Usenet Newsgroup Archive: rec.radio.amateur.homebrew

2002-06 - 2002-12

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Date span: 2002-06-01 through 2002-12-31

Source text: rec.radio.amateur.homebrew.txt

Source item: https://archive.org/details/usenet-rec

Messages included in this PDF: 4,840

Message records with no readable body available in the source text: 3

Messages are presented chronologically by archived date.

Binary or encoded payloads are not printed as blocks of encoded text; a placeholder appears where such material was detected. The original source text is unchanged.

1. Re: best Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-01 00:03:12 UTC
From: "n7ws at arrl net"
Message-ID: <3cf80757.23137453@news.triconet.org>
Source record: 43764
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Fri, 31 May 2002 17:36:45 -0400, "Rob" <Pse@NoEmail.Com> wrote:

|Many thanks for all the comments. I am curious. What about the W2IHY
|Technologies 8-Band Audio Equalizer and Noise Gate that is advertised in
|QST. Will it achieve similar results as a good speech processor?

The short answer is NO.

But you can have endless fun on the air talking to others that are using them, particularly the guys that have bypassed the audio stages in the rig and are driving the balanced modulator directly.

"Okay, I've boosted 50 Hz by 1 dB and cut 400 Hz by 2 dB. How do I sound now."

"Just a minute, I recorded you... let me play it back."

"Hmmm. Well, I dunno... let me boost 50 Hz by another dB. How does that sound?"

"Oh, much better. Now try boosting 4 KHz just a bit...."

And the cell phone company thought they were original with, "Can you hear me now?"

You can also enjoy annoying the others trying to operate in close proximity, especially with the opposite sideband burble you're now transmitting as you attempt to extend your frequency response to 0 Hz.

Wes Stewart N7WS

(Written with tongue only slightly in cheek)

2. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-01 04:51:47 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3CF85338.571A155B@bellatlantic.net>
Source record: 43765

Gary Schafer wrote:
>
> You are forgetting that with an MOV that has a turn on voltage of 300
> volts, the equipment that
> it is across is handling the first 300 volts and the MOV is
> dissipating zero at that level. It has not
> yet turned on.

No, I am not forgetting anything. The discussion had
nothing to do with an MOV that was not turned on. An
MOV that is not turned on does none of the shunting,
diverting or absorbing that is being discussed.
The equipment, prior to the MOV transition, "sees"
whatever voltage is on the line. That is irrelevant to
the discussion of the MOV in the low impedance state,
when it is absorbing the surge it "sees".

<snip>

>The voltage across it
> is not going to go much
> above the 300 volt turn on level so it does not dissipate much power.
> Not to say that they can't
> blow up from excessive dissipation.

Re: "so it does not dissipate much power"
It dissipates Isubt*300 if 300 is the clamping
voltage at that instant. The current ratings for typical
disc style MOVs used in point of use surge protectors are
from 125 amps to 7000 amps, depending on the size of the
MOV. That information comes from Panasonic - the url is:
http://www.panasonic.com/industrial/components/pdf/ZNR_APP_dne.pdf
So even a small one can carry 125 amps momentarily at 300
volts - that's 37,500 watts. Regardless of what happens
elsewhere, 37,500 watts is a lot of power.

>
> What W-tom is trying to say is that without a short ground lead it is
> almost like not having a
> ground at all. This is of course concerning common mode type surges
> (lightning). Which does
> need to be passed to ground.

Tom said: "... Only true for differential mode surges which
typically don't exist. Destructive surges are typically
common mode."

Consider:
Lightning strikes nearby and causes a surge on the
HV line feeding your transformer. That creates a
common mode surge raising both the neutral wire and
the hot wires to some level above ground at the secondary.
At the service entrance panel, that common mode surge
becomes a differential mode surge, because the neutral wire
is bonded to the grounding electrode conductor in the panel,
while the hot wires are not. Thus dies the myth that
differential mode surges typically don't exist. Within
the set of surges that exists, differential surges certainly
do exist.

This subject is made needlessly confusing by
inaccurate statements.

You want effective surge protection on your AC wiring:
1) Have an electrician install a good surge protector in
the service panel with the best ground system practical.
2) Install name brand, relatively expensive (around $70)
point of use protectors with guarantees to replace the
equipment at stuff you can't afford to lose - like that $7,000
flat screen TV
3) Use a bunch of cheap protectors on other gear and
install a good protector on the phone lines.
4) Any other wire entering your house should not require
additional measures if it was properly installed.
examples - cable tv, satellite dish, tv or amateur
radio antennas

That's about the best a typical homeowner can do.

3. Re: Winding the Univeral Wound Coil Question - Gingery Coil Winder

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-01 12:21:36 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <5rehfugleiase3ltb8mjouh3pf9s7qgfdc@4ax.com>
Source record: 43766

>>
>> Buying Litz in small quantities isn't easy.
>
>Agreed. Here are some places to try. I've bought it
>from the last one listed - American Science & Surplus.
>
>http://www.corningelectronics.com/litzwire.htm
>http://philsaudio.stryke.com/litzwire.htm
>http://www.allelectronics.com/cgi-bin/category.cgi
>(The above has 3' test leads made of litz for $4.00)
>http://www.surplussales.com/Wire-Cable/LitzWire.html
>http://www.sciplus.com/singleItem.cfm?terms=978

Thanks for the good suggestions. I'll order some.

The 2.5 mH RFC that I have examined is wound with a single conductor copper wire that I measured with a digital micrometer at 0.0062 inches in diameter, definitely not Litz. The insulation is green fabric, maybe silk or cotton. Whatever it is, the fabric insulation is deteriorating. I suspect that choke is 50 years old or more though.

Jack K8ZOA

4. Wanted: Electronics Illustrated/Practical Electronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-01 15:31:54 UTC
From: Ken <kscsken@yahoo.com>
Message-ID: <m4qhfu093ehe4ha5bpvhpegjvcaj4m351h@4ax.com>
Source record: 43767

I'm looking for an issue of electronics illustrated from 1967.
It had an article about a 1-tube all-bander receiver. A photo copy of
the article would be fine. Anyone have any ideas where I might
locate this?

thanks

Ken

5. Re: Coil length and winding pitch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-01 17:36:25 UTC
From: k7itm@aol.com
Message-ID: <3200347.0206010936.54ef2c90@posting.google.com>
Source record: 43768

"Ken Linney" <Ken.Linney@btinternet.com> wrote in message
news:<aco9kvlgb1@knossos.btinternet.com>...
> Here is a useful relationship applicable to single-layer inductors:
>
> n = 2.53(L/Sw)^1/3, where n = no of turns, L = inductance in uH &
> Sw = winding pitch as described by Roy below.
>
>
> If you have the chance see ARRL QEX Sep/Oct 2001 followed by Letters
> to Editor, p61 in QEX, Jan/Feb 2001.
>
> .... 73 Ken, G3UDA
...

Ahh...now it's all clear. Ken, I fear you've taken that formula so far out of context it no longer has meaning. It's from Dr. Koenig's letter to the editor, having to do with "how to get the highest Q out of a given piece of wire," and in no way is a formula to get inductance from just the number of turns and the winding pitch. In addition to that context problem, there are also, I believe, some problems in Dr. Koenig's basic premises. I didn't examine the whole letter in detail, but did see something similar from him in Electronics World, I believe, and he seems to go about it in a way that depends on a bunch of things that simply aren't true.

But the original article does have a definition of winding pitch that matches what Roy posted, and as I understand, "Radiotron Designer's Handbook" also follows the same definition. My reason for posting the original question was that I had found two independent pieces of software that used a different definition: pitch = length/(turns-1). One of those has since been reissued with what seems the more standard (and to me, correct) definition, pitch = length/turns. The programs I've found which do use pitch=length/turns give me inductance values which match very closely to what I actually measure for coils that I've carefully measured for diameter and length as well. For most of my work, the old Wheeler formula (L,uH = n^2*r^2/(9*r+10*l), where n is number of turns, r is coil radius to wire center, inches, and l is coil length to wire centers at end of coil, also inches) works fine...usually better than the 5% tolerance caps I have to work with...but there are programs that yield a bit closer values, and also estimate the Q, effective distributed capacitance, and both parallel and series self-resonances, and that additional info can be quite helpful too.

Cheers,
Tom

6. Re: best Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-01 18:55:33 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3CF9193A.300AAE48@bellatlantic.net>
Source record: 43769
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

ckh, -, Too, Much, SPAM wrote:
>
> On Fri, 31 May 2002 03:30:48, "Rob" <Pse@NoEmail.Com> wrote:
>
> > I have an old boat anchor. I would like to improve its DX performance with
> > a speech processor. What is the best external speech processor out there?
> > Does someone still make them or will I have to build one?
> >
> > Rob
>
> The best add-on speech processor I know of is the ETO-Alpha-77. I
> believe they've reopened the business.

Yeah - but it's a bitch to do the mod right. You have to
change the 77's input to a Mic connector, then fashion a cable
for the output to connect to the rig. And you have to
mod the keying circuit to operate from the mic switch.
I must've done mine wrong. When I finished the mod, I
connected the new output cable from the Alpha to the mic
input on the 746. I fired up the Alpha and waited
a while - someone told me you're supposed to wait a few
minutes - then I keyed the mic. It blew the 746 right
off the operating desk - pieces of melted plastic
are still embedded in the sheet rock, according to
my wife. The carpenters have finished replacing the
section of wall that was destroyed, but they claim
they can patch the damaged sheetrock on the rest of
it. I'll be going back to the shack to figure out
what went wrong, as soon as I get these casts off and
the doctor gives me permission to walk up the stairs.
I'm sure the smoke odor will be gone by then.
We never did figure out whether the force of the
explosion blew me out of the chair and down the steps,
or whether I stumbled in the smoke and fell. The last
thing I remember is thinking how powerful my audio
was going to be.

7. Re: TDA1576 as synchr. AM demod. + Level meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-01 22:43:13 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <ade6uiifi2@nic.grnet.gr>
Source record: 43794

realy where is the gif file????
"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3cf9762a.197702482@news.online.no...
> Built a level meter with AM detector using Philips TDA1576, detected
> audio was 20mV RMS and it seems to cover the range of at least
> 100kHz-10MHz. If you want to see it, it is only a small gif file of
> 15kB
>
> Have earlier constructed AM detectors using MC1496P, MC1351P, TBA120
>
> 73
> Jan-Martin
> LA8AK
> --
> remove ,xnd to reply

8. Re: Coil length and winding pitch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-01 22:44:24 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <adbio7ego1@knossos.btinternet.com>
Source record: 43770

Tom,

None of the basic solenoid inductance formulae I am aware of involve winding pitch.

Only length, diameter and a whole number of turns are required. These 3 values are necesary and SUFFICIENT.

So how come you get a difference in calculated inductance by entering a different value of winding pitch when pitch is not a requirement ?

========================
Regards from Reg G4FGQ
Free Coil Modelling Software
Go to http://www.g4fgq.com
========================

9. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-01 23:16:57 UTC
From: w_tom <w_tom1@usa.net>
Message-ID: <3CF955E9.518FDA47@usa.net>
Source record: 43771

A common mode surge on hot and neutral, but earthed at breaker box on neutral is still a common mode surge. If it was 'converted' to a differential mode surge, then when it got to the equipment, any ground to that equipment would be irrelevant. Differential mode surges would ignore that earth ground. But the common mode surge only seeks earth back on the neutral if it cannot get to earth ground, destructively, through the appliance. The most important objective for that common mode surge (regardless of earth neutral) IS still earth ground - because it is still a common mode surge. Moreso, a 100 amp common mode surge that must find ground back at the earth grounded breaker box at 50 feet would leave the computer typically at less than 13,000 volts. Can't happen. Voltage too high. Any computer at 13,000 volts relative to earth ground cannot help but to find destructive paths, from input hot wire to earth ground through the appliance.

That common mode surge is not converted to differential mode if a neutral is earth grounded. Just like that common mode surge is not converted by the earth ground out in the utility pole transformer. That surge, arriving at the appliance on hot wire will find any or every earth ground - even if that path to earth is ground - because it is still a common mode surge.

Differential mode surges ignore paths to earth ground. Common mode surges will find earth ground, destructively through the appliance - as the definition of common mode makes extremely clear. That breaker box earth ground is electrically to far away to be all but no earth ground connection.

Again we return to a principal well proven and repeated demonstrated since the 1930s, repeatedly demonstrates in reams of IEEE articles, and demanded by serious surge protector manufacturers. Notice that ehsjr provides no references for his theory. At no time have any of the too many articles, applications noted, etc ever made a claim that grounding the neutral far from the appliance converts a common mode surge to differential mode surge. All incoming AC connects neutral to earth AND all professional papers still call that surge common mode. Again that well proven principal - a surge protector is only as effective as its earth ground.

What is the difference between brand name, plug-in surge protectors and no-name, less expensive surge protectors of same joules? The no-name, less expensive unit provides same, ineffective, surge protection for far less money. Components in that $70 brand name surge protector cost about $0.05 and $0.20 each. Where did the other $60 go? Into the name? Bonuses and stock options? Of course neither brand name nor less expensive surge protector is effective; made so woefully obvious because they must forget to mention critical earth ground. Without that short connection to earth ground, then the brand name, plug-in surge protector recommended by ehsjr can actually increase probability of surge damage even if the adjacent appliance is turned off.

Why? An adjacent surge protector simply shunts the surge onto all wires so the surge has more paths to seek earth ground, destructively, through the appliance. That is what a shunt mode surge protector does - distribute a surge to all other wires meaning that a common mode surge now has more destructive paths through that appliance. Plug-in surge protectors can make common mode surge damage more possible.

But this is the most damning fact. If those $0.05 and $0.20 components in that plug-in surge protector were effective, then they would already be in the appliance. They are not in the appliance because they are not effective in the appliance or in the adjacent plug-in surge protector. Are all appliance manufacturers that dumb? Of course not. They also know that the plug-in surge protectors recommended by ehsjr are ineffective - a waste of $0.05.

Any money spent on grossly overpriced, undersized, ineffective, plug-in surge protection is money wasted - that could have been used to make more effective 'whole house' protection. Money best spent is in enhancing that central earth ground network - the most critical component in any surge protection 'system'.

Forgotten in that third (of four) recommendation is that the phone lines already have superior, 'whole house' surge protection - if the homeowner has not compromised critical earth ground. Why is that phone line surge protector's earth ground connection so necessary? Because even phone companies know that their surge protector is only as effective as its earth ground.

ehsjr@bellatlantic.net wrote:
> ...
> Consider:
> Lightning strikes nearby and causes a surge on the
> HV line feeding your transformer. That creates a
> common mode surge raising both the neutral wire and
> the hot wires to some level above ground at the secondary.

> At the service entrance panel, that common mode surge
> becomes a differential mode surge, because the neutral wire
> is bonded to the grounding electrode conductor in the panel,
> while the hot wires are not. Thus dies the myth that
> differential mode surges typically don't exist. Within
> the set of surges that exists, differential surges certainly
> do exist.
>
> This subject is made needlessly confusing by
> inaccurate statements.
>
> You want effective surge protection on your AC wiring:
> 1) Have an electrician install a good surge protector in
> the service panel with the best ground system practical.
> 2) Install name brand, relatively expensive (around $70)
> point of use protectors with guarantees to replace the
> equipment at stuff you can't afford to lose - like that $7,000
> flat screen TV
> 3) Use a bunch of cheap protectors on other gear and
> install a good protector on the phone lines.
> 4) Any other wire entering your house should not require
> additional measures if it was properly installed.
> examples - cable tv, satellite dish, tv or amateur
> radio antennas
>
> That's about the best a typical homeowner can do.

10. Re: Ferrite cores in Netherlands??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 00:23:35 UTC
From: "Eike Lantzsch, ZP6CGE" <eikelan@gmx.net>
Message-ID: <slrnafipc7.30b.eikelan@ID-77364.user.dfncis.de>
Source record: 43740
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew

J M Noeding wrote:
> On Sun, 02 Jun 2002 23:09:20 GMT, mike@corn2.freeserve.co.uk (Mike W)
> wrote:
>
> >On Sun, 2 Jun 2002 23:31:18 +0300, "VITEL" <vitel@eunet.yu> wrote:
> >
> >>Where in Netherlands I can find ferrite corres for buy?? (For ex. FT 37-43,
> >>FT 37-61 etc)
> >>
> >try this URL
> >
> >http://www.xs4all.nl/~barendh/Indexeng.htm
> >
> >I'm getting a frame with 'page not found' on the site tonight, but
> >they have an excellent range of RF bits and bobs if you download their
> >catalog.
> >hth MIke W, G8NXD qthr
>
> Believe they are also available at low price from G-QRP club, and at
> very high price in Germany (hi)
> --
> remove ,xnd to reply

You might want to have a look here

http://www.kent-electronics.nl/ under "voorraad ferriet"

Regards, Ike

11. P.C. Ham Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 01:22:10 UTC
From: "nntp.bloor.phub.net.cable.rogers.com" <bob@bob.com>
Message-ID: <6reK8.176340$t8_.67065@news01.bloor.is.net.cable.rogers.com>
Source record: 43772

Can anyone tell me if it'spossible to have a Ham Radio on a P.C.?

12. Re: P.C. Ham Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 01:33:30 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CF975EA.BF620C22@netscape.net>
Source record: 43773

"nntp.bloor.phub.net.cable.rogers.com" wrote:
>
> Can anyone tell me if it'spossible to have a Ham Radio on a P.C.?

There's a few shortwave receiver setups for PCs, I think one is actually
an internal board. But for transmitting, forget it. The RF power might
turn the PC to toast.
There's quite a bit of ham equipment these days that can be controlled
via PC.

-Bill

13. TDA1576 as synchr. AM demod. + Level meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 01:41:11 UTC
From: la8ak.xnd@online.no
Message-ID: <3cf9762a.197702482@news.online.no>
Source record: 43774

Built a level meter with AM detector using Philips TDA1576, detected
audio was 20mV RMS and it seems to cover the range of at least
100kHz-10MHz. If you want to see it, it is only a small gif file of
15kB

Have earlier constructed AM detectors using MC1496P, MC1351P, TBA120

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

14. Re: TDA1576 as synchr. AM demod. + Level meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 02:54:29 UTC
From: "r.crowley" <rcrowley7@xprt.net>
Message-ID: <ufj2765tgm9u2c@corp.supernews.com>
Source record: 43775

"J M Noeding" wrote ...
> Built a level meter with AM detector using Philips TDA1576, detected
> audio was 20mV RMS and it seems to cover the range of at least
> 100kHz-10MHz. If you want to see it, it is only a small gif file of
> 15kB

Sure, where is the gif file? Philips says TDA1576 is obsolete.

15. Re: P.C. Ham Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 09:19:25 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <xtlK8.713$nQ6.28753@newsfep1-win.server.ntli.net>
Source record: 43776

"> Can anyone tell me if it'spossible to have a Ham Radio on a P.C.?
==========
Ten-Tec launched their Pegasus transceiver in 2000 . It is a box linked to the PC via a standard serial port permitting all operations from the PC's mouse or keyboard.
However I haven't seen their advertisments for this unit in QST lately.
Another US manufacturer Kachina had a similar unit before with even the mike /key connected to a module built into the PC ,but Kachina no longer manufactures that type of transceiver. Their seems to be no profitable market for this type of equipment

It seems that Hams prefer a stand-alone transceiver (probably having better specs) whether or not linked to a PC for certain modes or for automatic linking to the DX cluster , etc .

Frank gm0csz.kn6wh@ntlworld.com

16. Re: TDA1576 as synchr. AM demod. + Level meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 10:00:27 UTC
From: la8ak.xnd@online.no
Message-ID: <3cf9dadd.223485137@news.online.no>
Source record: 43777

On Sat, 1 Jun 2002 19:54:29 -0700, "r.crowley" <rcrowley7@xprt.net>
wrote:

>"J M Noeding" wrote ...
>> Built a level meter with AM detector using Philips TDA1576, detected
>> audio was 20mV RMS and it seems to cover the range of at least
>> 100kHz-10MHz. If you want to see it, it is only a small gif file of
>> 15kB
>
>Sure, where is the gif file? Philips says TDA1576 is obsolete.
>
>
It is still still available, and it works fine, so what is my problem?
--
remove ,xnd to reply

17. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 11:27:59 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <adcvfvacn1@helle.btinternet.com>
Source record: 43778

Have you tried a simple direct connection ? Unless the sound card insists
on having a balanced 600-ohm input a transformer is not needed.

If a transformer MUST be used just to convert from unbalanced to balanced
then any old ratio will do the job.

May work fine with just a length of wire plus a series resistor. There's far
too much waffle wasted on impedance matching. Who's interested in the
maximum power transfer theorem when all that's wanted is a few millivolts
and micro-watts.

========================
Regards from Reg G4FGQ
Free Radio Modelling Software
Go to http://www.g4fgq.com
========================

KIRKWOOD wrote .
> Seems simple......I want to connect the audio output of my rig/scanner
> (which is meant for 8 ohms) to the Line-In port on my computer sound
> card (600 ohms). I searched for a few hours, but could find no
> off-the-shelf circuit. I think a 8:600 ohm audio transformer is
> required at least, but I am concerned about limiting the peak-to-peak
> input to the sound card. Any thoughts?
>
> Thanks!
>
> AJ
> kb1dmm

18. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 12:02:29 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <t01kfuk19112g1a6mgtettebj44u3fargu@4ax.com>
Source record: 43779

On Sat, 01 Jun 2002 19:16:57 -0400, w_tom <w_tom1@usa.net> wrote:

> Moreso, a
>100 amp common mode surge that must find ground back at the
>earth grounded breaker box at 50 feet would leave the computer
>typically at less than 13,000 volts. Can't happen. Voltage
>too high. Any computer at 13,000 volts relative to earth
>ground cannot help but to find destructive paths, from input
>hot wire to earth ground through the appliance.

First of all, where does that mythical earth potential exist ? Did they keep in Sevre outside Paris as they did with the 1 meter stick and the 1 kg weight before changing the definition :-).

The oceans would be quite good to find a reference potential, but unfortunately the variations in the Earth's magnetic field will cause currents to flow and thus also potential differences to develop.

I don't know your wiring code, but that situation is not as bad as it sounds.

If you have a shunt between live and neutral at the equipment, the equipment could reach a potential several kilovolts above the mythical ground reference potential when a current surge occurred. As long as the equipment is isolated and does not have external connections, who cares at what potential it is.

Assuming a computer system including monitor, printer etc. are connected to the same grounded wall outlet. If the current surge is creating a high voltage drop in the neutral wire, any shunt arresters connected from live to protective ground and neutral to protective ground will conduct, effectively sharing the surge current from the outlet to the house distribution point. In your case the wall outlet would be about 6500 V relative to the mystical earth reference. However, the computer chassis, the monitor chassis, the printer chassis would all be floating at this same 6500 V potential so this should not be a problem as long as the computer system is not connected to the external world.

At least our wiring code recognises that there is no such thing as a perfect grounding, but requires that the electric system neutral (N) and protective ground wire (PE), central heating pipes, cold and hot water pipes, antenna masts are connected to a common grounding bar, to keep these systems at the same potential. This bar is then connected to a grounding electrode if the grounding through the cold water pipes are not sufficient.

If a large surge comes through the mains wiring (both live and possibly also neutral), the current will sooner or later end up in the ground bar and then into the grounding electrode. Due to the impedance in the grounding, the ground bar might reach a potential several kilovolts above the mythical earth potential. However, the cold and hot water pipes, central heating pipes and finally the house itself will reach that same potential. This should not harm the people inside the house, since they will also float to the same potential relative to the mythical earth potential.

While the computer system might be at a quite high potential, the plumbing and eventually the house is at a quite similar potential, so the potential diffidence is not that great as one might expect. The voltage difference between the equipment chassis and the piping is the voltage drop in the parallel connection of neutral and PE wire. Assuming there are multiple paths (other equipment) from the live to the grounding bar, the grounding bar will reach an even higher potential, thus reducing the current flow from the computer N/PE connection to the grounding bar and also reducing the voltage difference.

As long as the impedance from the wall outlet N/PE to the grounding bar is well below the impedance from the grounding bar to the mythical earth, the potential difference between the wall outlet and the house piping (and the house) is quite small.

While the perfect place for a surge arrester would be between the live and the grounding bar, a simple arrester mounted in the wall outlet is not in a hopeless situation as you are suggesting.

However, there is a snake sneaking into Paradise in the form of the telephone line (or serial or Ethernet cables to other buildings). The other ends of these cables are connected to a different grounding bar and a different grounding electrode. Thus, there can be quite a few kilovolts between the grounding bars in different buildings during a surge condition.

I have been working with various industrial control systems for a few years and there is often a need to transfer data to different buildings, some of which are quite old and the electric system is not in the best shape. In this situation it is more or less mandatory to use isolated serial connections. Building current loops with optoisolators is quite easy and the typical optoisolator breakdown voltage is 2500 V,which is usually quite sufficient, since there has seldom been any extended damage due to lighting. If a better isolation is required, optical fibres must be used.

The telephone line is a big problem, since both AC and DC information needs to be transferred (transformers and optoisolators), getting devices with sufficient isolation can be a problem.

I don't see a point of using elaborate grounding systems in the house, but one has to be very careful with any other wires (telephone, serial

data and Ethernet) coming into the house and use a high isolation barrier with these connections.

Paul OH3LWR

19. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 12:32:52 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ufk43qlglmepcd@corp.supernews.com>
Source record: 43780

I have a spec sheet on the Sound Blaster and Sound Blaster Pro Family of sound cards. The line input impedance is 39K so a 600 ohm transformer is no where near matching impedances anyway.

20. Re: P.C. Ham Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 14:07:10 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3cfa25e5.2783907@news.peakpeak.com>
Source record: 43781

On Sun, 2 Jun 2002 10:19:25 +0100, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>It seems that Hams prefer a stand-alone transceiver (probably having better
>specs) whether or not linked to a PC for certain modes or for automatic
>linking to the DX cluster , etc .
>

Or perhaps we recognize that a transceiver will be usable for decades,
while the PC will be obsolete in a couple of years ;^)

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

21. Re: TDA1576 as synchr. AM demod. + Level meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 14:24:38 UTC
From: Bill & Suzie Whatley <spud286@attbi.com>
Message-ID: <GUpK8.89992$352.4721@sccrnsc02>
Source record: 43782

What is URL for .gif file ??

73
WA5VRL
Willis

22. Re: Another 10.7 MHz IF filter question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 14:24:49 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0206021027270001@c-66-176-144-254.se.client2.attbi.com>
Source record: 43783

In article <20020530231040.04266.00001269@mb-fh.aol.com>, pdrunen@aol.com (PDRUNEN) wrote:

> Hi Group,
>
> I am looking for a 10.7 MHz IF filter also, however I need a 2 MHz bandwidth.
> The largest bandwidth I have found to be in the FMBC receivers at about 200KHz.
>
>
> Is there a method to reduce the Q or whatever in the 10.7 MHz 200KHz filter so
> that it increases the -3db BW to 2 MHz?
>
> How about a two crystal filter with Lower freq crystal at 8.7MHz and Upper Freq
> at 12.7 MHz ?
>
> How about a discrete(L/C) or active (op-amp) filter?
>
> Others????
>
> Thanks,
>
> Paul

I would just look up the design parameters in a good filter book like "Electronic Filter Design" by Williams. If you need flat, then use a 0.5db Tchebyshev or less, if not enough then a Butterworth. I have always had excellent luck using the Williams book for values. Using cascaded filters tends to pull the poles around unless you use a buffer between the two sections. The two corners are too close to one another at 2 MHz. Always remember, that a filter is nothing more than a properly designed mismatch, so impedance matters.

Filters are kind of fun. RF is a pain in the backend.

Steve WB4CZR

P.S. Any one out there need a highly experienced RF/analog engineer?

23. High Power Digital Switching CW Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 14:38:45 UTC
From: Mark Hall <mark.hall34@verizon.net>
Message-ID: <3CFA2CA9.14302CF@verizon.net>
Source record: 43784

Anyone ever built a direct MOSFET switching CW transmitter here? Saw an article years ago, used a bunch of cheap High Voltage (800 Volt TV Flyback type) MOSFET's. VFO was entirely digital at the TX frequency, and drove the MOSFETs directly. Sort of Hyper Class C++ style. The output matching network took the edges off and probably had a Q of 20 or so. Low RDSon Power MOSFETs are dirt cheap these days and can be made to switch hard at least to 14 MHz. Efficiency should be 80+ percent (Low Heat generation), especially on the lower bands. Low switching losses are key. Probably a Full H-Bridge configuration is best, using all N-Channel MOSFETs. Power output is easily adjusted by varying the duty cycle of the drive. Add a transformerless AC power supply for 300 Volts or so, and voila.. worlds simplest and cheapest QRO CW transmitter. Legal limit will be less than 10 Amps which is easy to tame with a few of Digi-Key $3 power MOSFETs in parallel without that nasty huge copper and heatsinks common with those lower voltage linear MRF devices. Output Z of the xmtr should be easily tuneable with your standard roller inductor tuner which might serve as the output matching network depending on it's Q.

Any Thoughts?

The World will eventually become all Digital...

'73 KI4Z

24. Re: High Power Digital Switching CW Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 16:36:55 UTC
From: Jane Doe <janedoe994@msn.comm>
Message-ID: <HQrK8.29044$4i.3786058@bin2.nnrp.aus1.giganews.com>
Source record: 43785

www.texasstar.com

"Mark Hall" <mark.hall34@verizon.net> wrote in message
news:3CFA2CA9.14302CF@verizon.net...
> Anyone ever built a direct MOSFET switching CW transmitter here? Saw an
> article years ago, used a bunch of cheap High Voltage (800 Volt TV
> Flyback type) MOSFET's. VFO was entirely digital at the TX frequency,
> and drove the MOSFETs directly. Sort of Hyper Class C++ style. The
> output matching network took the edges off and probably had a Q of 20 or
> so. Low RDSon Power MOSFETs are dirt cheap these days and can be made
> to switch hard at least to 14 MHz. Efficiency should be 80+ percent
> (Low Heat generation), especially on the lower bands. Low switching
> losses are key. Probably a Full H-Bridge configuration is best, using
> all N-Channel MOSFETs. Power output is easily adjusted by varying the
> duty cycle of the drive. Add a transformerless AC power supply for 300
> Volts or so, and voila.. worlds simplest and cheapest QRO CW
> transmitter. Legal limit will be less than 10 Amps which is easy to
> tame with a few of Digi-Key $3 power MOSFETs in parallel without that
> nasty huge copper and heatsinks common with those lower voltage linear
> MRF devices. Output Z of the xmtr should be easily tuneable with your
> standard roller inductor tuner which might serve as the output matching
> network depending on it's Q.
>
> Any Thoughts?
>
> The World will eventually become all Digital...
>
> '73 KI4Z
>

25. Re: TDA1576 as synchr. AM demod. + Level meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 19:25:59 UTC
From: la8ak.xnd@online.no
Message-ID: <3cfa5be4.256520934@news.online.no>
Source record: 43786

On Sun, 02 Jun 2002 14:24:38 GMT, "Bill & Suzie Whatley"
<spud286@attbi.com> wrote:

>What is URL for .gif file ??
>
no, I have to mail it, is the address correct?

Just wanted to describe an application which wasn't supported by the
application note. The device was commonly available at low price and
suits my demands, mainly used together with an impedance bridge or
RLB. It is many better and later devices, you may even find an SMD
(which I don't like). Haven't checked overall performance yet, since I
had to mount it into a die-cast box first. Use a similar circuit with
MC3356 in my HF-rig for improved S-meter.

73
JM
--
remove ,xnd to reply

26. Re: Another 10.7 MHz IF filter question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 19:25:59 UTC
From: la8ak.xnd@online.no
Message-ID: <3cfa5dae.256979225@news.online.no>
Source record: 43788

On Sun, 02 Jun 2002 14:24:49 GMT, motsteve@attbi.com (carltons) wrote:

>P.S. Any one out there need a highly experienced RF/analog engineer?

Very often need to know about one...., hi

73
LA8AK
--
remove ,xnd to reply

27. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 19:26:00 UTC
From: la8ak.xnd@online.no
Message-ID: <3cfa541c.254529120@news.online.no>
Source record: 43787

On Sun, 2 Jun 2002 08:32:52 -0400, "Bob Lewis \(AA4PB\)"
<rlewis@staffnet.com> wrote:

>I have a spec sheet on the Sound Blaster and Sound Blaster Pro Family
>of sound cards. The line input impedance is 39K so a 600 ohm
>transformer is no where near matching impedances anyway.
>
>
it is for protection, not matching. If it is loaded with not more than
600 ohm at one end it won't cause any problems

LA8AK
--
remove ,xnd to reply

28. Ferrite cores in Netherlands??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 20:31:18 UTC
From: VITEL <vitel@eunet.yu>
Message-ID: <ade2n2$i2i$1@news.eunet.yu>
Source record: 43791
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew,sci.electronics.components

Where in Netherlands I can find ferrite corres for buy?? (For ex. FT 37-43, FT 37-61 etc)

Thank's in advance!

73 de YU1ATL

29. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 21:16:43 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <UdIK8.1359$376.63922@newsfep1-win.server.ntli.net>
Source record: 43663

> I don't see a point of using elaborate grounding systems in the house,
> but one has to be very careful with any other wires (telephone, serial
> data and Ethernet) coming into the house and use a high isolation
> barrier with these connections.
=======
When I purchased a make APC UPS for my PC system 3 years ago I received a separate telephone line surge arrester with a short 'earth lead' . This lead is permanently connected to the 'earth'connection of a nearby wall socket (British 230V -50Hz wall sockets have 3 receptables :L-N-E) The arrester also has an in -and out telephone socket. I have no idea how effective these arresters are , but with overhead telephone lines in the area ,I have so far not experienced any failure of any equipment connected to the telephone line eg 2 phones , 1 fax machine ,internal PC -modem . Just for info.

Frank gm0csz.kn6wh@ntlworld.com

30. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 21:35:28 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ufl3tc3tg1jm14@corp.supernews.com>
Source record: 43789

> it [the transformer] is for protection, not matching.

Protection from what? One poster suggested that you would blow up the sound card if you didn't use an 8:600 ohm transformer to get a proper match. I've connected the line input of the sound card across the 8 ohm output of a receiver plenty of times without blowing anything and it always worked. It seems to me that adding a 8:600 ohm transformer will raise the voltage applied to the sound card, not lower it.

I agree that if the transformer is loaded with not less than 600 ohms it won't cause any problems. I'm just saying there is no need to match impedances (which you are not doing with a 8:600 ohm transformer anyway).

31. PA3CKR Frequency squarer for high level mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 21:47:19 UTC
From: la8ak.xnd@online.no
Message-ID: <3cfa912b.270162862@news.online.no>
Source record: 43790

Does somebody know the email address for PA3CKR?

The main reason for asking is the 74AC86 frequency squarer, it has a
BALANCE arrangement, wonder what sort of balance is achieved? See
http://www.geocities.com/CapeCanaveral/Lab/9595/fst3125.html

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

32. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 22:10:21 UTC
From: w_tom <w_tom1@usa.net>
Message-ID: <3CFA97CD.27B20B5C@usa.net>
Source record: 43792

> If ... a shunt between live and neutral at the equipment, the
> equipment could reach a potential several kilovolts above the
> mythical ground reference potential when a current surge
> occurred. As long as the equipment is isolated and does not
> have external connections, who cares at what potential it is.

is absolutely correct "as long as the equipment is isolated"
(the perfect faraday cage). But professionals are blunt - no
equipment is isolated. For example, that computer with an
adjacent plug-in surge protector has equipotential across AC
power lines. But the path to ground is through modem, network
card, or even through wires draped behind the desk on the
baseboard heat pipes. Real world surge protection
professionals repeatedly advocate, excessively, the central
point earth ground. If one has a problem with the concept,
then take it up with the long list of experienced
professionals and academic papers.

Furthermore, the most common reason for modem damage is an
AC mains surge that finds earth ground, destructively, via
phone lines. In the US, all properly installed phone lines
make a connection to earth ground. The connection will shunt
surges before entering the building - as every responsible
surge protector manufacturer advocates. But if the surge is
already inside the house - and especially if an ineffective
surge protector is adjacent to the computer, then a surge can
get out - destructively complete the electrical circuit -
using that phone line ground. Most modem damage is from AC
mains surges that force a computer to a voltage different from
earth ground.

To understand references, don't speculate about oceans.
First learn principals demonstrated and repeatedly proven
since before WWII. An example of the surge circuit is
demonstrated by Dr Richard Feynman in his classic three volume
set Lectures in Physics. But when it comes to surge
protection, one first learns what has been so proven in
history and electrical theory. For example, one professional
states clearly:
http://www.harvardrepeater.org/news/lightning.html
> Well I assert, from personal and broadcast experience spanning
> 30 years, that you can design a system that will handle
> *direct lightning strikes* on a routine basis. It takes some
> planning and careful layout, but it's not hard, nor is it
> overly expensive. At WXIA-TV, my other job, we take direct

> lightning strikes nearly every time there's a thunderstorm.
> Our downtime from such strikes is almost non-existant. ...
> We do this by establishing what is called a *ground window*.
> Another term for this used in the commercial arena is the
> *entrance bulkhead*. *Every* wire that enters or leaves the
> station passes through this window, and *every* wire is
> connected to it, either directly in the case of nominally
> "grounded" conductors, or through an appropriate suppressor
> network in the case of "live" conductors. This means power,
> phone, coax, control cabling, *everything*. This window is
> then connected to Earth through the lowest inductance
> connection we can make. What we've done is to create a single
> reference point for our station, a single point "ground".

Last summer, more experienced professionals noted same in discussions in the newsgroup rec.radio.amatuer.antenna such as Richard Harrison:
> Broadcast radio stations operate right through numerous
> lightning hits with few interruptions, much less damage.

Benchmarks in surge protection discuss same in wildly recommended application notes:
http://www.polyphaser.com/ppc_technical.asp

Before questioning my posts, one should first consult experience, papers, professional, and principals repeated demonstrated in IEEE publications, high reliability sites, from manufacturers who don't promote urban myths of plug-in surge protectors, or even why Ben Franklin's 1752 invention (air terminal or lightning rod) worked. It's all about the same thing - earthing a surge before through a safe, nondestructive path.

If plug-in protection is effective, then it costs about $1. But plug-in surge protection is more about hype. Not only is it undersized and mislocated, but it is also grossly overpriced at $20 or $50. That is 20 or 50 times more per appliance for protection only hypothesized as effective? Why is that plug-in protection such as smart solution? Its not. It's effectiveness is urban myth associated with reasoning that must ignore the realities of earthing.

Surges find so many paths to earth meaning that no appliance is isolated from destructive paths to earth ground. An appliance is protected when at the same potential as earth under the building. That so well proven and so less expensive concept is called 'whole house' surge protection. As Paul Keinanen notes, plug-in protection can be made effective. But who has the $thousand to hire those experts necessary to refine a sophisticated system around the computer? Furthermore, any wiring changes in that protected bubble may also destroy the protection design. The so well proven method

is always been central point earth ground, the single point ground window, the MGB, the bulkhead, ... so many terms because the concepts are so widely understood through the generations, and are internationally proven.

A belief that a philosophy student will protect his computer using a plug-in surge protector in any wall outlet only demonstrates the philosophy student first may need to learn the well demonstrated philosophy of "lying by telling half truths". However, maybe the student wants to spend more money, wastefully, for ineffective protection. We know there are many plug-in surge protector manufacturers who must forget to discuss earthing, so that the philosophy student will buy and recommend their product.

High isolation barriers don't exist in the real world. If a good isolation barrier existed, then lightning would not travel through an excellent isolation barrier - miles of air. Everything also has a breakdown voltage. Even linoleum tile and concrete floors can become a good surge conductor. No way around a most effective surge protection concept - central earth ground determines the effectiveness of a surge protector - series mode or shunt mode. High reliability facilities cannot get a central earth ground that is good enough because central earth ground is what makes better surge protection.

If a plug-in surge protector was so effective, then all appliance manufacturers would install those $0.05 devices. They don't, because it makes no sense to waste only $0.05 on such ineffective protection. A surge protector is only as effective as its earth ground.

Paul Keinanen wrote:
>
> On Sat, 01 Jun 2002 19:16:57 -0400, w_tom <w_tom1@usa.net> wrote:
>
> > Moreso, a
> >100 amp common mode surge that must find ground back at the
> >earth grounded breaker box at 50 feet would leave the computer
> >typically at less than 13,000 volts. Can't happen. Voltage
> >too high. Any computer at 13,000 volts relative to earth
> >ground cannot help but to find destructive paths, from input
> >hot wire to earth ground through the appliance.
>
> First of all, where does that mythical earth potential exist ? Did
> they keep in Sevre outside Paris as they did with the 1 meter stick
> and the 1 kg weight before changing the definition :-).
>
> The oceans would be quite good to find a reference potential, but
> unfortunately the variations in the Earth's magnetic field will cause
> currents to flow and thus also potential differences to develop.

> I don't know your wiring code, but that situation is not as bad as it
> sounds.
>
> If you have a shunt between live and neutral at the equipment, the
> equipment could reach a potential several kilovolts above the mythical
> ground reference potential when a current surge occurred. As long as
> the equipment is isolated and does not have external connections, who
> cares at what potential it is.
>
> Assuming a computer system including monitor, printer etc. are
> connected to the same grounded wall outlet. If the current surge is
> creating a high voltage drop in the neutral wire, any shunt arresters
> connected from live to protective ground and neutral to protective
> ground will conduct, effectively sharing the surge current from the
> outlet to the house distribution point. In your case the wall outlet
> would be about 6500 V relative to the mystical earth reference.
> However, the computer chassis, the monitor chassis, the printer
> chassis would all be floating at this same 6500 V potential so this
> should not be a problem as long as the computer system is not
> connected to the external world.
>
> At least our wiring code recognises that there is no such thing as a
> perfect grounding, but requires that the electric system neutral (N)
> and protective ground wire (PE), central heating pipes, cold and hot
> water pipes, antenna masts are connected to a common grounding bar, to
> keep these systems at the same potential. This bar is then connected
> to a grounding electrode if the grounding through the cold water pipes
> are not sufficient.
>
> If a large surge comes through the mains wiring (both live and
> possibly also neutral), the current will sooner or later end up in the
> ground bar and then into the grounding electrode. Due to the impedance
> in the grounding, the ground bar might reach a potential several
> kilovolts above the mythical earth potential. However, the cold and
> hot water pipes, central heating pipes and finally the house itself
> will reach that same potential. This should not harm the people inside
> the house, since they will also float to the same potential relative
> to the mythical earth potential.
>
> While the computer system might be at a quite high potential, the
> plumbing and eventually the house is at a quite similar potential, so
> the potential diffidence is not that great as one might expect. The
> voltage difference between the equipment chassis and the piping is the
> voltage drop in the parallel connection of neutral and PE wire.
> Assuming there are multiple paths (other equipment) from the live to
> the grounding bar, the grounding bar will reach an even higher
> potential, thus reducing the current flow from the computer N/PE
> connection to the grounding bar and also reducing the voltage
> difference.

>
> As long as the impedance from the wall outlet N/PE to the grounding
> bar is well below the impedance from the grounding bar to the mythical
> earth, the potential difference between the wall outlet and the house
> piping (and the house) is quite small.
>
> While the perfect place for a surge arrester would be between the live
> and the grounding bar, a simple arrester mounted in the wall outlet is
> not in a hopeless situation as you are suggesting.
>
> However, there is a snake sneaking into Paradise in the form of the
> telephone line (or serial or Ethernet cables to other buildings). The
> other ends of these cables are connected to a different grounding bar
> and a different grounding electrode. Thus, there can be quite a few
> kilovolts between the grounding bars in different buildings during a
> surge condition.
>
> I have been working with various industrial control systems for a few
> years and there is often a need to transfer data to different
> buildings, some of which are quite old and the electric system is not
> in the best shape. In this situation it is more or less mandatory to
> use isolated serial connections. Building current loops with
> optoisolators is quite easy and the typical optoisolator breakdown
> voltage is 2500 V,which is usually quite sufficient, since there has
> seldom been any extended damage due to lighting. If a better isolation
> is required, optical fibres must be used.
>
> The telephone line is a big problem, since both AC and DC information
> needs to be transferred (transformers and optoisolators), getting
> devices with sufficient isolation can be a problem.
>
> I don't see a point of using elaborate grounding systems in the house,
> but one has to be very careful with any other wires (telephone, serial
> data and Ethernet) coming into the house and use a high isolation
> barrier with these connections.
>
> Paul OH3LWR
>

33. Re: Ferrite cores in Netherlands??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 23:09:20 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3cfaa53e.33719813@news.freeserve.net>
Source record: 43795
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew,sci.electronics.components

On Sun, 2 Jun 2002 23:31:18 +0300, "VITEL" <vitel@eunet.yu> wrote:

>Where in Netherlands I can find ferrite corres for buy?? (For ex. FT 37-43,
>FT 37-61 etc)
>
>Thank's in advance!
>
>73 de YU1ATL
>
>
try this URL

http://www.xs4all.nl/~barendh/Indexeng.htm

I'm getting a frame with 'page not found' on the site tonight, but
they have an excellent range of RF bits and bobs if you download their
catalog.
hth MIke W, G8NXD qthr

34. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-02 23:23:52 UTC
From: la8ak.xnd@online.no
Message-ID: <3cfa9e97.273599255@news.online.no>
Source record: 43796

On Sun, 2 Jun 2002 17:35:28 -0400, "Bob Lewis \(AA4PB\)"
<rlewis@staffnet.com> wrote:

>
>Protection from what?

Never heard of static discharge? Or lightening? Or just voltage
differences? Once damaged the motherboard with a cable connected to
the PC's serial port, but removed from the TNC. The lightening stroke
a half mile away just as I shut the door to go to work.

As I mentioned before, a friend learned from damaging the sound-card
as he tried to connect it to the transceiver, it was some voltage
difference

Another advantage with the transformer is to avoid hum induced on the
line.

Ignorant amateurs often never learn before the damage has been done a
few times, some don't. This was more commonly experienced with the
Commodore computers we used two decades ago because of less protection
of the interface. The most common way to sort this out was to use
opto-couplers between the computer and modem. But the problem still
exists, but the PC is somewhat better protected.

73,
LA8AK
--
remove ,xnd to reply

35. Re: PA3CKR Frequency squarer for high level mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 00:27:59 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <adedie$e20$1@nntp9.atl.mindspring.net>
Source record: 43647

The balance adjustment is to change the DC bias on the input pin of the 74AC86 so that the imposed AC sine wave will cause the part to toggle as it passes through the '0' crossing of the sine wave.

This toggle point will vary a bit as the component warms up, but the fixed adjustment is about as good as any way to use this part as a converter from sine wave to square wave.

==========

The alternative would be to double the frequency and then use a flip-flop to divide by 2 and get the 50% duty cycle LO drive for the mixer.

This method removes the finicky analog adjustment, but it also requires a pretty fast divider chip, depending on what your LO frequency is.

Fairly simple to do up to 30 MHz or so, and it makes the mixer circuitry less sensitive to temperature affecting the LO duty cycle.

Jim Pennell
N6BIU

36. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 00:35:52 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <adee3s$206$1@slb2.atl.mindspring.net>
Source record: 43648

Sun, 2 Jun 2002 17:35:28 -0400, "Bob Lewis \(AA4PB\)"
<rlewis@staffnet.com> wrote:

>
>Protection from what?
>

Well, I have had customers damage equipment due to AC ground loops from
time to time.

If they had used the recommended connection then an transformer for
isolation purposes would have protected the input they were connecting to.

Granted, this was overseas and on some areas the ground on the AC line
leaves something to be desired. This made it more likely to have a high
ground loop potentual, but it happens everywhere.

Most of the time, one can direct connect and get away with it depending on
the quality of the AC lines, earth grounds, Etc....

But all in all, an audio transformer is cheap insurance.

Jim Pennell
N6BIU

37. Re: High Power Digital Switching CW Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 00:56:29 UTC
From: Mark Hall <mark.hall34@verizon.net>
Message-ID: <3CFABD79.F98AF0DE@verizon.net>
Source record: 43649

Not even Close Jane...

Jane Doe wrote:

> www.texasstar.com
>
> "Mark Hall" <mark.hall34@verizon.net> wrote in message
> news:3CFA2CA9.14302CF@verizon.net...
> > Anyone ever built a direct MOSFET switching CW transmitter here? Saw an
> > article years ago, used a bunch of cheap High Voltage (800 Volt TV
> > Flyback type) MOSFET's. VFO was entirely digital at the TX frequency,
> > and drove the MOSFETs directly. Sort of Hyper Class C++ style. The
> > output matching network took the edges off and probably had a Q of 20 or
> > so. Low RDSon Power MOSFETs are dirt cheap these days and can be made
> > to switch hard at least to 14 MHz. Efficiency should be 80+ percent
> > (Low Heat generation), especially on the lower bands. Low switching
> > losses are key. Probably a Full H-Bridge configuration is best, using
> > all N-Channel MOSFETs. Power output is easily adjusted by varying the
> > duty cycle of the drive. Add a transformerless AC power supply for 300
> > Volts or so, and voila.. worlds simplest and cheapest QRO CW
> > transmitter. Legal limit will be less than 10 Amps which is easy to
> > tame with a few of Digi-Key $3 power MOSFETs in parallel without that
> > nasty huge copper and heatsinks common with those lower voltage linear
> > MRF devices. Output Z of the xmtr should be easily tuneable with your
> > standard roller inductor tuner which might serve as the output matching
> > network depending on it's Q.
> >
> > Any Thoughts?
> >
> > The World will eventually become all Digital...
> >
> > '73 KI4Z
> >

38. Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 03:00:05 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <VYAK8.19179$LC3.1393039@bgtnsc04-news.ops.worldnet.att.net>
Source record: 43650

Hi folks,
I've been feeling creative lately, and have been thinking about developing a series of high performance kits, including receivers, preselectors, etc. Let me know what any of you would like to see, and maybe I could develop your idea along. The approach that I am thinking of taking is to make the printed circuit board and the parts available, and leave it up to the builder for packaging in the enclosure. Interested parties can e-mail me directly.
Thanks!

Pete Gianakopoulos KE9OA
Chicago, Il.

39. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 03:00:33 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <uflmulev8bjcb2@corp.supernews.com>
Source record: 43651

I seriously doubt that a little audio coupling transformer is going to protect the input to the sound card from lightning. I'll stand by my statement that unless you have some really serious grounding or electrical problems you are not going to damage a sound card line input by connecting it to a scanner's speaker output.

40. update on the one transistor FM receiver...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 04:03:36 UTC
From: braincambre500@yahoo.com
Message-ID: <85a87c6c.0206022003.79d4445f@posting.google.com>
Source record: 43652

Hello all,

The one transistor FM receiver (super-regenerative),
now has two websites. If one is disabled, chances
are the other is not:

If you are new to this receiver, please take a
look at it. It is by far the simplist one I have
ever made. The sensitivity, selectivity and great
audio output is what you will expect, once your
journey has come to the end.

I call is "The Radio Shack Special", since all
of the parts may be
purchased there.

MAIN WEBSITE: http://braincambre500.freeservers.com

BACK-UP WEBSITE: http://earthground.8m.com

I surrender this project for anyone else who loves to dablle
in simple things!

Your friend, Patrick

41. Re: PA3CKR Frequency squarer for high level mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 04:05:05 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3CFAEAEF.DA9BA051@cox.net>
Source record: 43653

It seems that they are simply trying to get the best possible 50% duty
cycle square wave to drive the switches.

- Dan Tayloe, N7VE; Phoenix, Az; Az ScQRPions

J M Noeding wrote:
>
> Does somebody know the email address for PA3CKR?
>
> The main reason for asking is the 74AC86 frequency squarer, it has a
> BALANCE arrangement, wonder what sort of balance is achieved? See
> http://www.geocities.com/CapeCanaveral/Lab/9595/fst3125.html
>
> 73
> Jan-Martin
> LA8AK
> --
> remove ,xnd to reply

42. Re: TDA1576 as synchr. AM demod. + Level meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 04:47:46 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3CFAF461.1C35E64C@clifto.com>
Source record: 43654

J M Noeding wrote:
> <spud286@attbi.com> wrote:
> >What is URL for .gif file ??
>
> no, I have to mail it, is the address correct?

I'd like a copy. If you like, I can put it up on my site for general access.

--
If spammers weren't stupid, they'd be the idle rich instead of spammers.
- Morely Dotes

43. Re: Low bandwidth Video for a robot

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 04:54:40 UTC
From: TheJedi <thejedi@not.posting.my.address.to.usenet.com>
Message-ID: <kECK8.13$5%4.7334@news-west.eli.net>
Source record: 43655
Body handling: HTML body converted to readable text

"Mark Little" wrote in message
news:hg9qba.tnr.ln@chuckie.apana.org.au...
>snip
> Have you ruled out the use of an umbilical cord to carry comms (and
possibly power)?

On top of that, the umbilical is a safety line if the little guy stops responding to commands "at depth". You don't have to strap on a set of tanks, or kiss the investment goodbye, or hope that the failsafe positive buoyancy works (you did include something in the design where if you lose power, the bot floats to the surface, didn't you ???). You just have to pull the darn buggy thing back up.

Whatever wiring you use to carry data and especially with power, make sure it's rated for underwater use, not just "water resistant", although fibre optical doesn't have that kind of problem. Then wrap the umbilical together with a strong rope or cable (depending on the size of your robot) so that any towing or pulling doesn't put any weight on the wiring, just the load rope. You might try using nylon rope like is used for ski-boat tow handles, because it floats, and depending on the weight of the data cable or fibre, may make your umbilical neutrally or positively buoyant. At best, look at this rope and check out the outer braiding. Do something like this to wrap your entire umbilical to help prevent damage and/or snags. Another idea, although expensive, would be the kind of rope that is used by rapellers or rock climbers (although if I remember right, that kind of rope is cloth based and would not only rot easily underwater, would need to be completely dried after each use). Ok, never mind the rock climbing rope, but the same idea stands. The load bearing strands are sheathed in a protective outer braid to make the rope more manageable and avoid snags.

Chris - KF6QNZ

44. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 05:11:45 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3CFAFB17.349085AF@bellatlantic.net>
Source record: 43656

w_tom wrote:
>
> A common mode surge on hot and neutral, but earthed at
> breaker box on neutral is still a common mode surge. If it
> was 'converted' to a differential mode surge, then when it got
> to the equipment, any ground to that equipment would be
> irrelevant. Differential mode surges would ignore that earth
> ground. But the common mode surge only seeks earth back on
> the neutral if it cannot get to earth ground, destructively,
> through the appliance.

You claim: "But the common mode surge ONLY seeks
earth back on the neutral if it cannot get to earth ground,
destructively, through the appliance." (Emphasis mine)

Any discussion of surge protection with that kind of
thinking is pointless.

45. experimental sstv / nbtv soft

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 05:25:43 UTC
From: HB9TLK <me@privacy.net>
Message-ID: <1023082076.815933@ddba012.netstream.ch>
Source record: 43657

```
experimental sstv / nbtv soft in "beta.beta" state.
needs a 160*120 24bit RGB webcam and a
standard pc - radio cable.

http://www.qsl.net/hb9tlk/index.html

nbtv is very tricky about levels.
comments / test results / ideas for improvement welcome.
```

46. Re: TDA1576 as synchr. AM demod. + Level meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 06:37:14 UTC
From: "r.crowley" <rcrowley7@xprt.net>
Message-ID: <ufm3l1nl427p53@corp.supernews.com>
Source record: 43658

"J M Noeding" <la8ak.xnd@online.no> wrote ...
> no, I have to mail it,

Save yourself a LOT of work and just post it on
alt.binaries.schematics.electronic
That newsgroup was MADE for posting diagrams like yours!

Then post a message here that lets people know that it is available in
a.b.s.e.

47. Re: Ferrite cores in Netherlands??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 07:43:14 UTC
From: la8ak.xnd@online.no
Message-ID: <3cfaa97c.276388417@news.online.no>
Source record: 43659
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew

On Sun, 02 Jun 2002 23:09:20 GMT, mike@corn2.freeserve.co.uk (Mike W)
wrote:

>On Sun, 2 Jun 2002 23:31:18 +0300, "VITEL" <vitel@eunet.yu> wrote:
>
>>Where in Netherlands I can find ferrite corres for buy?? (For ex. FT 37-43,
>>FT 37-61 etc)
>>
>try this URL
>
>http://www.xs4all.nl/~barendh/Indexeng.htm
>
>I'm getting a frame with 'page not found' on the site tonight, but
>they have an excellent range of RF bits and bobs if you download their
>catalog.
>hth MIke W, G8NXD qthr

Believe they are also available at low price from G-QRP club, and at
very high price in Germany (hi)
--
remove ,xnd to reply

48. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 07:47:50 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <k14mfuke3r8t4ld72ddd8gopihag3a71vg@4ax.com>
Source record: 43660

On Sun, 02 Jun 2002 18:10:21 -0400, w_tom <w_tom1@usa.net> wrote:

> is absolutely correct "as long as the equipment is isolated"
>(the perfect faraday cage). But professionals are blunt - no
>equipment is isolated.

I assume we are discussing mains conducted over voltages and not direct lightning hit to the power pole next to the house. In the latter case I very much doubt that even large spark gaps would protect the equipment, no matter where it is installed inside the house.

>For example, that computer with an
>adjacent plug-in surge protector has equipotential across AC
>power lines. But the path to ground is through modem, network
>card, or even through wires draped behind the desk on the
>baseboard heat pipes.

As I later pointed out, modems need special protection.

The network card is not a problem as long at is connected to an other computer in the same room from the same wall outlet.

Flash overs to metal structures 30 cm to 1 m away will only occur, if you have a direct lightning hit, in which case I guess you have other things to worry about.

> Real world surge protection
>professionals repeatedly advocate, excessively, the central
>point earth ground.

Equipotential bonding is a good thing, but when the resistance to the real earth might be 10 ohms of more, a surge of 100 A will increase the potential of the main earthing terminal and all equipment connected to it to 1 kV, a surge of 1 kA to 10 kV and so on.

>If one has a problem with the concept,
>then take it up with the long list of experienced
>professionals and academic papers.
>
> Furthermore, the most common reason for modem damage is an
>AC mains surge that finds earth ground, destructively, via
>phone lines. In the US, all properly installed phone lines
>make a connection to earth ground.

At least previously here in Finland, it was forbidden to install surge protectors in to phone lines that had a connection to the earthing system. With large potential differences between buildings, quite high

currents would flow in the telephone cable, melting it. I do not know the current situation, but I guess that due to much damage to answering machines, faxes and modems mainly from the Far East (with inadequate isolation), this policy may have changed.

>The connection will shunt
>surges before entering the building - as every responsible
>surge protector manufacturer advocates.

Yes, it would preferable to have spark gaps in the utility pole _before_ the mains wires enters the house, in which case it would even giving some protection for direct lightning hit to _that_ pole. However, that would require grounding each pole.

> http://www.harvardrepeater.org/news/lightning.html

Gary here describes the grounding window, which is a form of equipotential bonding. When there is a surge, _every_ equipment within the building floats up to possibly several kilovolts above the ground potential of the neighbourhood, due to finite grounding resistance (impedance) in any practical installations. Thus, any other building with a similar grounding will have a different potential during the surge.

It should be noted that while grounding windows will protect the equipment inside it, it does not allow data communication while the surge arrester is operative. If the communication must work even during this surge period, the only thing to do is to use sufficient isolation (such as fiber optic cables) and avoid arrestors from the data line to the ground.

> Surges find so many paths to earth meaning that no appliance
>is isolated from destructive paths to earth ground. An
>appliance is protected when at the same potential as earth
>under the building.

It protects the equipment within the house, but when the house and the surrounding garden gets into an elevated potential, which is different from any other buildings in the neighbourhood (including telephone exchanges).

>Furthermore, any wiring changes in that protected bubble may
>also destroy the protection design.

Any new wire (e.g. Ethernet to the neighbour) might not be properly connected and protected to the grounding window, destroying the protected bubble :-).

> High isolation barriers don't exist in the real world. If a
>good isolation barrier existed, then lightning would not
>travel through an excellent isolation barrier - miles of air.

Talking about over voltage protection for mains connected equipment and protection against direct lightning hits in the same sentence can

be a bit misleading :-).

High isolation barriers sufficient for most practical situations can be made with optical fibers. The additional benefit with fibres is that they will operate during the surge, which can be quite critical in some industrials installations.

Paul OH3LWR

49. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 08:10:55 UTC
From: Mark Hall <mark.hall34@verizon.net>
Message-ID: <3CFB2344.1024BB63@verizon.net>
Source record: 43661

How about an SWR analyzer Kit like the AEA VIA with a hook up to a computer?
That would be a HOT seller.

'73 KI4Z

Pete Gianakopoulos wrote:

> Hi folks,
> I've been feeling creative lately, and have been thinking about
> developing a series of high performance kits, including receivers,
> preselectors, etc. Let me know what any of you would like to see, and maybe
> I could develop your idea along. The approach that I am thinking of taking
> is to make the printed circuit board and the parts available, and leave it
> up to the builder for packaging in the enclosure. Interested parties can
> e-mail me directly.
> Thanks!
>
> Pete Gianakopoulos KE9OA
> Chicago, Il.

50. Re: P.C. Ham Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 08:49:45 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <adhurl$j22$1@nic.grnet.gr>
Source record: 43701

yes there are a few but nothing commercial yet
"nntp.bloor.phub.net.cable.rogers.com" <bob@bob.com> wrote in message
news:6reK8.176340$t8_.67065@news01.bloor.is.net.cable.rogers.com...
> Can anyone tell me if it'spossible to have a Ham Radio on a P.C.?
>
>

51. 6146b lets put this bulb to work

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 09:01:35 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <adhvhqjch1@nic.grnet.gr>
Source record: 43702

I have a 6146b valve and no ideas or schematics to put it to use.
Hf or vhf schematics would be nice

Does anyone have an idea or something that will help me out?

--
deosiereas.virtualave.net

52. Re: PA3CKR Frequency squarer for high level mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 09:12:17 UTC
From: Adri <tncdrn@tin.it>
Message-ID: <MpGK8.111695$g04.63490@tornado.fastwebnet.it>
Source record: 43662

better then, f.i. a classic FM limiter (eg SO42P, NE604...)?
Adri

"Jim Pennell" <NoSpam@killspam.com> ha scritto nel messaggio
news:adedie$e20$1@nntp9.atl.mindspring.net...
> The balance adjustment is to change the DC bias on the input pin of the
> 74AC86 so that the imposed AC sine wave will cause the part to toggle as
it
> passes through the '0' crossing of the sine wave.
>
> This toggle point will vary a bit as the component warms up, but the
> fixed adjustment is about as good as any way to use this part as a
converter
> from sine wave to square wave.
>
> =================
>
> The alternative would be to double the frequency and then use a
flip-flop
> to divide by 2 and get the 50% duty cycle LO drive for the mixer.
>
> This method removes the finicky analog adjustment, but it also requires
a
> pretty fast divider chip, depending on what your LO frequency is.
>
> Fairly simple to do up to 30 MHz or so, and it makes the mixer
circuitry
> less sensitive to temperature affecting the LO duty cycle.
>
>
> Jim Pennell
> N6BIU
>
>
>

53. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 11:57:23 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <5OMK8.2192$376.115762@newsfep1-win.server.ntli.net>
Source record: 43673

> How about an SWR analyzer Kit like the AEA VIA with a hook up to a
computer?
> That would be a HOT seller.
==========
An SWR analyser should be suitable for use in the field .I wonder if one for
hook-up to a computer would be a really HOT seller ,unless the users would
have a hand-held computer to go with it.

Frank gm0csz.kn6wh@ntlworld.com

54. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 12:01:53 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3cfb5a33.322536@news.freeserve.net>
Source record: 43664

On Mon, 03 Jun 2002 08:10:55 GMT, Mark Hall <mark.hall34@verizon.net>
wrote:

>How about an SWR analyzer Kit like the AEA VIA with a hook up to a computer?
>That would be a HOT seller.
>
It certainly could be, depending on its performance and price.
I'm working on a PIC based aerial data logger that will eventually do
just this, and hopefully also have an LCD for actual realtime
measurements.

55. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 13:18:19 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3CFB6B18.A1DF1459@gte.net>
Source record: 43665

Pete Gianakopoulos wrote:

> Hi folks,
> I've been feeling creative lately, and have been thinking about
> developing a series of high performance kits, including receivers,
> preselectors, etc. Let me know what any of you would like to see, and maybe
> I could develop your idea along. The approach that I am thinking of taking
> is to make the printed circuit board and the parts available, and leave it
> up to the builder for packaging in the enclosure. Interested parties can
> e-mail me directly.
> Thanks!
>
> Pete Gianakopoulos KE9OA
> Chicago, Il.

Having already built one of Pete's hi end receivers
(http://www.parelectronics.com/pix/Pg150.jpg

(and using it more than ANY of my other receivers) I can tell you, these will be
1st class. Pete, from reading mail on the shortwave reflector, there seems to
be a goo deal of interest in passive preselectors- perhaps using soft switching
as in the Lowe model that goes with the HF-150.
Thanks for a great RX design.
Dale W4OP

56. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 13:36:35 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <DhKK8.113503$Oa1.10905729@bin8.nnrp.aus1.giganews.com>
Source record: 43666

It's a little away from ham radio, but I think that a high quality FM-broadcast tuner would be a huge winner. The designs used in mass-market receivers really stink compared to the discrete designs of old, and the high-end stuff is unapproachable for most mortals. The Tivoli design with its GASFet front would seem to be reminiscent of technology used for 2m and above. I think a kit like this would sell in the tens of thousands of units.

"Dale Parfitt" <parinc@gte.net> wrote in message news:3CFB6B18.A1DF1459@gte.net...
>
>
> Pete Gianakopoulos wrote:
>
> > Hi folks,
> > I've been feeling creative lately, and have been thinking about
> > developing a series of high performance kits, including receivers,
> > preselectors, etc. Let me know what any of you would like to see, and maybe
> > I could develop your idea along. The approach that I am thinking of taking
> > is to make the printed circuit board and the parts available, and leave it
> > up to the builder for packaging in the enclosure. Interested parties can
> > e-mail me directly.
> > Thanks!
> >
> > Pete Gianakopoulos KE9OA
> > Chicago, Il.
>
> Having already built one of Pete's hi end receivers
> (http://www.parelectronics.com/pix/Pg150.jpg
>
> (and using it more than ANY of my other receivers) I can tell you, these will be
> 1st class. Pete, from reading mail on the shortwave reflector, there seems to
> be a goo deal of interest in passive preselectors- perhaps using soft switching
> as in the Lowe model that goes with the HF-150.
> Thanks for a great RX design.
> Dale W4OP
>

57. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 14:28:42 UTC
From: w_tom <w_tom1@usa.net>
Message-ID: <3CFB7D19.9E3AD830@usa.net>
Source record: 43667

But lightning is a high frequency event. That outlet ground is how many meters to earth? Wire impedance - not wire resistance - are the critical numbers. Wire is an electronic component of the surge protection 'system'. That outlet ground is therefore called a safety ground - not earth ground. A phone line surge must also find other paths to earth because outlet to earth connection is too far.

http://www.telebyteusa.com/catalog/appnotes/a22px.htm demonstrates how phone line protection must be installed. The path to earth ground must be many times more conductive than the destructive path through electronics to avoid electronics damage. That phone line protector must be closer to earth and far from the appliance to be effective. In the UK, I am told that a type of master socket, called NTE5 has an earth grounding stud, but that most don't connect it. However the UK has so little CG (cloud to ground) lightning compared to the rest of the world meaning that some modem damage is acceptable?

APC, Belkin and other retail names are not quality surge protectors. They are overhyped, overpriced, and undersized. Made obvious by their total avoidance of earthing discussions. Instead, look at a benchmark. Their customers must never suffer damage from a direct strike. Therefore their application notes discuss earthing extensively. http://www.polyphaser.com/ppc_technical.asp

APC, et al is selling to the naive. Even their joule ratings are undersized. Professionals say distance to earth, splices in wires, ground wires through metallic conduit, multiple grounds, and even sharp bends all affect surge protection 'system' performance. Those selling ineffective plug-in protection never mention those critical parameters and avoid any discussion of what lightning really wants - earth ground.

Surges typically occur once every eight years. In the UK, such events are even less frequent. That statistic makes any recommendation based upon 'no damage yet' unreliable and misleading. 'No damage so far' is the sort of reasoning that overhyped plug-in surge protector would encourage to increase sales of their ineffective products.

Most often ignored is why earthing must be 'central' earth ground. Learn why in those above cited application notes.

Frank Dinger wrote:
> When I purchased a make APC UPS for my PC system 3 years ago I received a
> separate telephone line surge arrester with a short 'earth lead' . This lead
> is permanently connected to the 'earth'connection of a nearby wall socket
> (British 230V -50Hz wall sockets have 3 receptables :L-N-E) The arrester
> also has an in -and out telephone socket. I have no idea how effective these
> arresters are , but with overhead telephone lines in the area ,I have so far
> not experienced any failure of any equipment connected to the telephone line
> eg 2 phones , 1 fax machine ,internal PC -modem . Just for info.

58. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 14:40:49 UTC
From: Duncan Clark <NEWS@[127.0.0.1]>
Message-ID: <ZkyUPDCx$3+8EwoX@ntlworld.com>
Source record: 43668

In message <VYAK8.19179$LC3.1393039@bgtnsc04-news.ops.worldnet.att.net>,
Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net> writes
> I've been feeling creative lately, and have been thinking
>about developing a series of high performance kits, including
>receivers, preselectors, etc.

Narrow range, hi-gain television preamp immune to HF, 6m, 2m and 70cm
:-)))

Duncan
G4ELj
--
Support bacteria. They are the only culture some people have.

Duncan Clark

59. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 15:11:02 UTC
From: w_tom <w_tom1@usa.net>
Message-ID: <3CFB8706.C833B206@usa.net>
Source record: 43669

There is no reason to believe any direct strike must damage. It is urban myth that lightning is a high energy event. Alan Taylor of the US Forestry Service demonstrated that most trees - well in excess of 90% - struck by lightning leave no appreciable damage.

From Colin Baliss "Transmission & Distribution Electrical Engineering":
> Although lightning strikes have impressive voltage and current
> values (typically hundreds to thousands of kV and 10-100 kA)
> the energy content of the discharge is relatively low ...

Only failed surge protection systems do not protect from a direct strike at the pole. That includes modems, portable phone base stations, and fax machines. They all are included and protected by the same 'system'.

Every wire entering the building, including phone lines, are connected, either directly or through a surge protector, to central earth ground. That means a wire between buildings is earthed at both ends. This was a problem in the early days of Arriene rocket launches in French Guiana (I know I trashed the spellings). Proper earthing procedures at each structure were not followed resulting in computer damage.

Yes, earthing potential will rise because the earth is not conductive enough. We earth to make soil under the building equipotential. But earth cannot be equipotential enough across the building. So we try to dump all the surge into earth before it can enter the building at a central ground. But again earth cannot be conductive enough to absorb the whole surge. So we make the soil under the building more equipotential.

IOW we do both because neither is sufficient. Both means using central earth ground AND making the earth ground network beneath the building superior. However even a single ground rod in conductive, unfrozen soil can provide major surge protective benefit.

'Whole house' surge protection is called secondary protection. Primary protection is a ground that connects pole transformer to earth ground. Not a ground on every pole - but the critical one connecting transformer to earth. That utility pole ground is important for household surge protection from a resulting 'power follow-through current'.

A surge may create noise during the event. But the event is typically tens of microseconds. Furthermore, all communication must have error correction or other redundancy. Should fiber optic be necessary, then this communication line is so critical that a 30 microsecond loss of data is $hundreds. Small facility don't require that kind of reliability.

But fiber can solve another surge problem. We have only discussed the science of surge protection. Geology, for example, turns the science into an art. If geology makes equipotential impossible, then yes, fiber may be the expensive, more acceptable solution. IEEE Transactions are full of papers whereby professionals apply extravagant solutions to facilities that were properly installed but still not sufficient.

If incoming wires enter the building from different locations (cannot share a common bulkhead ground), such as "(e.g. Ethernet to the neighbor)", then more expensive solutions are required. One solution is to replace copper with fiber. But for most facilities, copper is more than adequate IF care is taken to implement the science of surge protection - especially central earth ground.

That ethernet to a friend's house provides isolation barriers of typically 2000 volts. But potential differences between homes during a strike can easily exceed that isolation barrier. The 2000 volts is sufficient if wire is earthed before entering the building but is insufficient if two buildings take on different voltages during a surge.

We have said much the same thing however I hope to have added a few new ideas such as the pole transformer ground and making sure earth ground remains below the frost line.

Paul Keinanen wrote:
>
> On Sun, 02 Jun 2002 18:10:21 -0400, w_tom <w_tom1@usa.net> wrote:
>
> > is absolutely correct "as long as the equipment is isolated"
> >(the perfect faraday cage). But professionals are blunt - no
> >equipment is isolated.
>
> I assume we are discussing mains conducted over voltages and not
> direct lightning hit to the power pole next to the house. In the
> latter case I very much doubt that even large spark gaps would protect
> the equipment, no matter where it is installed inside the house.
>
> >For example, that computer with an
> >adjacent plug-in surge protector has equipotential across AC
> >power lines. But the path to ground is through modem, network
> >card, or even through wires draped behind the desk on the

> >baseboard heat pipes.
>
> As I later pointed out, modems need special protection.
>
> The network card is not a problem as long at is connected to an other
> computer in the same room from the same wall outlet.
>
> Flash overs to metal structures 30 cm to 1 m away will only occur, if
> you have a direct lightning hit, in which case I guess you have other
> things to worry about.
>
> > Real world surge protection
> >professionals repeatedly advocate, excessively, the central
> >point earth ground.
>
> Equipotential bonding is a good thing, but when the resistance to the
> real earth might be 10 ohms of more, a surge of 100 A will increase
> the potential of the main earthing terminal and all equipment
> connected to it to 1 kV, a surge of 1 kA to 10 kV and so on.
>
> >If one has a problem with the concept,
> >then take it up with the long list of experienced
> >professionals and academic papers.
> >
> > Furthermore, the most common reason for modem damage is an
> >AC mains surge that finds earth ground, destructively, via
> >phone lines. In the US, all properly installed phone lines
> >make a connection to earth ground.
>
> At least previously here in Finland, it was forbidden to install surge
> protectors in to phone lines that had a connection to the earthing
> system. With large potential differences between buildings, quite high
> currents would flow in the telephone cable, melting it. I do not know
> the current situation, but I guess that due to much damage to
> answering machines, faxes and modems mainly from the Far East (with
> inadequate isolation), this policy may have changed.
>
> >The connection will shunt
> >surges before entering the building - as every responsible
> >surge protector manufacturer advocates.
>
> Yes, it would preferable to have spark gaps in the utility pole
> _before_ the mains wires enters the house, in which case it would even
> giving some protection for direct lightning hit to _that_ pole.
> However, that would require grounding each pole.
>
> > http://www.harvardrepeater.org/news/lightning.html
>
> Gary here describes the grounding window, which is a form of
> equipotential bonding. When there is a surge, _every_ equipment within

> the building floats up to possibly several kilovolts above the ground
> potential of the neighbourhood, due to finite grounding resistance
> (impedance) in any practical installations. Thus, any other building
> with a similar grounding will have a different potential during the
> surge.
>
> It should be noted that while grounding windows will protect the
> equipment inside it, it does not allow data communication while the
> surge arrester is operative. If the communication must work even
> during this surge period, the only thing to do is to use sufficient
> isolation (such as fiber optic cables) and avoid arrestors from the
> data line to the ground.
>
> > Surges find so many paths to earth meaning that no appliance
> >is isolated from destructive paths to earth ground. An
> >appliance is protected when at the same potential as earth
> >under the building.
>
> It protects the equipment within the house, but when the house and the
> surrounding garden gets into an elevated potential, which is different
> from any other buildings in the neighbourhood (including telephone
> exchanges).
>
> >Furthermore, any wiring changes in that protected bubble may
> >also destroy the protection design.
>
> Any new wire (e.g. Ethernet to the neighbour) might not be properly
> connected and protected to the grounding window, destroying the
> protected bubble :-).
>
> > High isolation barriers don't exist in the real world. If a
> >good isolation barrier existed, then lightning would not
> >travel through an excellent isolation barrier - miles of air.
>
> Talking about over voltage protection for mains connected equipment
> and protection against direct lightning hits in the same sentence can
> be a bit misleading :-).
>
> High isolation barriers sufficient for most practical situations can
> be made with optical fibers. The additional benefit with fibres is
> that they will operate during the surge, which can be quite critical
> in some industrials installations.
>
> Paul OH3LWR

60. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 15:23:45 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3CFB8880.1383DFE1@gte.net>
Source record: 43670

Dale Parfitt wrote:

> Pete Gianakopoulos wrote:
>
> > Hi folks,
> > I've been feeling creative lately, and have been thinking about
> > developing a series of high performance kits, including receivers,
> > preselectors, etc. Let me know what any of you would like to see, and maybe
> > I could develop your idea along. The approach that I am thinking of taking
> > is to make the printed circuit board and the parts available, and leave it
> > up to the builder for packaging in the enclosure. Interested parties can
> > e-mail me directly.
> > Thanks!
> >
> > Pete Gianakopoulos KE9OA
> > Chicago, Il.
>
> Sorry for the bad link: it should be:
> (http://www.parelectronics.com/pics/Pg150.jpg
>

Note, I do not offer the kits- just built up Pete's boards.

61. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 15:28:52 UTC
From: w_tom <w_tom1@usa.net>
Message-ID: <3CFB8B34.A3AB8077@usa.net>
Source record: 43671

All buildings have neutral earthed at the main panel. And yet still professionals discuss the common mode surges that enter those buildings. They don't discuss converting common mode surges to differential mode because that conversion is only your speculation. A common mode surge on the hot wire arrives at the appliance still as a common mode surge - regardless of what happens on any other wire such as the neutral.

Surge protection is about earthing a common mode surge before it can enter the building. But plug-in surge protectors can contribute to damage even to a powered off computer. The surge is provided more possible paths to earth, destructively, through the adjacent appliance by the plug-in surge protector. Therefore plug-in surge protector manufacturers simply forget to mention earth ground or even mention what a common mode surge is. No sense providing information a customer can use to see them as ineffective.

If earthing a neutral converted common mode surges into differential mode surges, then appliance manufacturers would routinely install those $0.05 and $0.20 parts inside appliances. Those parts are not installed because they are not effective. Why then would they ever be effective in a power strip? Common mode surges are not converted to differential mode by earthing some other wire far away. Common mode surge arrives on hot wires to damage an appliance. No plug-in surge protector is going to change that fact which is why money is best spent on enhancing the 'whole house' surge protector system.

ehsjr@bellatlantic.net wrote:
>
> w_tom wrote:
> >
> > A common mode surge on hot and neutral, but earthed at
> > breaker box on neutral is still a common mode surge. If it
> > was 'converted' to a differential mode surge, then when it got
> > to the equipment, any ground to that equipment would be
> > irrelevant. Differential mode surges would ignore that earth
> > ground. But the common mode surge only seeks earth back on
> > the neutral if it cannot get to earth ground, destructively,
> > through the appliance.
>
> You claim: "But the common mode surge ONLY seeks

> earth back on the neutral if it cannot get to earth ground,
> destructively, through the appliance." (Emphasis mine)
>
> Any discussion of surge protection with that kind of
> thinking is pointless.

62. Hammarlund SP-600

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 15:37:47 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <f3MK8.112471$%o.10689293@bin3.nnrp.aus1.giganews.com>
Source record: 43672
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

The tuning knob lacks friction and doesn't turn the dial. It's a friction drive but I don't know what the problem is. Is there a rubber tire that is missing? It looks like brass-to-brass and that doesn't make sense. But I can't see where a rubber tire would go.

Help please; I don't have a manual. Most manuals wouldn't show an exploded view of this complex mechanism anyway.

Bob

63. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 16:50:22 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <g8NK8.2225$376.119826@newsfep1-win.server.ntli.net>
Source record: 43674

> http://www.telebyteusa.com/catalog/appnotes/a22px.htm
> demonstrates how phone line protection must be installed. The
> path to earth ground must be many times more conductive than
> the destructive path through electronics to avoid electronics
> damage. That phone line protector must be closer to earth and
> far from the appliance to be effective. In the UK, I am told
> that a type of master socket, called NTE5 has an earth
> grounding stud, but that most don't connect it. However the
> UK has so little CG (cloud to ground) lightning compared to
> the rest of the world meaning that some modem damage is
> acceptable?
>
> APC, Belkin and other retail names are not quality surge
> protectors. They are overhyped, overpriced, and undersized.
> Made obvious by their total avoidance of earthing
> discussions. Instead, look at a benchmark. Their customers
> must never suffer damage from a direct strike. Therefore
> their application notes discuss earthing extensively.
> http://www.polyphaser.com/ppc_technical.asp
>
> APC, et al is selling to the naive. Even their joule
> ratings are undersized. Professionals say distance to earth,
> splices in wires, ground wires through metallic conduit,
> multiple grounds, and even sharp bends all affect surge
> protection 'system' performance. Those selling ineffective
> plug-in protection never mention those critical parameters and
> avoid any discussion of what lightning really wants - earth
> ground.

> Surges typically occur once every eight years. In the UK,
> such events are even less frequent. That statistic makes any
> recommendation based upon 'no damage yet' unreliable and
> misleading. 'No damage so far' is the sort of reasoning that
> overhyped plug-in surge protector would encourage to increase
> sales of their ineffective products.
>
> Most often ignored is why earthing must be 'central' earth
> ground. Learn why in those above cited application notes.
============
w_tom ,your posting + advice is much appreciated .

Frank gm0csz.kn6wh@ntlworld.com

64. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 17:00:48 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ufn86g9c1flve8@corp.supernews.com>
Source record: 43675

> Alan Taylor of the US Forestry Service demonstrated
> that most trees - well in excess of 90% - struck by lightning
> leave no appreciable damage.
>
But I can show you trees in my yard that have the bark stripped off top to bottom. Some have died. I also had an experience in Jacksonville, Fla where the copper disappeared from the inside of the phone wire (pole to pole) while leaving the insulation in tact - still connected to the poles but sagging to the ground. I also helped a friend remove what was left of his aluminum tower after the legs were blown open (inside to outside) on nearly every 10 foot section. We assume that the air inside the legs must have been heated and expanded so rapidly that the tubing burst open.

65. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 17:01:25 UTC
From: la8ak.xnd@online.no
Message-ID: <3cfba04a.33652177@news.online.no>
Source record: 43676

On Sun, 2 Jun 2002 23:00:33 -0400, "Bob Lewis \(AA4PB\)"
<rlewis@staffnet.com> wrote:

>I seriously doubt that a little audio coupling transformer is going to
>protect the input to the sound card from lightning. I'll stand by my
>statement that unless you have some really serious grounding or
>electrical problems you are not going to damage a sound card line
>input by connecting it to a scanner's speaker output.
>
>
I can't see any arguments, but I am sure the old neighbour wife
support your tale

--
remove ,xnd to reply

66. PSK31 without a PC.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 17:03:01 UTC
From: Paul Breed <pbreed@netburner.com>
Message-ID: <a78nfuk6ouian6plqet4oc8s7dviloss2q@4ax.com>
Source record: 43682

Has anyone built a PSK31 rx that did not need a PC?

Specifically has anyone done a non C version of the DSP code?

Is the source availible?

Where can I find the technical specifics of the PSK31 protocol?

Paul (Kl7JG)

67. Re: High Power Digital Switching CW Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 17:25:19 UTC
From: mcalhoun@ksu.edu
Message-ID: <adg8pv$21h@unix1.cc.ksu.edu>
Source record: 43677

>Anyone ever built a direct MOSFET switching CW transmitter here? Saw an
>article years ago, used a bunch of cheap High Voltage (800 Volt TV
>Flyback type) MOSFET's. VFO was entirely digital at the TX frequency,
>and drove the MOSFETs directly. Sort of Hyper Class C++ style. The
>output matching network took the edges off and probably had a Q of....

I didn't see that article, but QST published a two-part article on
"High-Efficiency Class-E Power Amplifiers" in May and June, 1997.
(I filed them until I find the right round tuit; so far, I'm still looking!-)

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

68. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 18:03:53 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3CFA5E70.60B0@pop.removethistomailme.net>
Source record: 43678

J M Noeding wrote:
>
> On Sun, 2 Jun 2002 23:00:33 -0400, "Bob Lewis \(AA4PB\)"
> <rlewis@staffnet.com> wrote:
>
> >I seriously doubt that a little audio coupling transformer is going to
> >protect the input to the sound card from lightning. I'll stand by my
> >statement that unless you have some really serious grounding or
> >electrical problems you are not going to damage a sound card line
> >input by connecting it to a scanner's speaker output.
> >
> >
> I can't see any arguments, but I am sure the old neighbour wife
> support your tale
>

I imagine what happened to your friend had more to do with high-power RF
getting back into the sound card via the line-in jack than any audio
signal-level or impedance-matching issue. He must have had a bad case
of "RF in the shack." I used to see this happen a lot when writing
CW-reading software for my Apple][back in the early 80s.

You're right, in that an audio transformer would probably have prevented
the damage... just not in the way that you're thinking. Better to
identify and fix the underlying cause of the overload damage.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

69. Re: Coil length and winding pitch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 18:09:08 UTC
From: k7itm@aol.com
Message-ID: <3200347.0206031009.bda64c4@posting.google.com>
Source record: 43679

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<adbio7ego1@knossos.btinternet.com>...
> Tom,
>
> None of the basic solenoid inductance formulae I am aware of involve winding
> pitch.
>
> Only length, diameter and a whole number of turns are required. These 3
> values are necesary and SUFFICIENT.
>
> So how come you get a difference in calculated inductance by entering a
> different value of winding pitch when pitch is not a requirement ?

Hi Reg,

Well, since I don't have the source code to the programs I was
testing, I really am not the one to answer that question. I can only
tell you that with ONE of the programs, at least, I could adjust the
pitch to get to an indicated length that matched what I expected for
the given number of turns, and in so doing, I got results from the
program which matched much more closely the inductance that I measured
for a small number of test coils.

I suppose that program simply calculates the coil length from the
pitch and number of turns, a very reasonable thing to do since it
displays the calculated inductance (and other parameters) for several
consecutive turns counts, for a given pitch. Also, it matches the way
I wind coils: I don't try to put n turns in length l, but rather wind
n turns at a particular pitch determined by the spacing wire, or by
the screw thread on which I'm winding it, or by the feed rate of the
lathe I'm using. I happen to find that program very convenient when I
am trying to figure a practical way to realize a certain inductance,
and now that it's been corrected to give the correct length for a
given pitch and number of turns (and correspondingly, an apparently
more accurate estimate of the inductance), it's actually useful to me.

I'm hoping to find time to test a wider range of coils; perhaps I'll
also test the self-resonant frequency as well. It would be nice to
know that the limited tests I've done weren't just a fluke. I'm
thinking of testing coils which are relatively short and relatively
long, and wound with wire which has a diameter much smaller than the
coil diameter, and wire which has a diameter which is a significant
percentage of the coil diameter. I will also try to arrange to make
accurate inductance measurements at both low frequencies (perhaps
10kHz) and in the HF range, though of course to test at low

frequencies accurately, I'll need enough inductive reactance to make it practical. Comments on choice of test cases are welcome, of course, though what acutally gets tested will depend on my supply of "round tuits". Also, I'm aware that others have done similar tests in the past, and if anyone can supply references to what appear to be accurate measurements of coil dimensions and inductance, I'd be grateful for that help as well.

Cheers,
Tom

Cheers,
Tom

70. Re: PA3CKR Frequency squarer for high level mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 19:13:10 UTC
From: la8ak.xnd@online.no
Message-ID: <3cfba3e5.34574382@news.online.no>
Source record: 43680

On Sun, 2 Jun 2002 17:27:59 -0700, "Jim Pennell" <NoSpam@killspam.com>
wrote:

> The balance adjustment is to change the DC bias on the input pin of the
>74AC86 so that the imposed AC sine wave will cause the part to toggle as it
>passes through the '0' crossing of the sine wave.
>
> This toggle point will vary a bit as the component warms up, but the
>fixed adjustment is about as good as any way to use this part as a converter
>from sine wave to square wave.
>
>
> This method removes the finicky analog adjustment, but it also requires a
>pretty fast divider chip, depending on what your LO frequency is.
>
> Fairly simple to do up to 30 MHz or so, and it makes the mixer circuitry
>less sensitive to temperature affecting the LO duty cycle.
>
>
> Jim Pennell
> N6BIU
>
Thanks, I will instantly plan to modify my previous constructions with
74HC4066, I hoped it was mixer balance, but seems not, hi

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

71. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 19:53:11 UTC
From: w_tom <w_tom1@usa.net>
Message-ID: <3CFBC926.C732D85E@usa.net>
Source record: 43681

I can't say enough about those application notes from
Polyphaser.
http://www.polyphaser.com/ppc_technical.asp
Sometimes they become difficult to read because of nouns
used. Best to first learn what the noun means, then reread to
understand the concepts. For example, the single point earth
ground may be called a bulkhead.

Homes and factories are equivalent to radio stations.
Whereas radio stations have antenna, those other structures
have same in the form of AC electric (highest on the pole) and
other incoming utilities. Same principals of surge protection
apply to both.

Also for background reference is the IEEE Transactions on
Electromagnetic Compatibility for 4 Nov 1998 which was totally
dedicated to this topic. Notice that all surges, even
induced, are considered the result of a direct strike (as
demonstrated by figures). Surge protection is about avoiding
damage from direct strikes. Those IEEE papers can be
difficult to read. But the figures and overall concepts point
to the same principals of central earth grounding and other
events related to that fundamental design - such as an induce
surge in a wire adjacent to one carrying the surge.

For examples of better earthed systems, see

http://leminstruments.com/grounding_tutorial/html/index.shtml
especially the example for a Cell Phone Station. That is a
complete 'system' for high reliability operations. But we
want to install stripped down versions of same in any building
with transistorized appliances. Although they don't discuss
it, the easiest and one of the most highly regarded grounding
methods is Ufer grounding. Ufer grounding exists in most all
new buildings, but we still don't use it.

Although the NEC does not address surge protection issues,
they do define minimal requirements for how grounding must be
installed.

Frank Dinger wrote:
>
> > http://www.telebyteusa.com/catalog/appnotes/a22px.htm
> > demonstrates how phone line protection must be installed. ...
> ============
> w_tom ,your posting + advice is much appreciated .

>
> Frank gm0csz.kn6wh@ntlworld.com

72. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 20:08:19 UTC
From: w_tom <w_tom1@usa.net>
Message-ID: <3CFBCCB3.308BA8F2@usa.net>
Source record: 43683

If you have that many examples of rare hot lightning, then imagine how many more surges you may have suffered without detection. Also lightning may not strip the bark. Lightning may be the spark plug that ignites a more powerful fuel such as tree sugars which in turn convert water to steam - enough energy to blow bark off the tree.

In that previous post, Colin Baliss goes on to discuss where destructive energy comes from. For example, in a house where wires were blown out of the walls, lightning typically does not have sufficient energy. However the utility does. It is why the pole transformer ground is so critical to household surge protection. Should lightning create a plasma conductor from 13Kv or 33Kv primary to 240v secondary feeding the building, then long after lightning has terminated, the utility is pumping high voltage into the building.

As Colin Baliss writes:
> ... the energy content of the discharge is relatively
> low and most of the damage to power plant is caused by
> 'power follow-through current'. The lightning simply
> provides a suitable ionized discharge path.

Rather surprised that the aluminum legs were sealed. I would have expected them to have substantial breathing just to eliminate humidity problems. Too much moisture could even result in damage from freezing puddles (elsewhere). You are describing a region that averages maybe 6 to 12 strikes per sq km per year - variance higher (or lower) across the county. It is why good earthing (and sandy soil is a worst earthing) is so important.

"Bob Lewis (AA4PB)" wrote:
>
> > Alan Taylor of the US Forestry Service demonstrated
> > that most trees - well in excess of 90% - struck by lightning
> > leave no appreciable damage.
> >
> But I can show you trees in my yard that have the bark stripped off
> top to bottom. Some have died. I also had an experience in
> Jacksonville, Fla where the copper disappeared from the inside of the
> phone wire (pole to pole) while leaving the insulation in tact - still
> connected to the poles but sagging to the ground. I also helped a
> friend remove what was left of his aluminum tower after the legs were
> blown open (inside to outside) on nearly every 10 foot section. We

> assume that the air inside the legs must have been heated and expanded
> so rapidly that the tubing burst open.

73. Re: TDA1576 as synchr. AM demod. + Level meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 20:30:04 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <flQK8.114763$%o.10902848@bin3.nnrp.aus1.giganews.com>
Source record: 43684

FYI, You can post pictures to the following newsgroups (without retaliation): alt.binaries.schematics.electronic or alt.binaries.pictures.radio

"J M Noeding" <la8ak.xnd@online.no> wrote in message news:3cfa5be4.256520934@news.online.no...
> On Sun, 02 Jun 2002 14:24:38 GMT, "Bill & Suzie Whatley"
> <spud286@attbi.com> wrote:
>
> >What is URL for .gif file ??
> >
> no, I have to mail it, is the address correct?
>
> Just wanted to describe an application which wasn't supported by the
> application note. The device was commonly available at low price and
> suits my demands, mainly used together with an impedance bridge or
> RLB. It is many better and later devices, you may even find an SMD
> (which I don't like). Haven't checked overall performance yet, since I
> had to mount it into a die-cast box first. Use a similar circuit with
> MC3356 in my HF-rig for improved S-meter.
>
> 73
> JM
> --
> remove ,xnd to reply
>

74. Re: Impedance Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 21:04:25 UTC
From: la8ak.xnd@online.no
Message-ID: <3cfbbfe7.41746114@news.online.no>
Source record: 43685

On Mon, 03 Jun 2002 18:03:53 GMT, John Miles wrote:

>
>I imagine what happened to your friend had more to do with high-power RF
>getting back into the sound card via the line-in jack than any audio
>signal-level or impedance-matching issue.

well, not high-power here, normal transmitters are so-called QRP class
on your side of the ocean, and this one can't by operate higher power
as he soon cause bad problems to the neighbours

> He must have had a bad case
>of "RF in the shack." I used to see this happen a lot when writing
>CW-reading software for my Apple][back in the early 80s.
>
Oh, dear. I had no problems with Apple II+ reading CW, hi, but it
wasn't meant as an argument in this thread

>You're right, in that an audio transformer would probably have prevented
>the damage... just not in the way that you're thinking. Better to
>identify and fix the underlying cause of the overload damage.
>
The way you argue, anything would really have helped. A resistor in
series with the line is another very simple, but often effective way
to limit all sorts of accidental discharges, it even may prevent RF
from causing problems, but not hum pick-up.

73 JM
LA8AK
--
remove ,xnd to reply

75. Re: TDA1576 as synchr. AM demod. + Level meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 21:07:33 UTC
From: la8ak.xnd@online.no
Message-ID: <3cfbd9dc.48392250@news.online.no>
Source record: 43686

On Sun, 2 Jun 2002 23:37:14 -0700, "r.crowley" <rcrowley7@xprt.net>
wrote:

>"J M Noeding" <la8ak.xnd@online.no> wrote ...
>> no, I have to mail it,
>
>Save yourself a LOT of work and just post it on
>alt.binaries.schematics.electronic
>That newsgroup was MADE for posting diagrams like yours!
>
>Then post a message here that lets people know that it is available in
>a.b.s.e.
>
may try later, but hasn't been lot of work so far
--
remove ,xnd to reply

76. Re: Hammarlund SP-600

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 22:14:20 UTC
From: amdx <amdx@att.net>
Message-ID: <0TRK8.21770$UT.1484338@bgtnsc05-news.ops.worldnet.att.net>
Source record: 43687
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

I don't know the set up on the SP600 but when I bought my HP freq. Generator
the shaft was froze to the bushing as it went through the front panel. I
disassembled, cleaned and lubed it
then the tuning adjuster had more friction than the tuning capacitor,
and everything worked well.
Mike

> The tuning knob lacks friction and doesn't turn the dial. It's a friction
> drive but I don't know what the problem is. Is there a rubber tire that
is
> missing? It looks like brass-to-brass and that doesn't make sense. But I
> can't see where a rubber tire would go.
>
> Help please; I don't have a manual. Most manuals wouldn't show an
exploded
> view of this complex mechanism anyway.
>
> Bob
>
>

77. Re: TDA1576 as synchr. AM demod. + Level meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 22:40:20 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <ade6uhifi1@nic.grnet.gr>
Source record: 43793

eerrrrr sorry to say but where is the gif file?????

78. Re: 6146b lets put this bulb to work

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 22:50:22 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <adjg3q$d6m$1@nic.grnet.gr>
Source record: 43721

are you sure You can directly substitute a 6146 for the 807 (just asking)
"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3CFCF091.F8D83B96@eznec.com...
> Older handbooks also have numerous circuits for the 807. You can
> directly substitute a 6146 for the 807 in most of these circuits.
>
> Roy Lewallen, W7EL
>
> Bill Turner wrote:
> >
> > On Mon, 3 Jun 2002 12:01:35 +0300, "Deos" <lineoffiretoday@yahoo.com>
> > wrote:
> >
> > > I have a 6146b valve and no ideas or schematics to put it to use.
> > >Hf or vhf schematics would be nice
> > >
> > >Does anyone have an idea or something that will help me out?
> >
> > ____
> >
> > Old ARRL handbooks from the '50s and '60s will have lots of information
> > and schematics for the 6146. I've built several transmitters using one.
> > A great tube.
> >
> > 73, Bill W7TI

79. Re: PA3CKR Frequency squarer for high level mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 23:11:27 UTC
From: k7itm@aol.com
Message-ID: <3200347.0206031511.36ecd953@posting.google.com>
Source record: 43688

I think Jim's analysis is fine. I'd like to offer another way to
implement essentially the same circuit so it auto-adjusts.

If the 74AC86 output really drives to the rails, within a few
millivolts, then you can detect the duty cycle as the average level of
the output. When it's at 50%, the average voltage will be 1/2 the
supply voltage. So, if you bias the (+) input of an op amp integrator
with a (precision) 1:2 divider from the supply, and drive the (-)
input with one of the outputs through a large resistor, the integrator
output can then be used to drive the input stage's DC bias, and it
will keep the output duty cycle constant.

If you are driving a load that keeps the 74AC86 output from going to
the rails, you can likely use a buffer...or monitor the drive to the
output stages. You can put a trimmer in the 1:2 divider to trim
things up slightly, but still benefit from the feedback tracking which
should do a good job keeping it constant over things like temperature
variations.

You can also do some more fancy things like monitoring both outputs
and using the op amp to servo them to be the same duty cycles, even if
both are slightly different from 50%, if it's worth the effort. So
long as the outputs go to equal loads, then even if the output levels
don't go to the rails, you still get very close to equal output from
both sides.

Cheers,
Tom

"Jim Pennell" <NoSpam@killspam.com> wrote in message
news:<adedie$e20$1@nntp9.atl.mindspring.net>...
> The balance adjustment is to change the DC bias on the input pin of the
> 74AC86 so that the imposed AC sine wave will cause the part to toggle as it
> passes through the '0' crossing of the sine wave.
>
> This toggle point will vary a bit as the component warms up, but the
> fixed adjustment is about as good as any way to use this part as a converter
> from sine wave to square wave.
>
> =================
>
> The alternative would be to double the frequency and then use a flip-flop
> to divide by 2 and get the 50% duty cycle LO drive for the mixer.
>
> This method removes the finicky analog adjustment, but it also requires a
> pretty fast divider chip, depending on what your LO frequency is.

>
> Fairly simple to do up to 30 MHz or so, and it makes the mixer circuitry
> less sensitive to temperature affecting the LO duty cycle.
>
>
> Jim Pennell
> N6BIU

80. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 23:17:38 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <adjhmudss1@nic.grnet.gr>
Source record: 43723

the best thing we can make is a vfo with pll from 1mhz to 500mhz that could
be install in a TX or rx device or were ever the user likes.....
P.S eise elinas?

"Pete Gianakopoulos" <n.gianakopoulos@worldnet.att.net> wrote in message
news:VYAK8.19179$LC3.1393039@bgtnsc04-news.ops.worldnet.att.net...
> Hi folks,
> I've been feeling creative lately, and have been thinking
about
> developing a series of high performance kits, including receivers,
> preselectors, etc. Let me know what any of you would like to see, and
maybe
> I could develop your idea along. The approach that I am thinking of
taking
> is to make the printed circuit board and the parts available, and leave it
> up to the builder for packaging in the enclosure. Interested parties can
> e-mail me directly.
> Thanks!
>
> Pete Gianakopoulos KE9OA
> Chicago, Il.
>
>

81. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 23:29:40 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <EZSK8.21835$UT.1491513@bgtnsc05-news.ops.worldnet.att.net>
Source record: 43689

One think that I have had in the works for awhile has been a good FM tuner design, using a doubly-balanced mixer. I am not sure if I am going to go with a single or a dual conversion design. The hardest things to get ahold of are the TDA1591 multiplex decoder chips and the Toko ABW07-3618 19kHz/38kHz filters. Using my McIntosh MR78 tuner as a test bed, I have had good results. Over most of the audio range, stereo separation is 55dB, and stereo distortion is .08% @ 1kHz. If I can get a line on some of the critical compononts in any quantity, I will definitely persue the endeavor.

Pete KE9OA

john walton <jdwalton@comcast.net> wrote in message
news:DhKK8.113503$Oa1.10905729@bin8.nnrp.aus1.giganews.com...
> It's a little away from ham radio, but I think that a high quality
> FM-broadcast tuner would be a huge winner. The designs used in
mass-market
> receivers really stink compared to the discrete designs of old, and the
> high-end stuff is unapproachable for most mortals. The Tivoli design
with
> its GASFet front would seem to be reminiscent of technology used for 2m
and
> above. I think a kit like this would sell in the tens of thousands of
> units.
>
> "Dale Parfitt" <parinc@gte.net> wrote in message
> news:3CFB6B18.A1DF1459@gte.net...
> >
> >
> > Pete Gianakopoulos wrote:
> >
> > > Hi folks,
> > > I've been feeling creative lately, and have been thinking
> about
> > > developing a series of high performance kits, including receivers,
> > > preselectors, etc. Let me know what any of you would like to see, and
> maybe
> > > I could develop your idea along. The approach that I am thinking of
> taking
> > > is to make the printed circuit board and the parts available, and
leave
> it
> > > up to the builder for packaging in the enclosure. Interested parties
can
> > > e-mail me directly.
> > > Thanks!

> > >
> > > Pete Gianakopoulos KE9OA
> > > Chicago, Il.
> >
> > Having already built one of Pete's hi end receivers
> > (http://www.parelectronics.com/pix/Pg150.jpg
> >
> > (and using it more than ANY of my other receivers) I can tell you, these
> will be
> > 1st class. Pete, from reading mail on the shortwave reflector, there
> seems to
> > be a goo deal of interest in passive preselectors- perhaps using soft
> switching
> > as in the Lowe model that goes with the HF-150.
> > Thanks for a great RX design.
> > Dale W4OP
> >
>
>

82. Re: Hammarlund SP-600

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 23:31:07 UTC
From: Doug <doug@ycsi.net>
Message-ID: <adgu7r$o57$0@63.90.193.226>
Source record: 43690
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

Quick fix is to use a bit of bee's wax on the drive wheel. It provides
enough friction to allow turning of the cap. Also works fine on dial
cord radios where everything has dried out after years of little use.

Good luck

Doug, K7YD
Livingston, MT

Bob wrote:

> The tuning knob lacks friction and doesn't turn the dial. It's a friction
> drive but I don't know what the problem is. Is there a rubber tire that is
> missing? It looks like brass-to-brass and that doesn't make sense. But I
> can't see where a rubber tire would go.
>
> Help please; I don't have a manual. Most manuals wouldn't show an exploded
> view of this complex mechanism anyway.
>
> Bob

83. Re: Terminating HC4066 Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 23:40:21 UTC
From: la8ak.xnd@online.no
Message-ID: <3cfbfb06.56883657@news.online.no>
Source record: 43691

On Thu, 16 May 2002 10:43:22 GMT, "Harold E. Johnson"
<W4ZCB@mchsi.com> wrote:

>
>The FST 3125 from Fairchild, Texas Instruments, Perricom and others exhibits
>under 4 ohms of Rdss, works to somewhere well above 30 MHz, has the switch
>drivers on board, and an Ip3 of above +42 dBm, (With square wave LO) . It
>costs under a buck in single quantities from DigiKey. (TI is $1.02). I've
>measured under 5 dB conversion loss in the "H" mode configuration with both
>MCL TT4:1A transformers at 200 ohms and MCL T1:1T's at 50 ohms, both at 20
>meters. Slightly more using T4:1's. It all gets better (But not a lot) when
>you raise Vdd from 5 volts to 7 volts, max ratings. Available in both SSOP
>and TSSOP.
>
>W4ZCB
>
>
A TI 74HC4066 has ON-resistance of 15 ohm typical, see
http://www-s.ti.com/sc/ds/cd74hct4066.pdf while Philips 74HC4066 has
20 ohm at 9V supply, see
http://www.philipslogic.com/products/hc/pdf/74hc4066.pdf

You normally connect two and two switches in parallel, then you have
typical resistance of 7.5-10 ohm, and it has only academical interest
to choose at better device, particularly when the better device is an
SMD type which isn't very much suitable for amateurs using dead-bug
mounting method.

The CD4069UBE buffer draws 10mA@10V, not certain if the 74HC86 will
draw more current on 9 or 10V. This may work with -10dBm oscillator
level (-30dBm on 200kHz), so I still believe the HC4066 is the right
device to choose for QRP up to 7MHz. Believe the HC86 stage is
described as 74ac86.jpg (never understand why somebody scan and save
as jpg when gif makes much smaller file size and better readability)
at http://www.geocities.com/CapeCanaveral/Lab/9595/fst3125.html .
DL7JGR's notes will give some valuable information to simplify the
construction, but I suspect he looses some gain in the front-end, it
is fairly easy to make a construction with -120dBm sensitivity, at
least it worked for me on 136kHz to hear a signal down below -126dBm
with no RF-stage ahead of 74HC4066, and otherwise quite similar
construction to what I would have used on 7MHz

It is so easy to wind your own transformers, so I don't see the point
in using MCL, they probably saturate long before the mixer.

One problem remain. Since everybody is only concerned about using 50 ohm, I have a problem finding suitable 200 ohm termination amplifier designs. Suppose it isn't just to use a lower gain JFET or J310 with low current, hi

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

84. Re: Hammarlund SP-600

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 23:44:39 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3CFBFF67.4BE75221@visi.com>
Source record: 43692
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

Bob wrote:
>
> The tuning knob lacks friction and doesn't turn the dial. It's a friction
> drive but I don't know what the problem is.

The beveled wheel that turns the dial plate is kept pressed up against
it by a triangular plate mounted to the front of the chassis on 3
floating mount points, with an "S" shaped spring to keep tension on.

In my SP-600, these 3 floating mounts had become locked in place by
dirt, etc. A complete cleaning fixed the problem.

85. Re: Hammarlund SP-600

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-03 23:56:49 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <5nTK8.116655$Oa1.11431613@bin8.nnrp.aus1.giganews.com>
Source record: 43693
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

And where does one get beeswax? Would something else work as well?

I don't think the mechanism is sticky at all. It's just that the brass is too smooth and there is no grip.

I tried some of that non slip goop and it didn't help at all; that's intended for dial string anyway.

It occurred to me to put some solder on the brass but that wouldn't last long and might cause trouble that I won't be able to undo.

I have cleaned and cleaned and even stretched that spring that pushes on the idler shaft and it's still very flaky in tuning.

86. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 00:53:49 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <3CFC0F93.94B9AED2@flash.net>
Source record: 43694

Sorry, that link is bad too. I didn't find any pictures at all on the
main URL!
Steve

Dale Parfitt wrote:
>
>
>
> Dale Parfitt wrote:
>
> > Pete Gianakopoulos wrote:
> >
> > > Hi folks,
> > > I've been feeling creative lately, and have been
> > thinking about
> > > developing a series of high performance kits, including receivers,
> >
> > > preselectors, etc. Let me know what any of you would like to see,
> > and maybe
> > > I could develop your idea along. The approach that I am thinking
> > of taking
> > > is to make the printed circuit board and the parts available, and
> > leave it
> > > up to the builder for packaging in the enclosure. Interested
> > parties can
> > > e-mail me directly.
> > > Thanks!
> > >
> > > Pete Gianakopoulos KE9OA
> > > Chicago, Il.
> >
> > Sorry for the bad link: it should be:
> > (http://www.parelectronics.com/pics/Pg150.jpg
> >
>
> Note, I do not offer the kits- just built up Pete's boards.

87. Re: Hammarlund SP-600

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 01:18:28 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <EzUK8.45280$4i.5201910@bin2.nnrp.aus1.giganews.com>
Source record: 43695
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

The floating mounts are okay; the idler is free to move on them and the S spring is working. I even stretched it a little. I cleaned and cleaned. Still not enough friction.

I am loath to try to reduce the friction in the mechanism, since it doesn't appear to be binding and I have been warned not to add any lubrication anywhere.

I will clean some more.

88. Surplus Junkbox Parts for sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 01:33:18 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <GDUK8.1430$L4.354804@news1.iquest.net>
Source record: 43696
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap,rec.radio.amateur.misc

```
Junkbox Surplus Parts for Sale as of 06/01/2002

Newer Items
============
LM78L62ACZ Volt regulators, TO92 format 5/$3.00 10/$5.00
SMT4403's - Surf Mount 2N4403 PNP's - 200/$5
9.8304 Mhz Crystals, 1/4 in tall - 25 for $7.00
27mH inductors with radial leads - 50 for $7.00

Caps - All new, old stock. No pulls.
====================================
All caps now 50/$3 or 100/$5
====================================
8pf NPO Ceramic - Loose
11pf NPO Ceramic - Loose
12pf NPO ceramics on tape
22pf Kemet Ceramic Caps, 200v, 10%
100pf Axial Mono Caps, 100v, 10%
150pf ceramics, 100v, 10%
470pf Ceramics on paper tape, rated 5% (NPO)
560pf Kemet Ceramic Caps, 200v, 10%
1000pf blue mono caps, 10% 100v
3300pf Kemet Ceramic Caps, 100v, 10%
.01 uF ceramic caps, 10% 100v brand new by Kyocera
and
.01 uF ceramic caps, 20% 50v, new old stock, not used
50/2.50 100/$4

Voltage Regulators
==================
L7805ACV voltage regulators TO220 case. 7/$4 or 15/$7
LM7812 voltage regulators. TO220 case. 5/$4
LM317T Adjust. Positive Voltage Regulator TO220. 6/$5.00 or 12/$8.50

Transistors - New Parts - No Pulls
==========
TP2222 plastic TO92 NPN (House brand 2N2222)50/$4 100/$7
2N3906's plastic TO92. PNP - 50/$4 100/$7
2N3904's plastic TO92. NPN - 50/$4 100/$7
2N3704's plastic TO92, NPN - 50/$4 100/$7

Op AMPS, Comparators
====================
LM741CN - Single Op Amp, 8 Pin Dip, 6 for $2.00
http://www.hep.ph.ic.ac.uk/~hallg/Instrumentation/Data/LM741.pdf
```

BA10324 - LM324 equiv Quad Ground Sense Op Amp 14 pin, 4 for $2.00
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10358 - Dual Ground Sense Op Amp, 8 pin, 5 for $4.00
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10393 - Dual Comparator 8 pin dip, 4 for $2.00
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10339 - Quad Comparator 14 pin, 4 for $2.00
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA4560 - Dual High Slew Op Amp, 4 for $2.00
http://www.rohm.com/products/databook/standard/pdf/ba4560.pdf

Diodes
======
1N4148 - You always need these. 100 for $2.50 These are NEW.

Let me know if you're interested. All prices are post paid to the
USA, unless otherwise noted. I will ship to non USA addresses but we
need to discuss the shipping charges first.

--

==========
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57
==========

89. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 03:08:47 UTC
From: gaschafer@attbi.com
Message-ID: <3cfc2fe4.44204389@netnews.attbi.com>
Source record: 43697

It is usually moisture that gets turned into superheated steam that causes trees to explode or the
bark to be peeled off when lightning strikes.

Wire can be easily vaporized by high currents from lightning. Sometimes while vaporizing it will
explode and scatter particles everywhere. The same thing happens if you use a 12 volt rated
fuse in a 120 volt circuit. The fuse can explode when it blows.

Usually when tower legs split from a lightning strike it is because there was water trapped in the
leg. The high current causes it to turn to steam and the steam splits the leg.

It is very rare for lightning to go through a pole transformer. It does happen with very large
strikes at times but most of the time if lightning hits the main lines it never makes it through the
transformer. Some amount of energy gets through from capacitive coupling within the
transformer but it is greatly reduced. The transformer will saturate with high voltage and limit the
magnetic coupling . Most damaging lightning that comes in on the power line comes from
lightning hitting the secondary line between the transformer and the building. Sometimes large
currents can also be induced into the secondary lines also from other nearby lines that may be
carrying the strike. If you have long runs of secondary line from the pole transformer (120/240)
you will probably have more problems with lightning coming in on the power than if there is not
much secondary line from the transformer. Sometimes it parallels the high voltage lines for a long
distance.

Even underground telephone lines have gotten high surge currents induced in them from
underground utility lines that carried a strike.

The thing to remember is that all lightning strikes are not mega strikes that cause severe damage.
There are many lower level lightning strikes that happen that never cause any damage.
Sometimes these smaller strikes do some damage that is not

recognizable as a lightning strike
and is blamed on some other cause for equipment failure.

73
Gary K4FMX

On Mon, 03 Jun 2002 16:08:19 -0400, w_tom <w_tom1@usa.net> wrote:

> If you have that many examples of rare hot lightning, then
>imagine how many more surges you may have suffered without
>detection. Also lightning may not strip the bark. Lightning
>may be the spark plug that ignites a more powerful fuel such
>as tree sugars which in turn convert water to steam - enough
>energy to blow bark off the tree.
>
> In that previous post, Colin Baliss goes on to discuss where
>destructive energy comes from. For example, in a house where
>wires were blown out of the walls, lightning typically does
>not have sufficient energy. However the utility does. It is
>why the pole transformer ground is so critical to household
>surge protection. Should lightning create a plasma conductor
>from 13Kv or 33Kv primary to 240v secondary feeding the
>building, then long after lightning has terminated, the
>utility is pumping high voltage into the building.
>
> As Colin Baliss writes:
>> ... the energy content of the discharge is relatively
>> low and most of the damage to power plant is caused by
>> 'power follow-through current'. The lightning simply
>> provides a suitable ionized discharge path.
>
> Rather surprised that the aluminum legs were sealed. I
>would have expected them to have substantial breathing just to
>eliminate humidity problems. Too much moisture could even
>result in damage from freezing puddles (elsewhere). You are
>describing a region that averages maybe 6 to 12 strikes per sq
>km per year - variance higher (or lower) across the county.
>It is why good earthing (and sandy soil is a worst earthing)
>is so important.
>
>"Bob Lewis (AA4PB)" wrote:
>>
>> > Alan Taylor of the US Forestry Service demonstrated
>> > that most trees - well in excess of 90% - struck by lightning
>> > leave no appreciable damage.
>> >
>> But I can show you trees in my yard that have the bark stripped off
>> top to bottom. Some have died. I also had an experience in
>> Jacksonville, Fla where the copper disappeared from the inside of the

>> phone wire (pole to pole) while leaving the insulation in tact - still
>> connected to the poles but sagging to the ground. I also helped a
>> friend remove what was left of his aluminum tower after the legs were
>> blown open (inside to outside) on nearly every 10 foot section. We
>> assume that the air inside the legs must have been heated and expanded
>> so rapidly that the tubing burst open.

90. Re: PSK31 without a PC.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 06:40:24 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0206032240.3fa24c8c@posting.google.com>
Source record: 43698

Hi Paul,
start at http://aintel.bi.ehu.es/indice.html

73 de Ivan

91. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 06:50:05 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0206032250.774b95a1@posting.google.com>
Source record: 43699

"Pete Gianakopoulos" <n.gianakopoulos@worldnet.att.net> wrote in message news:<EZSK8.21835$UT.1491513@bgtnsc05-news.ops.worldnet.att.net>...
> One think that I have had in the works for awhile has been a good FM tuner
> design, using a doubly-balanced mixer. I am not sure if I am going to go
> with a single or a dual conversion design. The hardest things to get ahold
> of are the TDA1591 multiplex decoder chips and the Toko ABW07-3618
> 19kHz/38kHz filters. Using my McIntosh MR78 tuner as a test bed, I have had
> good results. Over most of the audio range, stereo separation is 55dB, and
> stereo distortion is .08% @ 1kHz. If I can get a line on some of the
> critical compononts in any quantity, I will definitely persue the endeavor.
>
> Pete KE9OA
>

It seems like the problem with most FM BCB receivers is that they are too sensitive. I once had a Sony receiver, from about 1970, that was quite unsensitive and had no rf stage, but it didn't suffer from overload like a lot of receivers I've tried (admittedly nothing high end). Since the sensitivity isn't needed in most use (because people are only listening to local stations), they might as well get better signal handling capability. Of course, then the sensitivity spec would look bad.

I've picked up a number of Delco digitally tuned car radios (I'm not sure where to look for the part number) for five dollars each at garage sales, and I'm impressed by their FM BCB performance. It looks like they use some sort of transistor in the RF stage intended for the purpose (if I remember, the package has four leads coming out from the center), and then into an IC that has a Delco part number but which I assume is a double balanced mixer of some sort. The limit I'm finding is that I need to change the IF filter in order to get distant stations adjacent to local stations.

But I too have thought about making an FM BCB receiver with the same sort of designing that goes into communication receivers. Of course it would use a diode mixer, and I think I'd start with that, and have whatever ahead of it plug in. Get the IF strip going, I think the real problem would be getting the IF filters, especially so you could have different bandwidths.

If I was going to double conversion, I'd put the IF high enough in frequency so the image rejection of the front end could be reduced. Maybe one could use an SAW filter out of a TV set; sort of wide, but available.

In some ways, it stops there because I wasn't sure what I was doing with it. There was a time when I wondered if I could receive a not quite local station, and I thought a fixed tuned receiver (maybe helical filters at the front) and a crystal controlled local oscillator might be interesting. Or maybe a combination, make it tuneable but allow for switching to a fixed frequency front end for a station (or maybe two) that I really wanted.

But even apart from weak signal use, there are different FM detectors that would be interesting to try out. A pulse counting detector, like a Heathkit once used, has always intrigued me.

Somewhere, I have two articles that popped out of a stack of "The Journal of the AES" that deal with improved stereo demodulation. I haven't seen them in some years, so this is vague. One dealt with using a non-square wave for the regenerated stereo carrier, I think it used Walsh functions. The other used some scheme based on pulse counting, but dealt with deriving the two stereo channels more directly. I must think about where I put the articles, because they were interesting, and covered areas that I hadn't seen elsewhere when it comes to stereo decoders.

Michael VE2BVW

92. FS: Large stock of valves - very cheap

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 07:12:14 UTC
From: arnoldg@c2i.net
Message-ID: <3cfc66fb.4142164@news1.c2i.net>
Source record: 43700
Cross-posted to:
rec.radio.amateur.boatanchors,rec.audio.tubes,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.audio.marketplace

Hello,

These valves are completely new, never used. They are in original
boxes and in mint shape. The valves are mostly HALTRON brand, but
they were a typical 'rebranding' company and got their valves from
well known manufacturers like Philips, Mullard, Siemens etc.

The following are for sale. The price shown are for each valve, and
as you can see, they are very low.

950 pcs DY 87 $ 0,40 HV single rectifier

60 pcs EB 91 $ 0,50 = 6AL5
40 pcs EF 50 $ 0,40 WW2 wideband pentode
20 pcs EF 55 $ 0,50 WW2 wideband radar pentode
200 pcs EF 183 $ 0,50 = 6EH7 remote cutoff pebtode
40 pcs EY 81 $ 0,40 Booster diode 550V 150mA
40 pcs EY 86 $ 0,40 HV single rectifier

220 pcs PABC 80 $ 0,50 triple diode + medium u triode
400 pcs PC 900 $ 3,00 high gm VHF triode + audio
90 pcs PCC 85 $ 0.40 double triode VHF
280 pcs PCF 200 $ 0,50 triode + high gm pentode
350 pcs PCF 201 $ 0,50 Triode + high gm pentode
630 pcs PCF 801 $ 0,50 Triode + high gm pentode
370 pcs PCF 802 $ 0,60 Triodepentode
730 pcs PCH 200 $ 0,50 Triodeheptode

150 pcs PCL 81 $ 0,60 Triode outputpentode
190 pcs PCL 82 $ 0,50 Triode outputpentode Wa 7W
200 pcs PCL 86 $ 0,60 Triode outputpentode Wa 9W
250 pcs PFL 200 $ 0,50 Pentode + high gm outputpentode
(S= 22mA/V Wa 5W)

100 pcs PL 36 $ 0,50 Line outputpentode Wa 12W
170 pcs PL 82 $ 0,50 Output pentode Wa 9W
170 pcs PL 83 $ 0,50 Output pentode Wa 9W
360 pcs PL 84 $ 0,50 Output pentode close to EL 84 l
200 pcs PY 81 $ 0,40 Booster diode 550V 150mA
100 pcs PY 83 $ 0,40 Booster diode 175mA

Even more discount is available if you buy large quantities.

Please contact me by fax (+47 57 69 12 67) or e-mail (arnoldg@c2i.net)
if you are interested

Best regards,

Arnold Goks&#65533;yr
-manager-

DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://www.demostenes.no

Thousands of different valves in stock as well as
sockets,transformers,books,caps,resistors and
other components. Web site is updated every week.
You can order on-line.

93. Re: 6146b lets put this bulb to work

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 09:51:37 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <adkmrj$1q0$1@nic.grnet.gr>
Source record: 43736

ok got the idea thanks for you time......
i hope that i will mannage to get this bulb on the air!
"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3CFDD056.A32403C2@eznec.com...
> The 6146 and 807 are certainly not exactly equivalent tubes, and they
> but they are quite similar. The 807 has 30 watt dissipation vs 25 for
> the 6146 (35 for the 6146B), and the rated screen voltage is a little
> higher for the 807. But in class C service, the 807 was typically run at
> 750 volts, 100 mA for 75 watts input, while the 6146 could be safely
> pushed to 120 mA for 90 watts, and the 6146B was good for 160 mA at 750
> volts in that service. 6146 heater current is a bit higher, but
> interelectrode capacitances and other specifications are similar. While
> there might be some applications where you couldn't replace an 807 with
> a 6146 with minor or no modifications, I think they'd be very rare. I
> wouldn't recommend substituting the other way, though. The 6146 was
> better shielded, so some circuits using a 6146 could become unstable if
> an 807 were substituted for one.
>
> The tubes have different bases, so one can't be a plug-in replacement
> for the other. In that sense, the 6146 is obviously not a "direct"
> replacement.
>
> But you can, with minor modifications at most, use a 6146 in nearly all
> the old Handbook circuits which used an 807.
>
> Roy Lewallen, W7EL
>
> Deos wrote:
> >
> > are you sure You can directly substitute a 6146 for the 807 (just
asking)

94. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 11:38:19 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <cyQdzvIraK$8EAgE@ifwtech.co.uk>
Source record: 43703

w_tom wrote:
> I can't say enough about those application notes from Polyphaser.
> http://www.polyphaser.com/ppc_technical.asp Sometimes they become
>difficult to read because of nouns used. Best to first learn what the
>noun means, then reread to understand the concepts. For example, the
>single point earth ground may be called a bulkhead.

Now might that be a clue about your own highly individual use of the nouns "earth" and "ground"?

The reason Polyphaser call it a "bulkhead" is that they're referring to a physical plate through which all services must pass, and be bonded to equalize their potential in common mode. And the reason they don't call it an "earth ground" is that it is neither earth nor ground.

The "bulkhead" system of equipotential bonding works well, if it's designed and installed correctly. It's useful to consider how this system works, in order to see how household installations fall short - especially if there's a ham in the house.

For example, in broadcast transmitting stations, the "bulkhead" system allows uninterrupted operation (or very nearly) even during a direct strike to the tower - which may happen several times a year. Every electrical cable entering or leaving the transmitter building passes through this bulkhead, and its ground conductor (if it has one) is bonded to it. Conductors that cannot be directly grounded - like the phone lines and the inner conductors of coax cables - are protected by surge arresters that are bonded to the bulkhead; these protect against differential-mode surges appearing at the equipment input/output ports.

The bulkhead plate is also bonded to a very effective earth system - and by earth I really do mean "true dirt". The purpose of the earth system is to provide a path for the lightning current that does <not> pass through the installed equipment in the transmitter building. Because of the resistance and inductance of the earthing system (including the dirt itself), the whole of the bonded installation in the building will "bounce" with respect to ground potential (whatever that may be at the time of the strike) - but that doesn't matter because it's all in the same equipotential "bubble".

Bottom line: if equipment does not experience large surge voltages and currents <inside of itself> it won't be harmed.

The only limitation, as other people have mentioned, is that the equipotential bubble (nice expression, that) must not be punctured by any other incoming current path. At the design stage, this is ensured by

allowing no conductors to enter the building by any other route than the bonding bulkhead. In addition, it's necessary to ensure that no new current paths through the equipment will be created during a strike, due for example to an insulation breakdown, a side-flash through air, or a potential induced magnetically from the huge current pulse flowing in the earth conductor. An effective earth system can ensure that the protected equipment doesn't "bounce" too far with respect to its surroundings, and careful system layout can prevent side-flashes and induced potentials.

That description is of a purpose-designed industrial system, where the designers know that lightning strikes <will> happen, several times a year, so they have to get it right. We all seem agreed that, compared with this ideal system, most household systems are very poor.

Household systems have nothing resembling a bonding bulkhead, or the discipline of bonding all incoming cables to it - and once again, I do mean <all>. Electrical wiring codes generally require some form of equipotential bonding of power ground conductors for routine safety purposes, but there's no way this meets "industrial" lightning protection standards. As already noted, other services such as phone and cable may or may not be bonded to the power ground. Surges can thus get into household systems via any one of the connected services. Once they're in there, very large potentials can develop between different parts of your household electrical system - and that's what kills electronic equipment.

Hams make things even worse by erecting large arrays of lightning attractors, establishing extra earth (and again, I mean true dirt) connections outside of the house, and bringing them all indoors via antenna and rotator cables. Wiring codes may require bonding of all "earthed" electrodes, but these are only for routine shock protection. If there is a nearby lightning surge that creates a significant potential difference between your house electrical earth and the radio earth out there in the backyard, the "earth bonding" and your radio cables are a highway that brings destructive surge currents into the house.

A fortunate few hams, when building a new home in a lightning-prone area, have been able to have all services brought into the building at the same location, where they can be bonded together and to an excellent earth connection. Then they can route all their outgoing radio cables through the same location, and bond them too. Along with this single-point bonding goes an array of differential-mode protectors for conductors that cannot be bonded to ground. That goes a long way towards the industrial-type system, and protection will be good unless some other incoming wiring breaks discipline and bypasses the bonding.

The rest of us, in less lightning-prone areas and with household and ham wiring that has "just growed", just have to do what we can - and keep the insurance paid-up.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
New e-mail: g3sek@ifwtech.co.uk
New website: http://www.ifwtech.co.uk/g3sek

95. Terminating HC4066 mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 12:42:37 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <1B2L8.166831$L76.254101@rwcrnsc53>
Source record: 43704

LA8AK wrote:

> A TI 74HC4066 has ON-resistance of 15 ohm typical, see
> http://www-s.ti.com/sc/ds/cd74hct4066.pdf while Philips 74HC4066 has
> 20 ohm at 9V supply, see
> http://www.philipslogic.com/products/hc/pdf/74hc4066.pdf
>
> You normally connect two and two switches in parallel, then you have
> typical resistance of 7.5-10 ohm, and it has only academical interest
> to choose at better device, particularly when the better device is an
> SMD type which isn't very much suitable for amateurs using dead-bug
> mounting method.

In the "H" mode mixer, a very attractive configuration for Ip3 considerations, the switches are not in parallel. I've never used a 4066 and have no experience with them. The SD5000 series, which started all this I believe, has a high conversion loss due to high Rdss. I have used those and measured variously 10-11 dB CL. It's appreciably more expensive but is a wonderful mixer, I use several in test equipment in the shop where I occasionally NEED high intercepts and G3SBI has measured third order intercepts in the mid +50's using it over volted which immediately made the following filters the culprit in obtaining anything higher.. It may be getting difficult to find, but is also available in DIP. I have had no difficulty with SSOP and have even used a few TSSOP packages in a homebrew workshop. It takes a little care, but you'd better start getting a handle on it, more and more desireable devices are only available in the smaller packages.
>

>
> It is so easy to wind your own transformers, so I don't see the point
> in using MCL, they probably saturate long before the mixer.
>

I have wound many transformers. Using BN43-2402 cores and even BN61 and 43-302 cores. And, I don't work for Mini Circuit Labs. But they have some kind of magic they put in the ferrites they use. I've never been able to match the performance I can get with their transformers. I have little experience with 100 KHz receivers either, but I do use their T1-6T's in a homebrew vector network analyzer that goes down to 50 KHz. For the frequency range you express interest in, you might want to try the TT4-1 rated down to 50 KHz for 200 ohm use or the T1-6T for 50 ohm use. The latter is rated all the way down to 15 KHz at the 3 dB corner. It should be obvious that you cannot measure +50 dBm third order mixer intercepts if you have transformers saturating at +30.

> One problem remain. Since everybody is only concerned about using 50
> ohm, I have a problem finding suitable 200 ohm termination amplifier
> designs. Suppose it isn't just to use a lower gain JFET or J310 with
> low current, hi

Try Wes Haywards lossless feedback JFET. (pp 216, IRFD) excellent reverse isolation, very low noise and can make 200 ohms if you don't like 50.

W4ZCB

96. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 13:08:02 UTC
From: Steve Robertson <ke4oh@yahoo.com>
Message-ID: <3CFCBBB1.77BECF46@yahoo.com>
Source record: 43705

Jeez Louise!!! Just buy a new bottle of Q-Dope already. GC still makes it. I realize this NG is for homebrew, but what's next? Build your own refinery to make the toluene?

73 de Steve, KE4OH

Jim Higgins wrote:

> On Wed, 29 May 2002 00:54:41 -0400, in
> <3CF45F11.16884061@netscape.net>, ".Bill :-)"
> <TheRealExray@netscape.net> wrote:
>
> >Dick Carroll wrote:
> >>
> >> Jim Higgins wrote:
> >>
> >> > Q Dope is polystyrene dissolved in toluene. You can dissolve
> >> > polystyrene in acetone, but it will dry very quickly and may
> >> > wrinkle or shrink excessively. Ethyl Acetate is a good solvent
> >> > for polystyrene, but it also dries awfully fast. I'd stick with
> >> > toluene.
> >> >
> >> > Here's a link to a Material Safety Data Sheet for Q Dope.
> >> > http://www.chess.cornell.edu/Safety/MSDS/Q_Dope.htm
> >> > It's nothing but polystyrene and toluene.
> >> >
> >> > You can make some in a few minutes by dissolving polystyrene
> >> > packing peanuts in toluene. An amazing amount of peanuts will
> >> > dissolve in a bit of toluene, so start off with just a little
> >> > solvent and add more as you go. The peanuts dissolve very
> >> > quickly.
> >> >
> >> > If you want to use hard plastic as the starting point, chip it up
> >> > into pieces small enough to soak in a small amount of toluene in
> >> > a tightly closed container for a week or so. Err on the side of
> >> > way too little toluene because once you soften all the plastic,
> >> > you can always easily stir in more toluene. If you have to add
> >> > more hard plastic, be prepared to wait for it to soften. You can
> >> > hasten the process by stirring - daily, hourly, or constantly,
> >> > depending on how impatient you might be.
> >>
> >> Where do you get toluene? Acetone is available in small quantities, but I've never
> >> seen toluene on the shelf.
> >>
> >> Dick
> >

> >Isn't toluene a major component in lacquer thinner?
>
> Lacquer thinner is usually a hodgepodge of solvents with toluene
> probably being the 3rd or 4th in terms of percentage. It's
> composition varies widely. In some states/areas toluene may even
> be absent for assorted reasons - one being it's a close relative
> of benzene, and the other is a positive implication in causing
> birth defects.
>
> I've never tried making Q-Dope using lacquer thinner, but it's
> definitely worth a try. Lacquer thinner is formulated to dry
> reasonably quickly, but not so fast that the lacquer wrinkles.
> That's the same condition you want for Q-Dope.
>
> --
> Jim Higgins, quasimodo AT yahoo DOT com
> icbm: 33.55.34N, 80.24.21W

97. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 14:24:39 UTC
From: Bill Turner <w7ti@dslextreme.com>
Message-ID: <b3jpfugo2rck1g15fksi7ai5vu9ceo6chs@4ax.com>
Source record: 43706

On Tue, 04 Jun 2002 09:08:02 -0400, Steve Robertson <ke4oh@yahoo.com>
wrote:

>Jeez Louise!!! Just buy a new bottle of Q-Dope already. GC still makes it. I realize this
>NG is for homebrew, but what's next? Build your own refinery to make the toluene?
>
>73 de Steve, KE4OH

A good idea! Directions for building your own refinery can be found at:

http://extra.gamespot.co.uk/pc.gamespot/features/starcraft_sg/rba.html

73, Bill W7TI

98. Re: 6146b lets put this bulb to work

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 14:27:30 UTC
From: Bill Turner <w7ti@dslextreme.com>
Message-ID: <4ejpfu47i4kaisgirsfks7cqog41tnlsh5@4ax.com>
Source record: 43707

On Mon, 3 Jun 2002 12:01:35 +0300, "Deos" <lineoffiretoday@yahoo.com>
wrote:

> I have a 6146b valve and no ideas or schematics to put it to use.
>Hf or vhf schematics would be nice
>
>Does anyone have an idea or something that will help me out?

Old ARRL handbooks from the '50s and '60s will have lots of information
and schematics for the 6146. I've built several transmitters using one.
A great tube.

73, Bill W7TI

99. Re: 6146b lets put this bulb to work

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 16:53:37 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CFCF091.F8D83B96@eznec.com>
Source record: 43708

Older handbooks also have numerous circuits for the 807. You can
directly substitute a 6146 for the 807 in most of these circuits.

Roy Lewallen, W7EL

Bill Turner wrote:
>
> On Mon, 3 Jun 2002 12:01:35 +0300, "Deos" <lineoffiretoday@yahoo.com>
> wrote:
>
> > I have a 6146b valve and no ideas or schematics to put it to use.
> >Hf or vhf schematics would be nice
> >
> >Does anyone have an idea or something that will help me out?
>
> ----------
>
> Old ARRL handbooks from the '50s and '60s will have lots of information
> and schematics for the 6146. I've built several transmitters using one.
> A great tube.
>
> 73, Bill W7TI

100. Re: 6146b lets put this bulb to work

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 17:28:26 UTC
From: k7itm@aol.com
Message-ID: <3200347.0206040928.370f75ce@posting.google.com>
Source record: 43709

I'd guess if you need help of this sort, it would be good for you to try an HF application before you venture into VHF. Try "6146 transmitter schematic" in a Google search. You should get lots of hits. www.qsl.net/n6ev/1957.html was the first one I got, with several 6146 aps mentioned, and the subpage at http://www.qsl.net/n6ev/57-174S.jpg looks like about as simple an application as you'll find. I trust you have a license to transmit...

The valve, of course, is only part of the problem. Do you have parts for the power supply? Around 500V-600V at 150mA or so would be nice. How about a variable capacitor or two for tuning, one of which is going to have to handle over 1kV? Do you have any info on RF construction practices that you can follow?

Cheers,
Tom

"Deos" <lineoffiretoday@yahoo.com> wrote in message news:<adhvhqjch1@nic.grnet.gr>...
> I have a 6146b valve and no ideas or schematics to put it to use.
> Hf or vhf schematics would be nice
>
> Does anyone have an idea or something that will help me out?

101. 222 mhz transverter diagram wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 17:36:52 UTC
From: Handi Ham <okiemansc@yahoo.com>
Message-ID: <UU6L8.986$C91.509@newsread1.prod.itd.earthlink.net>
Source record: 43710

I would like to get on 222 all modes.Does anyone know where to find a good preferably simple diagram for such a transverter or perhaps even a project one someone has.
THANKS,
...Charlie...KC0EH...

102. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 18:04:01 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3CFD0111.33086517@clifto.com>
Source record: 43711

Pete Gianakopoulos wrote:
> I've been feeling creative lately, and have been thinking about
> developing a series of high performance kits, including receivers,
> preselectors, etc. Let me know what any of you would like to see, and maybe
> I could develop your idea along.

A constant in rec.radio.shortwave is the quest for the perfect AM BCB
receiver. I'm sure you could kick some butt with your only competition
being the SRIII and the CCRadio.

--
If spammers weren't stupid, they'd be the idle rich instead of spammers.
- Morely Dotes

103. Re: PSK31 without a PC.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 19:19:46 UTC
From: Paul Breed <pbreed@netburner.com>
Message-ID: <4l4qfug73pl3cvp3lqsf1jea0ebti2u7hu@4ax.com>
Source record: 43717

```
It was a typo on my part, I was looking for a non PC version, not a
non C version.
oops.

Paul (Kl7JG)

On Tue, 4 Jun 2002 17:06:38 -0400, "xpyttl"
<xpyttl_nospam@earthling.net> wrote:

>George Heron of the NJ QRP Club demoed a cute little box last year at
>Dayton. It took a PSK-31 signal and converted it to Morse. He also had a
>little LCD display that would display a few words of the message. The
>little box would take a paddle input and transmit it on PSK-31.
>
>He threatened to kit it, but I don't think he ever did. I think it was
>written up in either QQ or the QRP Homebrewer.
>
>It seems to me that the source for DigiPan is available on their web site.
>Also, a good description of the protocol. I could be mistaken about it
>being the DigiPan site, but I think it was.
>
>I realize that C is a write-only language, but you're going to find it
>tougher to pull the algorithm from someone else's assembler than someone
>else's C. Why specifically a non-C version? Seems like you're eliminating
>99% of the possible sources up front.
>
>..
>
>"Paul Breed" <pbreed@netburner.com> wrote in message
>news:a78nfuk6ouian6plqet4oc8s7dviloss2q@4ax.com...
>> Has anyone built a PSK31 rx that did not need a PC?
>>
>> Specifically has anyone done a non C version of the DSP code?
>>
>> Is the source availible?
>>
>> Where can I find the technical specifics of the PSK31 protocol?
>>
>> Paul (Kl7JG)
>>
>>
>>
>
```

104. Good s-meter for small radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 19:36:59 UTC
From: msenecal@logicon.com
Message-ID: <50ecc828.0206041136.59e12f73@posting.google.com>
Source record: 43712

What's a good meter to use as an S-meter on a small, 9v radio?

105. Plans for homemade sw radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 19:37:41 UTC
From: msenecal@logicon.com
Message-ID: <50ecc828.0206041137.1ecdc748@posting.google.com>
Source record: 43713

Anyone have (or know of) any good plans for a homemade SW radio?

Thanks!

106. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 20:15:48 UTC
From: mikea@mikea.ath.cx
Message-ID: <Ud9L8.8579$cx2.396829840@newssvr16.news.prodigy.com>
Source record: 43714

"Bob Lewis \(AA4PB\)" <rlewis@staffnet.com> wrote:

: But I can show you trees in my yard that have the bark stripped off
: top to bottom. Some have died. I also had an experience in
: Jacksonville, Fla where the copper disappeared from the inside of the
: phone wire (pole to pole) while leaving the insulation in tact - still
: connected to the poles but sagging to the ground. I also helped a
: friend remove what was left of his aluminum tower after the legs were
: blown open (inside to outside) on nearly every 10 foot section. We
: assume that the air inside the legs must have been heated and expanded
: so rapidly that the tubing burst open.

Stripped bark, split-open tubing, and so on, are usually due to
steam explosions from current passage. I have two old-style 7-UP
cans at my summer place in Canada that were closed and full of
7-UP until a storm one fine June afternoon. After the strike, we
couldn't find anything damaged -- until we looked next to the
(miraculously undamaged) microwave oven. The two cans of 7-UP had
been standing, one atop the other, in the corner between the wall
and one side of the microwave.

They were still there, but both had ripped down the side, and
both were empty and dry on the inside. There is a burnt spot on
the surface of each, where they were touching.

We never did find the contents.

--
[T]he claim that brits drink warm beer because we have Lucas
refrigerators is a myth.
-- Tanuki the Raccoon-dog, in asr

107. Re: Return-Loss-Bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 20:26:08 UTC
From: Ian Jackson <ianjackson@g3ohxSPAM-ME-NOT.demon.co.uk>
Message-ID: <MxPDRBAgJS$8Ewy4@g3ohx.demon.co.uk>
Source record: 43715

In article <GhoBlEA9CS$8EwTU@g3ohx.demon.co.uk>, Ian Jackson
<ianjackson@g3ohxSPAM-ME-NOT.demon.co.uk> writes
>In article <3B6AFE38.D9C9F68A@eznec.com>, Roy Lewallen <w7el@eznec.com>
>writes
>>You'll find good information in _Solid State Design for the Radio
>>Amateur_, by DeMaw & Hayward, available from the ARRL.
>>
>>Roy Lewallen, W7EL
>>
>>Frank Worm wrote:
>>>
>>> Anyone know of any good construction manuals
>>> or schematics for a 50 ohm return loss bridge?
>>> TIA
>>> Regards
>>> Frank
>
>Telonic Rho-Tector, attached.
>Ian.
>[A UUEncoded file (Rho-Tector.doc) was included here.]
>
>N.B.....Remove upper-case letters from my address.

Whoops.... Sorry.
Meant to send it direct.
73,
Ian.
N.B.....Remove upper-case letters from my address.

108. Re: PSK31 without a PC.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 21:06:38 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ufqb14nn3f7811@corp.supernews.com>
Source record: 43716

George Heron of the NJ QRP Club demoed a cute little box last year at Dayton. It took a PSK-31 signal and converted it to Morse. He also had a little LCD display that would display a few words of the message. The little box would take a paddle input and transmit it on PSK-31.

He threatened to kit it, but I don't think he ever did. I think it was written up in either QQ or the QRP Homebrewer.

It seems to me that the source for DigiPan is available on their web site. Also, a good description of the protocol. I could be mistaken about it being the DigiPan site, but I think it was.

I realize that C is a write-only language, but you're going to find it tougher to pull the algorithm from someone else's assembler than someone else's C. Why specifically a non-C version? Seems like you're eliminating 99% of the possible sources up front.

..

"Paul Breed" <pbreed@netburner.com> wrote in message news:a78nfuk6ouian6plqet4oc8s7dviloss2q@4ax.com...
> Has anyone built a PSK31 rx that did not need a PC?
>
> Specifically has anyone done a non C version of the DSP code?
>
> Is the source availible?
>
> Where can I find the technical specifics of the PSK31 protocol?
>
> Paul (Kl7JG)
>
>
>

109. 38Khz Crystal,

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 22:17:05 UTC
From: Kev <parker.kREMOVE@btinternet.com>
Message-ID: <adje91$i7p$1@knossos.btinternet.com>
Source record: 43718

Hi

I am looking for a 38Khz crystal in the uk, anyone know of a supplier / or would be willing to send me one (for payment of course).
the small cylinder type.

I broke one off the top of a cheap xmitter I was using to convey my MP3's to the car radio.

any help would be much appreciated.

Kev

110. Re: PA3CKR Frequency squarer for high level mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 22:31:53 UTC
From: la8ak.xnd@online.no
Message-ID: <3cfd38d9.138258335@news.online.no>
Source record: 43719

On Mon, 03 Jun 2002 04:05:05 GMT, Dan Tayloe <dtayloe@cox.net> wrote:

>It seems that they are simply trying to get the best possible 50% duty
>cycle square wave to drive the switches.
>
>- Dan Tayloe, N7VE; Phoenix, Az; Az ScQRPions
>

PA3CKR mailed the Radcom reference to me. It seems that an important
figure text is not shown (or difficult to see) on internet. Radcom
September 1998 pp58, TT, fig.6: ".....The unit shall always have an
input frequency. The LO input amplitude should preferably be +10dBmas
the squarer then takes less current.
Balnce adjustment for 9MHz IF using FST3125 mixer; (1) Set the RF
signal generator to 9MHz at 0dBm. (2) Set LO to 37MHz. (3) Adjust RV1
fir minimum feed-through @9MHz. The mixer should now be correctly
balanced. Do not omit the 270ohm resistor or the squarer will become
unstable. Use ground-plane PCB."

So in a way it seems that the amateur constructor don't really need a
100Mhz oscilloscope, and still the mixer balance is more important to
achieve than what you believe is 50% duty cycle. It may even be easier
to adjust for minimum leakage than spending time with the oscilloscope
to verify the accurate pulse lengths.

I'll now have to try CD4070UBE, CD4077 or 74C86 on +10Vcc for my
experiment. Suppose the resistor values are somewhat higher. Not quite
sure why the 74AC86 circuit uses an inverter and non-inverter to
perform like an inverter, but certainly it is a good idea to use
exclusive-OR (or EX-NOR will probably do the same job) when you only
need inverters and non-inverters. Will try to modify the 4069 for
balance using the described technique.

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

111. Re: Terminating HC4066 mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 22:31:54 UTC
From: la8ak.xnd@online.no
Message-ID: <3cfd3cfb.139316590@news.online.no>
Source record: 43720

On Tue, 04 Jun 2002 12:42:37 GMT, "Harold E. Johnson"
<W4ZCB@mchsi.com> wrote:

>
>Try Wes Haywards lossless feedback JFET. (pp 216, IRFD) excellent reverse
>isolation, very low noise and can make 200 ohms if you don't like 50.
>
>W4ZCB
>
not sure which book you refer to. tried the BFR96 with transformer and
two resistors to choose impedance, but it was a disaster. Used 22R in
series with emitter and 2k2 as feedback from tap on transformer to the
base. BFR96 draw 20mA. Wouldn't work good whether I connected 220 ohm
termination across the transformer or to the tapping. Input impedance
was closest to 200 ohm when the termination was across the transformer
on the output, but a termination across a terminal which has 400 ohm
impedance doesn't make sense to me. Tested over the range 0.5-20MHz.

So it seems that the well proven circuit for 50 ohm stage doesn't work
on 200 ohm.
Used the circuit suggested by DJ8ES, and it is very similar to those
mentioned in fig 16, 17, 18 pp188-189 in Solid state design for the
radio amateur.

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

112. Re: Terminating HC4066 mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 22:49:45 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <dubL8.169711$L76.254291@rwcrnsc53>
Source record: 43722

> >
> >Try Wes Haywards lossless feedback JFET. (pp 216, IRFD) excellent reverse
> >isolation, very low noise and can make 200 ohms if you don't like 50.
> >
> >W4ZCB
> >
> not sure which book you refer to.

Introduction to Radio Frequency Design. ISBN 0-87259-492-0. Been out in hard cover for 20 years, in soft cover for close to 10. Wonderful reference text.

The noiseless feedback design utilizes a 3 winding transformer for feedback and to set the input match. Depending on the transconductance of the Fet and the turns ratio, you can get about anything you want. Just not all at the same time. With a single turn for the source winding, (piece of RG-174 braid) the 200 ohm requirement should be even easier than getting a 50 ohm match. I usually use a number of J-310's to raise the transconductance and to increase the signal handling ability. I haven't cranked through the numbers to see what you'd wind up with for a QRP low current amplifier.

W4ZCB

113. Freq counter advice needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 23:19:48 UTC
From: "P. Ermisch" <paul@ermisch.com>
Message-ID: <oWbL8.104545$352.5001@sccrnsc02>
Source record: 43724

I've found a good deal on an HP counter but the specs state:

channel A: 10hz to 200mhz, 1 megohm impedance
channel B: 50mhz to 225mhz, 50 ohm impedance

I'm a neophyte on homebrew and was hoping to use this for some HF work. The 1M impedance on the counter makes me think I can't use it for HF work without an impedance match. Is this correct or am I confused?

I'm reading specs at http://www.bellelect.com/products/agilent/5384a.htm

Paul KB0LUR

114. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 23:25:35 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <P%bL8.109636$cQ3.3541@sccrnsc01>
Source record: 43725

Pete -

An interesting site on Kitbuilding by WT9W:
http://ww2.netnitco.net/users/wt9w/kit%20building.html

The PC board creation business exists today farther west of you Pete in
Dundee, FAR Circuits
http://www.farcircuits.net

What is provided with Fred's business is the PC board and sometimes a
reprint of the publication article or a set of instructions. This varies
depending upon the author or group asking for the PC boards. The parts and
enclosure is left to the builder - as well as detailed step by step
instructions (aka "HeathKit" style).

What makes a kit high-performance? Good clear instructions, illustrations,
support for beginning kit builders ?

Let's face it, HeathKit had a great business and actually set the bar quite
high for future kit companies.

If Heathkit were running today - I think Elecraft is close to what it would
look like (Manuals on-line for review, before building the kit !):
http://www.elecraft.com

A special Building Resource's Page to provide information and tutorials on
topics, such as good soldering.

Other companies offering well regarded kits: http://www.norcalqrp.com;
http://www.fix.net/jparker/wild.html ; http://www.njqrp.org ,
http://www.smallwonderlabs.com and http://www.tapr.org .

73 de w9gb

"Pete Gianakopoulos" <n.gianakopoulos@worldnet.att.net> wrote in message
news:VYAK8.19179$LC3.1393039@bgtnsc04-news.ops.worldnet.att.net...
> Hi folks,
> I've been feeling creative lately, and have been thinking
about
> developing a series of high performance kits, including receivers,
> preselectors, etc. Let me know what any of you would like to see, and
maybe
> I could develop your idea along. The approach that I am thinking of
taking
> is to make the printed circuit board and the parts available, and leave it
> up to the builder for packaging in the enclosure. Interested parties can
> e-mail me directly.

> Thanks!
>
> Pete Gianakopoulos KE9OA
> Chicago, Il.
>
>

115. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-04 23:39:27 UTC
From: k7itm@aol.com
Message-ID: <3200347.0206041539.40d79abd@posting.google.com>
Source record: 43726

Yes, there are different kinds of packing "peanuts". A lot of the "modern" ones are water-soluble -- they typically are a gray-beige color. Of those that aren't, there are still at least a couple varieties I'm aware of...if it doesn't dissolve readily in toluene, xylene, MEK or acetone, it is almost certainly NOT polystyrene. Also, don't count on the ones that are polystyrene to be the pure, low-loss polystyrene that we'd most like to use on coils, though they're likely to be plenty good enough for most of our work. You can also use styrofoam blocks...hunks of the molded packing material, for instance. I'd avoid using the pink or greeen type...stick with white.

Like Roy, says, avoid Plexiglass -- that's acrylic: "polymethyl methacrylate" in most cases, I think. If that's right, its dissipation factor at 1MHz is around 0.014, compared with about .00007 for pure polystyrene. Polycarbonate is only a little better than the acrylic.

I've found toluene, xylene, acetone and MEK all at various of the major "home improvement center" stores like Lowe's and Home Depot. (OK, I do admit that I now have more xylene than I'm likely to use in my lifetime...)

I've found that a polyethylene bottle will hold the home-made "Q-dope" just fine, BUT the solvent slowly evaporates through the polyethylene. You might want to use a glass bottle if you have one available.

Cheers,
Tom

Bob Liesenfeld <wb0poq@visi.com> wrote in message news:<3CF44603.F3FE7550@visi.com>...
> Jim Higgins wrote:
> >
> >
> > You can make some in a few minutes by dissolving polystyrene
> > packing peanuts in toluene. An amazing amount of peanuts will
> > dissolve in a bit of toluene, so start off with just a little
> > solvent and add more as you go. The peanuts dissolve very
> > quickly.
> >
> Thanks for the very informative response. Are there more than one
> type of packing peanut, and if so, how may I recognize polystyrene?
>
> Thanks!
>
> Bob WB0POQ

116. Re: Plans for homemade sw radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 00:28:47 UTC
From: Walter <walter@accessus.net>
Message-ID: <3XcL8.119690$jm.12025391@bin6.nnrp.aus1.giganews.com>
Source record: 43727

Not sure what you type of receiver you are thinking
of building, but here are some URLS.

http://members.aol.com/gapershi/radio/radio.htm

http://www.ai.com/receivers/

and try google.com, type in homebrew,shortwave
receivers. There are 10 pages of hits.

73...Walter, AG5P

"Matt Senecal" <msenecal@logicon.com> wrote in message
news:50ecc828.0206041137.1ecdc748@posting.google.com...
> Anyone have (or know of) any good plans for a homemade SW radio?
>
> Thanks!
>

117. Re: Good s-meter for small radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 00:33:27 UTC
From: Walter <walter@accessus.net>
Message-ID: <r%cL8.113074$%y.11860358@bin4.nnrp.aus1.giganews.com>
Source record: 43728

Are you sure that small radio is worth the effort of building up
an S meter circuit?

Would a voltmeter paralleled in the audio output give you
enough of a reading of peaks and nulls?

73...Walter, AG5P

"Matt Senecal" <msenecal@logicon.com> wrote in message
news:50ecc828.0206041136.59e12f73@posting.google.com...
> What's a good meter to use as an S-meter on a small, 9v radio?
>

118. Re: Freq counter advice needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 02:10:56 UTC
From: w4pqwhs@aol.com
Message-ID: <20020604221056.28411.00000109@mb-mh.aol.com>
Source record: 43729

>
>I've found a good deal on an HP counter but the specs state:
>
>channel A: 10hz to 200mhz, 1 megohm impedance
>channel B: 50mhz to 225mhz, 50 ohm impedance

Paul, the 1Meg input means that the scope probe will not load a normal circuit under test,the 50ohm input was provided to do certain measurements in 50 ohm circuits,..the 50 ohm input would not be of much use in regular ham radio measurements..One thing about an older scope ,like some of the HP and Tec models is lack of affordable service parts.good luck Harold W4PQW

119. Re: Freq counter advice needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 02:48:29 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3cfd79ac.35934761@news.peakpeak.com>
Source record: 43730

On Tue, 04 Jun 2002 23:19:48 GMT, "P. Ermisch" <paul@ermisch.com>
wrote:

>I've found a good deal on an HP counter but the specs state:
>
>channel A: 10hz to 200mhz, 1 megohm impedance
>channel B: 50mhz to 225mhz, 50 ohm impedance
>
>I'm a neophyte on homebrew and was hoping to use this for some HF work. The
>1M impedance on the counter makes me think I can't use it for HF work
>without an impedance match. Is this correct or am I confused?
>

That input arrangement is fairly common. You'll probably find that the
1 Meg input works well with a 10:1 scope probe, which gives you a
shielded test lead and allows measurement of higher level signals
without damaging the counter's inmput circuit.

Use a dummy load as the HF termination, with a "T" adapter for
probing.

At VHF with the 50 ohm input, be sure to use an attenuator between the
rig and the counter so you don't exceed safe input voltage. Replacing
burnt-out prescaler chip gets expensive!

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

120. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 03:22:33 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3cfd7dcf.36993973@news.peakpeak.com>
Source record: 43731

On Tue, 4 Jun 2002 12:38:19 +0100, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

>...Electrical wiring codes generally require some form of
>equipotential bonding of power ground conductors for routine safety
>purposes, but there's no way this meets "industrial" lightning
>protection standards. As already noted, other services such as phone and
>cable may or may not be bonded to the power ground.

The "National Electrical Code" does require that all these things be
bonded to the same grounding electrode as the power service. It also
makes the driven ground rod the electrode of _last_ resort, not the
preferred method. But the discipline to do these things right often is
lacking, unless the inspector holds the installers' feet to the fire.

In too many cases, that doesn't happen. This is especially true for
lines addeded after the house is built, often with no permit or
inspection.

A four-foot toy "ground rod" completely isolated from the electric
service electrode seems to be the norm for cable TV installers in my
area. Bonding the grounds together is something I haven't seen in
either of the two houses I've owned. This puts the cable box, TV, VCR,
etc. right in the surge current path between TV cable and the power
line. When the power line takes a strike, the results are not pretty!

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

121. Re: Freq counter advice needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 04:42:27 UTC
From: "P. Ermisch" <paul@ermisch.com>
Message-ID: <TEgL8.63419$0A2.52493@rwcrnsc54>
Source record: 43732

<tmgroat at peakpeak dot com (Tim Groat)> wrote in message
news:3cfd79ac.35934761@news.peakpeak.com...
> On Tue, 04 Jun 2002 23:19:48 GMT, "P. Ermisch" <paul@ermisch.com>
> wrote:
>
> >I've found a good deal on an HP counter but the specs state:
> >
> >channel A: 10hz to 200mhz, 1 megohm impedance
> >channel B: 50mhz to 225mhz, 50 ohm impedance
> >
> >I'm a neophyte on homebrew and was hoping to use this for some HF work.
The
> >1M impedance on the counter makes me think I can't use it for HF work
> >without an impedance match. Is this correct or am I confused?
> >
>
> That input arrangement is fairly common. You'll probably find that the
> 1 Meg input works well with a 10:1 scope probe, which gives you a
> shielded test lead and allows measurement of higher level signals
> without damaging the counter's inmput circuit.
>
> Use a dummy load as the HF termination, with a "T" adapter for
> probing.
<stuff deleted>

Ah, OK, I understand that setup. My thanks to you and W4PQW.

Paul KB0LUR

122. Re: 222 mhz transverter diagram wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 04:51:24 UTC
From: "P. Ermisch" <paul@ermisch.com>
Message-ID: <gNgL8.111911$cQ3.3719@sccrnsc01>
Source record: 43733

http://www.w1ghz.org/222xvtr/222.htm

"Handi Ham" <okiemansc@yahoo.com> wrote in message
news:UU6L8.986$C91.509@newsread1.prod.itd.earthlink.net...
> I would like to get on 222 all modes.Does anyone know where to find a good
> preferably simple diagram for such a transverter or perhaps even a project
> one someone has.
> THANKS,
> ...Charlie...KC0EH...
>
>

123. Re: 38Khz Crystal,

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 07:57:08 UTC
From: John Hague <John.Hague@philips.com>
Message-ID: <3CFDC454.4CFA9953@philips.com>
Source record: 43734

Kev wrote:

> Hi
>
> I am looking for a 38Khz crystal in the uk, anyone know of a supplier / or
> would be willing to send me one (for payment of course).
> the small cylinder type.
>
> I broke one off the top of a cheap xmitter I was using to convey my MP3's to
> the car radio.
>
> any help would be much appreciated.
>
> Kev

Kev

If you have trouble finding a supplier, you could try the Crystals Swapping Board at:

http://www.senac.com/boards/880/

Regards

John, G4GOY

124. Re: 6146b lets put this bulb to work

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 08:48:22 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CFDD056.A32403C2@eznec.com>
Source record: 43735

The 6146 and 807 are certainly not exactly equivalent tubes, and they but they are quite similar. The 807 has 30 watt dissipation vs 25 for the 6146 (35 for the 6146B), and the rated screen voltage is a little higher for the 807. But in class C service, the 807 was typically run at 750 volts, 100 mA for 75 watts input, while the 6146 could be safely pushed to 120 mA for 90 watts, and the 6146B was good for 160 mA at 750 volts in that service. 6146 heater current is a bit higher, but interelectrode capacitances and other specifications are similar. While there might be some applications where you couldn't replace an 807 with a 6146 with minor or no modifications, I think they'd be very rare. I wouldn't recommend substituting the other way, though. The 6146 was better shielded, so some circuits using a 6146 could become unstable if an 807 were substituted for one.

The tubes have different bases, so one can't be a plug-in replacement for the other. In that sense, the 6146 is obviously not a "direct" replacement.

But you can, with minor modifications at most, use a 6146 in nearly all the old Handbook circuits which used an 807.

Roy Lewallen, W7EL

Deos wrote:
>
> are you sure You can directly substitute a 6146 for the 807 (just asking)

125. Re: Freq counter advice needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 10:55:06 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ufrrieddulunb2@corp.supernews.com>
Source record: 43737

Keep in mind, it depends on what you are doing.

If you have a circuit under test, and you want to feed the output of the circuit, presumably a circuit with a very low level output, directly into the counter, then a 50 ohm input impedance is a useful thing, presuming, of course, that the circuit was designed for 50 ohms. While the final output stage of amateur gear is typically designed for 50 ohms, there is no reason that earlier stages would be.

On the other hand, if you are poking around in a running circuit that is already terminated, you want as high an impedance on the test equipment as possible, in order not to load the circuit under test. Inputs to mixers and the like frequently have impedances of a k or two ... sticking a 50 ohm probe on one of those would seriously upset the circuit. Some sensing circuits have far higher impedances, as do the gates of FETs. Imagine putting that 50 ohm probe onto the input of a circuit with a few megs of input impedance. Virtually all the current is going to go into the counter, and the circuit won't be able to work at all.

..

"P. Ermisch" <paul@ermisch.com> wrote in message
news:oWbL8.104545$352.5001@sccrnsc02...
> I've found a good deal on an HP counter but the specs state:
>
> channel A: 10hz to 200mhz, 1 megohm impedance
> channel B: 50mhz to 225mhz, 50 ohm impedance
>
> I'm a neophyte on homebrew and was hoping to use this for some HF work.
The
> 1M impedance on the counter makes me think I can't use it for HF work
> without an impedance match. Is this correct or am I confused?
>
> I'm reading specs at http://www.bellelect.com/products/agilent/5384a.htm
>
> Paul KB0LUR
>
>

126. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 11:19:25 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <1tmL8.24522$UT.1695005@bgtnsc05-news.ops.worldnet.att.net>
Source record: 43738

Actually, I do have a MW only variation of my general coverage design. This design used a Phillips TDA1072 as the 2nd I.F. subsystem. The main thing is getting those variable caps for the preselector. Performance of this unit is similar to an AOR7030 with a Kiwa loop. I have made these side by side comparisons. Right now, I am using an Analog Devices AD9851 DDS for LO injection, but I will be experimenting with a varactor tuned VFO. Another MW/LW unit that I built used the Motorola MC13030 dual conversion receiver on a chip. Unfortunately, Motorola decided to discontinue this device. Too bad; this was a good device.

Pete KE9OA

Clifton T. Sharp Jr. <clifto@clifto.com> wrote in message news:3CFD0111.33086517@clifto.com...
> Pete Gianakopoulos wrote:
> > I've been feeling creative lately, and have been thinking about
> > developing a series of high performance kits, including receivers,
> > preselectors, etc. Let me know what any of you would like to see, and maybe
> > I could develop your idea along.
>
> A constant in rec.radio.shortwave is the quest for the perfect AM BCB
> receiver. I'm sure you could kick some butt with your only competition
> being the SRIII and the CCRadio.
>
> --
> If spammers weren't stupid, they'd be the idle rich instead of spammers.
> - Morely Dotes

127. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 11:22:44 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <8wmL8.24526$UT.1695473@bgtnsc05-news.ops.worldnet.att.net>
Source record: 43739

I do know Fred personally; we have talked over the years about putting
something together. Now, as far as board houses.....there is one
place up in Wheeling that I used to deal with, called Superior Printed
Circuits.
Anyway, I am not sure if you are in the Chicago area, but if you want to see
one of the receivers, I was thinking about bring one of them to the Wheaton
hamfest this weekend.

Pete KE9OA

w9gb <gregory.beat@attbi.com> wrote in message
news:P%bL8.109636$cQ3.3541@sccrnsc01...
> Pete -
>
> An interesting site on Kitbuilding by WT9W:
> http://ww2.netnitco.net/users/wt9w/kit%20building.html
>
> The PC board creation business exists today farther west of you Pete in
> Dundee, FAR Circuits
> http://www.farcircuits.net
>
> What is provided with Fred's business is the PC board and sometimes a
> reprint of the publication article or a set of instructions. This varies
> depending upon the author or group asking for the PC boards. The parts
and
> enclosure is left to the builder - as well as detailed step by step
> instructions (aka "HeathKit" style).
>
> What makes a kit high-performance? Good clear instructions,
illustrations,
> support for beginning kit builders ?
>
> Let's face it, HeathKit had a great business and actually set the bar
quite
> high for future kit companies.
>
> If Heathkit were running today - I think Elecraft is close to what it
would
> look like (Manuals on-line for review, before building the kit !):
> http://www.elecraft.com
>
> A special Building Resource's Page to provide information and tutorials on
> topics, such as good soldering.
>
> Other companies offering well regarded kits: http://www.norcalqrp.com;

> http://www.fix.net/jparker/wild.html ; http://www.njqrp.org ,
> http://www.smallwonderlabs.com and http://www.tapr.org .
>
>
> 73 de w9gb
>
> "Pete Gianakopoulos" <n.gianakopoulos@worldnet.att.net> wrote in message
> news:VYAK8.19179$LC3.1393039@bgtnsc04-news.ops.worldnet.att.net...
> > Hi folks,
> > I've been feeling creative lately, and have been thinking
> about
> > developing a series of high performance kits, including receivers,
> > preselectors, etc. Let me know what any of you would like to see, and
> maybe
> > I could develop your idea along. The approach that I am thinking of
> taking
> > is to make the printed circuit board and the parts available, and leave
it
> > up to the builder for packaging in the enclosure. Interested parties can
> > e-mail me directly.
> > Thanks!
> >
> > Pete Gianakopoulos KE9OA
> > Chicago, Il.
> >
> >
>
>

128. Re: Plans for homemade sw radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 13:50:16 UTC
From: msenecal@logicon.com
Message-ID: <50ecc828.0206050550.3bce00d8@posting.google.com>
Source record: 43741

Perfect. Thanks!

---Matt

"Walter" <walter@accessus.net> wrote in message
news:<3XcL8.119690$jm.12025391@bin6.nnrp.aus1.giganews.com>...
> Not sure what you type of receiver you are thinking
> of building, but here are some URLS.
>
> http://members.aol.com/gapershi/radio/radio.htm
>
> http://www.ai.com/receivers/
>
> and try google.com, type in homebrew,shortwave
> receivers. There are 10 pages of hits.
>
> 73...Walter, AG5P
>
>
>
>
>
> "Matt Senecal" <msenecal@logicon.com> wrote in message
> news:50ecc828.0206041137.1ecdc748@posting.google.com...
> > Anyone have (or know of) any good plans for a homemade SW radio?
> >
> > Thanks!
> >

129. Re: 38Khz Crystal,

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 14:53:26 UTC
From: la8ak.xnd@online.no
Message-ID: <3cfd4055.140174717@news.online.no>
Source record: 43742

On Tue, 4 Jun 2002 22:17:05 +0000 (UTC), "Kev"
<parker.kREMOVE@btinternet.com> wrote:

>Hi
>
>I am looking for a 38Khz crystal in the uk, anyone know of a supplier / or
>would be willing to send me one (for payment of course).
>the small cylinder type.
>
>I broke one off the top of a cheap xmitter I was using to convey my MP3's to
>the car radio.
>

If you check the posters dated around 27 Dec 2001 02:04:22 GMT with
subject "Re: Need 19KHz Xtal", you would probably find some useful
information, the first post in the thread as I have saved is written
by, "Clyde R. Shappee" <cshappee@ieee.org>
--
remove ,xnd to reply

130. SP-600 dial slip fix

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 17:21:29 UTC
From: msix@plato.nmia.com
Message-ID: <tMrL8.283363$%u2.47034@atlpnn01.usenetserver.com>
Source record: 43743

Loosen the 3 screws holding the logging scale.
Press dial down and to the right firmly, then tighten.
GL John W7ZFB

131. Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 17:55:19 UTC
From: Rob <Pse@NoEmail.Com>
Message-ID: <FgsL8.2511$H67.13640@tor-nn1.netcom.ca>
Source record: 43744
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hi,

After 10 years of sitting in a box, I just set-up my old Drake C line (R4C and T4XC). The R4C is working great. But the T4XC is giving me problems. Since it is getting impossible to find anyone in Canada to fix these old radio, perhaps someone can give me some advice.

Problem 1

When I operate the in "Separate mode", everything seems to work pretty well. But when I go to "transceive" mode (either the R4C or T4XC VFO is used for both transmitting and receiving), problems start. At first it works! But after a while, I hear a tone in the receiver. What is really weird is that when I can tap on the cabinet of the T4XC transmitter, the S meter on the R4C moves and I can hear it in the receiver while in RECEIVE mode. It seems like my old T4XC has a hidden microphone (smile). It must be some sort of weird feedback or ground loop.

If I disconnect the INJ (injection) cable the tone/ feedback disappears. Also when I go back to the separate mode, the tone / feedback disappears. Right now the only way I can operate is in "Separate" mode. I have been getting pretty good audio reports on the air.

Does anyone else experienced this? WHat might be wrong? Perhaps a blocking capacitor has gone in the Injection circuit? I doubt it is serious. But I need some help tracking the faulty part down. Any suggestions would be appreciated.

Problem 2

When I tune up on 20 meters, I initially get over 175 watts output power! But it soon drops to 100 watts. The power sometimes fluctuate rapidly at times during tune up between 100 and 175 watts. (The plate current also fluctuates between 300 and 450 mils). It can be a challenge at times to tune it. The problem is intermittent.

Any ideas? It looks like another capacitor has gone? How do I track down the faulty component?

Rob
P.S. I really wish I had a VTVM!!

132. Re: Hammarlund SP-600

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 18:08:07 UTC
From: lbrty4us@aol.com
Message-ID: <205ef942.0206051008.21b1127d@posting.google.com>
Source record: 43745
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

> The beveled wheel that turns the dial plate is kept pressed up against
> it by a triangular plate mounted to the front of the chassis on 3
> floating mount points, with an "S" shaped spring to keep tension on.

When they were in regular use, the wear was taken care of by outright replacement of dial assy companents at regular overhauls. I have had one set where the cleaning was futile that required me to drift the three fixed pins of the floating mount further toward the OD of the dial, to obtain a bit more travel & tension in the worn mechanism.

133. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 18:19:54 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CFE564A.82790106@netscape.net>
Source record: 43746
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Rob wrote:

> When I tune up on 20 meters, I initially get over 175 watts output power!
> But it soon drops to 100 watts. The power sometimes fluctuate rapidly at
> times during tune up between 100 and 175 watts. (The plate current also
> fluctuates between 300 and 450 mils). It can be a challenge at times to
> tune it. The problem is intermittent.

That could be a bandswitch contact...or ant relay if you ever see it happen on other bands. My old Galaxy xcvr does both but is somewhat tame after a good cleaning with De-Oxit and burnishing the ant relay contacts.

-Bill

134. Re: SP-600 dial slip fix

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 19:29:01 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <1EtL8.139408$Oa1.13414199@bin8.nnrp.aus1.giganews.com>
Source record: 43597

Ah, this looks like the fix I am looking for!

Of course the front panel has to come off, not a five minute task.

Thank you.

135. oscilloscope as monitor scope?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 21:01:54 UTC
From: gschwab@florida-knife.com
Message-ID: <451250af.0206051301.167277ec@posting.google.com>
Source record: 43598

Does anyone here know how I might use an oscilloscope as a monitor scope?
I have a 15 Mhz scope and would like to "see" my transmitters output.
Any help greatly appreciated!
Thanks
George

136. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 21:16:25 UTC
From: Dave Edwards <kd2e@comcast.net>
Message-ID: <JcvL8.128$Qg.42204@bin6.nnrp.aus1.giganews.com>
Source record: 43599
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I agree with Bill....It is like one of those things that goes 'bump' in the night.
I would first suspect a tube has to be reseated. Make sure all connectors are tight, and move each control on the front panel while listening to see if the sound changes. If the cause is a BAD tube, listen to the sound and tap each tube lightltly with the eraser end of a pencil....see if the sound is effected by a particular tube.
You can tap on other components with the pencil while you are at it.
Regards...Dave
"Rob" <Pse@NoEmail.Com> wrote in message
news:FgsL8.2511$H67.13640@tor-nn1.netcom.ca...
> Hi,
>
> After 10 years of sitting in a box, I just set-up my old Drake C line (R4C
> and T4XC). The R4C is working great. But the T4XC is giving me problems.
> Since it is getting impossible to find anyone in Canada to fix these old
> radio, perhaps someone can give me some advice.
>
> Problem 1
>
> When I operate the in "Separate mode", everything seems to work pretty
well.
> But when I go to "transceive" mode (either the R4C or T4XC VFO is used for
> both transmitting and receiving), problems start. At first it works! But
> after a while, I hear a tone in the receiver. What is really weird is
that
> when I can tap on the cabinet of the T4XC transmitter, the S meter on the
> R4C moves and I can hear it in the receiver while in RECEIVE mode. It
seems
> like my old T4XC has a hidden microphone (smile). It must be some sort of
> weird feedback or ground loop.
>
> If I disconnect the INJ (injection) cable the tone/ feedback disappears.
> Also when I go back to the separate mode, the tone / feedback disappears.
> Right now the only way I can operate is in "Separate" mode. I have been
> getting pretty good audio reports on the air.
>
> Does anyone else experienced this? WHat might be wrong? Perhaps a
blocking
> capacitor has gone in the Injection circuit? I doubt it is serious. But I
> need some help tracking the faulty part down. Any suggestions would be
> appreciated.
>

> Problem 2
>
> When I tune up on 20 meters, I initially get over 175 watts output power!
> But it soon drops to 100 watts. The power sometimes fluctuate rapidly at
> times during tune up between 100 and 175 watts. (The plate current also
> fluctuates between 300 and 450 mils). It can be a challenge at times to
> tune it. The problem is intermittent.
>
> Any ideas? It looks like another capacitor has gone? How do I track down
> the faulty component?
>
> Rob
> P.S. I really wish I had a VTVM!!
>
>
>
>
>
>
>
>

137. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 22:35:50 UTC
From: Rob <Pse@NoEmail.Com>
Message-ID: <DnwL8.2547$H67.13634@tor-nn1.netcom.ca>
Source record: 43600
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I have opened up the T4XC and R4C and inspected the tubes. They all look pretty good. They are firmly pushed into their seats. But I will try your eraser trick.

The problem only occurs after I have transmitted for awhile. Then I start hearing the tone/hum in my speakers in "Transceive mode". When I tap on the T4XC cabinet, I hear the tapping in my speaker and see the S meter jump on the R4C while RECEIVING. Very strange!

Recently, I have also been getting reports of a 60 hz hum in my SSB and CW transmissions. Maybe the problem is originating in the AC4 power supply.

But keep the suggestions coming. I think it should be fairly easy to isolate the problem

73
Rob

"Dave Edwards" <kd2e@comcast.net> wrote in message
news:JcvL8.128$Qg.42204@bin6.nnrp.aus1.giganews.com...
> I agree with Bill....It is like one of those things that goes 'bump' in
the
> night.
> I would first suspect a tube has to be reseated. Make sure all connectors
> are tight, and move each control on the front panel while listening to see
> if the sound changes. If the cause is a BAD tube, listen to the sound and
> tap each tube lightltly with the eraser end of a pencil....see if the
sound
> is effected by a particular tube.
> You can tap on other components with the pencil while you are at it.
> Regards...Dave
> "Rob" <Pse@NoEmail.Com> wrote in message
> news:FgsL8.2511$H67.13640@tor-nn1.netcom.ca...
> > Hi,
> >
> > After 10 years of sitting in a box, I just set-up my old Drake C line
(R4C
> > and T4XC). The R4C is working great. But the T4XC is giving me
problems.
> > Since it is getting impossible to find anyone in Canada to fix these old
> > radio, perhaps someone can give me some advice.
> >
> > Problem 1
> >
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> well.
> > But when I go to "transceive" mode (either the R4C or T4XC VFO is used
for
> > both transmitting and receiving), problems start. At first it works!
But
> > after a while, I hear a tone in the receiver. What is really weird is
> that
> > when I can tap on the cabinet of the T4XC transmitter, the S meter on
the
> > R4C moves and I can hear it in the receiver while in RECEIVE mode. It
> seems
> > like my old T4XC has a hidden microphone (smile). It must be some sort
of
> > weird feedback or ground loop.
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> > If I disconnect the INJ (injection) cable the tone/ feedback disappears.
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disappears.
> > Right now the only way I can operate is in "Separate" mode. I have been
> > getting pretty good audio reports on the air.
> >
> > Does anyone else experienced this? WHat might be wrong? Perhaps a
> blocking
> > capacitor has gone in the Injection circuit? I doubt it is serious. But
I
> > need some help tracking the faulty part down. Any suggestions would be
> > appreciated.
> >
> > Problem 2
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power!
> > But it soon drops to 100 watts. The power sometimes fluctuate rapidly
at
> > times during tune up between 100 and 175 watts. (The plate current also
> > fluctuates between 300 and 450 mils). It can be a challenge at times to
> > tune it. The problem is intermittent.
> >
> > Any ideas? It looks like another capacitor has gone? How do I track
down
> > the faulty component?
> >
> > Rob
> > P.S. I really wish I had a VTVM!!
> >
> >
> >
> >
> >
> >

> >
> >
>
>

138. Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 22:53:10 UTC
From: Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <adm4omoip9@woodrow.ucdavis.edu>
Source record: 43601
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

In reference to another thread where someone asked questions about converting an amplifier from 6LQ6 "sweep tubes" over to 4CX250B "ceramic" tubes...

Here's a web link to a few photos of a Dentron GLA-1000B which was converted over to a pair of 4CX250's by an Italian Amateur Radio Operator. I also have pictures of the same amplifier with some of the newer Russian GU7 series tubes on board, but that's off topic. Anyway have a look if your interested.

cheers
skipp@pilotNOSPAMPLEASE.ucdavis.edu

http://sonic.ucdavis.edu/dentron

The main page for the sonic server..

http://sonic.ucdavis.edu
chow for now
skipp

139. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 23:29:09 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3cfe9cba.479812@news.freeserve.net>
Source record: 43602
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

On Wed, 5 Jun 2002 18:35:50 -0400, "Rob" <Pse@NoEmail.Com> wrote:

>I have opened up the T4XC and R4C and inspected the tubes. They all look
>pretty good. They are firmly pushed into their seats. But I will try your
>eraser trick.
>
>The problem only occurs after I have transmitted for awhile. Then I start
>hearing the tone/hum in my speakers in "Transceive mode". When I tap on the
>T4XC cabinet, I hear the tapping in my speaker and see the S meter jump on
>the R4C while RECEIVING. Very strange!
>
>Recently, I have also been getting reports of a 60 hz hum in my SSB and CW
>transmissions. Maybe the problem is originating in the AC4 power supply.
>
>But keep the suggestions coming. I think it should be fairly easy to
>isolate the problem
>
>73
>Rob
>
>"Dave Edwards" <kd2e@comcast.net> wrote in message
>news:JcvL8.128$Qg.42204@bin6.nnrp.aus1.giganews.com...
>> I agree with Bill....It is like one of those things that goes 'bump' in
>the
>> night.
>> I would first suspect a tube has to be reseated. Make sure all connectors
>> are tight, and move each control on the front panel while listening to see
>> if the sound changes. If the cause is a BAD tube, listen to the sound and
>> tap each tube lightltly with the eraser end of a pencil....see if the
>sound
>> is effected by a particular tube.
>> You can tap on other components with the pencil while you are at it.
>> Regards...Dave
>> "Rob" <Pse@NoEmail.Com> wrote in message
>> news:FgsL8.2511$H67.13640@tor-nn1.netcom.ca...
>> > Hi,
>> >
>> > After 10 years of sitting in a box, I just set-up my old Drake C line
>(R4C
>> > and T4XC). The R4C is working great. But the T4XC is giving me
>problems.
>> > Since it is getting impossible to find anyone in Canada to fix these old
>> > radio, perhaps someone can give me some advice.

>> >
>> > Problem 1
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>> > When I operate the in "Separate mode", everything seems to work pretty
>> well.
>> > But when I go to "transceive" mode (either the R4C or T4XC VFO is used
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>> > both transmitting and receiving), problems start. At first it works!
>But
>> > after a while, I hear a tone in the receiver. What is really weird is
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>> > when I can tap on the cabinet of the T4XC transmitter, the S meter on
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>> > R4C moves and I can hear it in the receiver while in RECEIVE mode. It
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>> > like my old T4XC has a hidden microphone (smile). It must be some sort
>of
>> > weird feedback or ground loop.
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>> > If I disconnect the INJ (injection) cable the tone/ feedback disappears.
>> > Also when I go back to the separate mode, the tone / feedback
>disappears.
>> > Right now the only way I can operate is in "Separate" mode. I have been
>> > getting pretty good audio reports on the air.
>> >
>> > Does anyone else experienced this? WHat might be wrong? Perhaps a
>> blocking
>> > capacitor has gone in the Injection circuit? I doubt it is serious. But
>I
>> > need some help tracking the faulty part down. Any suggestions would be
>> > appreciated.
>> >
>> > Problem 2
>> >
>> > When I tune up on 20 meters, I initially get over 175 watts output
>power!
>> > But it soon drops to 100 watts. The power sometimes fluctuate rapidly
>at
>> > times during tune up between 100 and 175 watts. (The plate current also
>> > fluctuates between 300 and 450 mils). It can be a challenge at times to
>> > tune it. The problem is intermittent.
>> >
>> > Any ideas? It looks like another capacitor has gone? How do I track
>down
>> > the faulty component?
>> >
>> > Rob
>> > P.S. I really wish I had a VTVM!!
I'm guessing but obviously something is microphonic.
Coupled with the 60Hz hum and bearing in mind the lack of use for the

last 10 years... its most unlikley.. but I have come across
microphonic capacitors and I suspect the smoothing caps prior to the
OA1 or OB2 voltage regulators supplying the HT to the VFO.
As usual, no guarentees etc etc..
I'm usually wrong ;-)
atb Mike W G8NXD qthr

140. Re: oscilloscope as monitor scope?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-05 23:31:27 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3cfe9edf.1028690@news.freeserve.net>
Source record: 43603

On 5 Jun 2002 14:01:54 -0700, gschwab@florida-knife.com (George)
wrote:

>Does anyone here know how I might use an oscilloscope as a monitor scope?
>I have a 15 Mhz scope and would like to "see" my transmitters output.
>Any help greatly appreciated!
>Thanks
>George

on what frequency ?. A 1Mhz timbase can 'see' the modulation envelope.

141. Re: oscilloscope as monitor scope?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 01:30:34 UTC
From: w4pqwhs@aol.com
Message-ID: <20020605213034.15317.00000094@mb-fu.aol.com>
Source record: 43605

George ,to monitor transmitter up to 15 mhz,you only need to sample some of the RF output..one way is to use a coax "tee"..couple the scope probe to the center of the tee through a small HV cap,like 10 pf. at 1000 v ..adjust the scope sweep and vertical for a good waveform(like a horizontal christmas tree)I assume you are talking about AM or SSB..ARRL radio handbooks have all this, If you don`t have one you can get one at local library. good luck , Harold W4PQW

142. Re: Hammarlund SP-600

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 01:30:50 UTC
From: Idontwantspam@net
Message-ID: <3cfeba34.10552018@news.bellatlantic.net>
Source record: 43604
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

On Mon, 03 Jun 2002 23:56:49 GMT, "Bob" <balbert@cnmnetwork.com>
wrote:

>And where does one get beeswax? Would something else work as well?
>
Other than the obvious smartass answer,

Craft stores which sell candlemaking stuff

Archery stores (beeswax is used on bowstrings)

beeswax has different properties than parrafin wax
Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

143. Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 03:48:05 UTC
From: KC8SSG <kc8ssg@qsl.net>
Message-ID: <VXAL8.62$13.1028@news>
Source record: 43606
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I'm having a hard time getting my wife to get used to me buying radios and stuff. Any help or suggestions would be great!

--
KC8SSG

144. Re: Hammarlund SP-600

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 03:57:23 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <D4BL8.138305$%o.13363384@bin3.nnrp.aus1.giganews.com>
Source record: 43607
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

I bit the bullet and took off the front panel. What a job! I did more cleaning and the dial started working a lot better. By the time I got the panel back on, it was bad again.

I may try the beeswax idea yet. I don't really think this mechanism is worn; the radio seems to have had almost no use at all.

Someone directed me to a bama web site but I couldn't get there. Well I got there but when I tried to download the manual it wouldn't work. Maybe it's working now.

145. Re: Hammarlund SP-600

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 04:01:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3CFEDE93.262921D8@eznec.com>
Source record: 43608
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

In the past, I've found beeswax at sewing stores. And yes, it's very different from paraffin wax. Beeswax is soft and kind of sticky. Paraffin is hard and waxy.

Roy Lewallen, W7EL

"Gary S." wrote:
>
> On Mon, 03 Jun 2002 23:56:49 GMT, "Bob" <balbert@cnmnetwork.com>
> wrote:
>
> >And where does one get beeswax? Would something else work as well?
> >
> Other than the obvious smartass answer,
>
> Craft stores which sell candlemaking stuff
>
> Archery stores (beeswax is used on bowstrings)
>
> beeswax has different properties than parrafin wax
> Happy trails,
> Gary (net.yogi.bear)
> --
> at the 51st percentile of ursine intelligence
>
> Gary D. Schwartz, Needham, MA, USA
> Please reply to: garyDOTschwartzATpoboxDOTcom

146. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 04:03:51 UTC
From: ke7nr@cox.net
Message-ID: <3cfeded0.13994615@news.west.cox.net>
Source record: 43609
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

It took two wives before I found one that doesn't bitch about the
radios. Keep looking.

KE7NR

On Thu, 06 Jun 2002 03:48:05 GMT, "KC8SSG" <kc8ssg@qsl.net> wrote:

>I'm having a hard time getting my wife to get used to me buying radios and
>stuff. Any help or suggestions would be great!
>
>--
>KC8SSG
>
>
>

147. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 04:15:37 UTC
From: Bill Otten <res0958z@verizon.net>
Message-ID: <JIBL8.43017$m9.5999@nwrddc02.gnilink.net>
Source record: 43610
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I am blessed. My lovely wife bought me a new rig this past Christmas. I had merely looked and commented on the rig she bought me, it was a complete surprise. She actually encourages me to enjoy my hobby.

Bill
KC9CS

"dontownsend" <ke7nr@cox.net> wrote in message news:3cfeded0.13994615@news.west.cox.net...
> It took two wives before I found one that doesn't bitch about the
> radios. Keep looking.
>
> KE7NR
>
>
> On Thu, 06 Jun 2002 03:48:05 GMT, "KC8SSG" <kc8ssg@qsl.net> wrote:
>
> >I'm having a hard time getting my wife to get used to me buying radios and
> >stuff. Any help or suggestions would be great!
> >
> >--
> >KC8SSG
> >
> >
> >
>

148. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 04:30:37 UTC
From: "n7ws at arrl net"
Message-ID: <3cfee52b.7746436@news.triconet.org>
Source record: 43611
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Thu, 06 Jun 2002 04:03:51 GMT, ke7nr@cox.net (dontownsend) wrote:

|It took two wives before I found one that doesn't bitch about the
|radios. Keep looking.

Third time's a charm. This is one expensive hobby.

149. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 04:38:06 UTC
From: Jay in the Mojave <jay123a@qnet.com>
Message-ID: <3CFEE72E.FB505B47@qnet.com>
Source record: 43614
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

Hello Skipp: Exellent posting!

Jay in the Mojave

Skipp wrote:
>
> In reference to another thread where someone asked questions about
> converting an amplifier from 6LQ6 "sweep tubes" over to 4CX250B "ceramic"
> tubes...
>
> Here's a web link to a few photos of a Dentron GLA-1000B which was
> converted over to a pair of 4CX250's by an Italian Amateur Radio Operator.
> I also have pictures of the same amplifier with some of the newer Russian
> GU7 series tubes on board, but that's off topic. Anyway have a look if
> your interested.
>
> cheers
> skipp@pilotNOSPAMPLEASE.ucdavis.edu
>
> http://sonic.ucdavis.edu/dentron
>
> The main page for the sonic server..
>
> http://sonic.ucdavis.edu
> chow for now
> skipp

150. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 04:41:35 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3CFEE7CF.C8739800@att.net>
Source record: 43612
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

KC8SSG wrote:

> I'm having a hard time getting my wife to get used to me buying radios and
> stuff. Any help or suggestions would be great!

Express to her that you're so disappointed you're headed for Hooters.

151. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 04:41:47 UTC
From: George Tyrebyter <GeoTyrebyter@netscape.net>
Message-ID: <3CFEE80B.76DC7F9E@netscape.net>
Source record: 43613
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Wes Stewart wrote:
>
> On Thu, 06 Jun 2002 04:03:51 GMT, ke7nr@cox.net (dontownsend) wrote:
>
> |It took two wives before I found one that doesn't bitch about the
> |radios. Keep looking.
>
> Third time's a charm. This is one expensive hobby.

Which hobby is that? Ham radio or getting married?

--
George Tyrebyter

152. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 04:44:23 UTC
From: "Stephen C. Robbins" <srobbinsNOSPAMDUDES@netacc.net>
Message-ID: <3cfee882$1@news.netacc.net>
Source record: 43615
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

"KC8SSG" <kc8ssg@qsl.net> wrote in message news:VXAL8.62$13.1028@news...
> I'm having a hard time getting my wife to get used to me buying radios and
> stuff. Any help or suggestions would be great!
>
> --
> KC8SSG
>
>
Natch, just start spending your money on booze, drugs, and whores. After
awhile she will be happy to have you home playing on radios instead. :-)

Steve

153. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 04:49:58 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CFEE9F6.8488E6F2@netscape.net>
Source record: 43616
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

KC8SSG wrote:
>
> I'm having a hard time getting my wife to get used to me buying radios and
> stuff. Any help or suggestions would be great!
>
> --
> KC8SSG

You should send her to a restaurant more often.

-WX4A

154. WTB: GU-43B socket and chimney

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 05:40:58 UTC
From: Henry Flores <hdflores@worldnet.att.net>
Message-ID: <KBCL8.23638$LC3.1782288@bgtnsc04-news.ops.worldnet.att.net>
Source record: 43617

I am looking for a socket and chimney for a GU-43B tube, new or used. State condition and price delivered insured to Reno, Nevada

155. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 06:00:33 UTC
From: "Dana H. Myers" <dana@dioxine.net>
Message-ID: <3CFEFA81.30206@dioxine.net>
Source record: 43618
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Dick Carroll wrote:
> KC8SSG wrote:
>
>
>>I'm having a hard time getting my wife to get used to me buying radios and
>>stuff. Any help or suggestions would be great!
>
>
> Express to her that you're so disappointed you're headed for Hooters.

Heck, Hooters is a family restaurant, isn't it?

;-)

Dana K6JQ
k6jq@arrl.net

156. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 07:21:41 UTC
From: W6DKN <w6dkn@qsl.net>
Message-ID: <94EL8.8093$2n4.406@nwrddc04.gnilink.net>
Source record: 43619
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Replace the defective unit... :>)

73 de W6DKN

"KC8SSG" <kc8ssg@qsl.net> wrote in message news:VXAL8.62$13.1028@news...
> I'm having a hard time getting my wife to get used to me buying radios
and
> stuff. Any help or suggestions would be great!
>
> --
> KC8SSG
>
>
>

157. Re: oscilloscope as monitor scope?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 07:54:00 UTC
From: Ricardo Martins <ricardo.martins@pt.uu.net>
Message-ID: <3CFF1518.B825D2F6@pt.uu.net>
Source record: 43620

Check this:

http://www.intio.or.jp/jf10zl/bms.htm

If you find more circuits similar to this one, post them!

73, CT2GQV

George wrote:
>
> Does anyone here know how I might use an oscilloscope as a monitor scope?
> I have a 15 Mhz scope and would like to "see" my transmitters output.
> Any help greatly appreciated!
> Thanks
> George

--
Ricardo Martins

158. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 08:14:02 UTC
From: Oedipus Rex <MissMyMomma@Wiseman.com>
Message-ID: <adn5i6$m3b$0@pita.alt.net>
Source record: 43621
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Get a puppy.
She will be so busy cleaning up after the pup that she won't even notice
your radios.

"KC8SSG" <kc8ssg@qsl.net> wrote in message news:VXAL8.62$13.1028@news...
> I'm having a hard time getting my wife to get used to me buying radios and
> stuff. Any help or suggestions would be great!
>
> --
> KC8SSG
>
>
>

159. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 08:17:21 UTC
From: Oedipus Rex <MissMyMomma@Wiseman.com>
Message-ID: <adn5oamhh0@pita.alt.net>
Source record: 43622
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Show her some of Wiseman's posts. Remind her that things could always be worse....

"KC8SSG" <kc8ssg@qsl.net> wrote in message news:VXAL8.62$13.1028@news...
> I'm having a hard time getting my wife to get used to me buying radios and
> stuff. Any help or suggestions would be great!
>
> --
> KC8SSG
>
>
>

160. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 08:27:14 UTC
From: mike <spamme0@juno.com>
Message-ID: <3CFF1CE2.9FE2CEA1@juno.com>
Source record: 43623
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Sounds like a squelch problem to me.
Stick her on Ebay....AS-IS.
mike

KC8SSG wrote:

> I'm having a hard time getting my wife to get used to me buying radios and
> stuff. Any help or suggestions would be great!
>
> --
> KC8SSG

161. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 08:37:28 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CFF1F48.79CC282A@netscape.net>
Source record: 43624
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

mike wrote:
>
> Sounds like a squelch problem to me.
> Stick her on Ebay....AS-IS.
> mike

Take her on a fishing trip. Have her change the oil in the truck while
you watch the game. Lie and tell her she is sexy. She's just needs to
be 'wanted'.

-ex

162. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 10:44:36 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ufuf92fhsh4o1a@corp.supernews.com>
Source record: 43625
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

> Get a puppy.

Yup, I've never heard a puppy complain about ham radio.

163. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 10:54:09 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3CFF3F51.1AE89AB4@bloomer.net>
Source record: 43626
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Yes it is (a family restaraunt)!! I took my wife and daughter for lunch
while in Orlando and I loved it! The food was great too ;)

Scott
N0EDV

"Dana H. Myers" wrote:
>
> Dick Carroll wrote:
> > KC8SSG wrote:
> >
> >
> >>I'm having a hard time getting my wife to get used to me buying radios and
> >>stuff. Any help or suggestions would be great!
> >
> >
> > Express to her that you're so disappointed you're headed for Hooters.
>
> Heck, Hooters is a family restaurant, isn't it?
>
> ;-)
>
> Dana K6JQ
> k6jq@arrl.net

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

164. Re: SP-600 dial slip fix

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 12:59:14 UTC
From: msix@plato.nmia.com
Message-ID: <C0JL8.312139$%u2.28847@atlpnn01.usenetserver.com>
Source record: 43627

Bob wrote:
>Ah, this looks like the fix I am looking for!
>Of course the front panel has to come off, not a five minute task.
>Thank you.

While you're at it, you may want to add my ham-band bandspread
dial. It fits over the logging dial inside the logging scale.
Its still available from Mike last I looked.
Here's the blurb...

SP-600 Hamband Bandspread Dial now available

An attractive, professionally made reproduction of my old
1968 SP-600 ham band only bandspread dial is now available.
It fits on the front of the logging dial inside the logging
scale and covers 160-10M plus WARC bands.
Includes installation and alignment instructions.

I have used this with four SP-600s and had no trouble aligning
them to the dial. Not perfect but worlds better than trying to
interpolate the main dial!

Contact Mike Tobin, the old-radio-dial maker, at dials@juno.com
See his page at http://members.aol.com/rockseaent

Best, John

165. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 14:00:38 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <aWJL8.26545$UT.1831772@bgtnsc05-news.ops.worldnet.att.net>
Source record: 43628
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Take her to the doctor for a labotomy!
"KC8SSG" <kc8ssg@qsl.net> wrote in message news:VXAL8.62$13.1028@news...
> I'm having a hard time getting my wife to get used to me buying radios and
> stuff. Any help or suggestions would be great!
>
> --
> KC8SSG
>
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.368 / Virus Database: 204 - Release Date: 5/29/02

166. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 14:02:13 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <FXJL8.26547$UT.1831007@bgtnsc05-news.ops.worldnet.att.net>
Source record: 43629
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Tell her she doesn't have to be dead to be a donor!
"KC8SSG" <kc8ssg@qsl.net> wrote in message news:VXAL8.62$13.1028@news...
> I'm having a hard time getting my wife to get used to me buying radios and
> stuff. Any help or suggestions would be great!
>
> --
> KC8SSG
>
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.368 / Virus Database: 204 - Release Date: 5/29/02

167. Re: Hammarlund SP-600

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 15:11:36 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnafuut7.cnh.QSB@animas.frontier.net>
Source record: 43630
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

On Wed, 05 Jun 2002 21:01:23 -0700, Roy Lewallen scribbled:
> In the past, I've found beeswax at sewing stores. And yes, it's very
> different from paraffin wax. Beeswax is soft and kind of sticky.
> Paraffin is hard and waxy.

I think you'll find a life's-time supply in an inexpensive
toilet bowl seat/seal at your local hardware store.

Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

168. RTTY interface "ground loop free"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 15:37:28 UTC
From: Paolo Rizzato <rospez71@yahoo.com>
Message-ID: <5056ec665b2572b9f855c32f8e614c3f.92228@mygate.mailgate.org>
Source record: 43631

Hi all,
i have made an interface for TS940 + Sound Blaster that supports
A/FSK,(may be simply modified for any rig) works great, and finally
stopped all the problems dure to ground loops, keyboard look and so
on...
For wiring diagrams and info, a look at http://www.ik3qar.it on "RTTY"
section.

Hope it will be helpful.
Please add any critics, comments suggestions are appreciated!

73's de Paolo ik3qar

--
Posted via Mailgate.ORG Server - http://www.Mailgate.ORG

169. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 15:52:50 UTC
From: M1nn0w <1c3d0g@att.net>
Message-ID: <mzLL8.24057$LC3.1819069@bgtnsc04-news.ops.worldnet.att.net>
Source record: 43632
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hey Bill,
My wife did the exact same thing and for our anniversary 2
weeks ago she bought me a new ICOM V8000 because I was searching around to
get the finals replaced in my dead TM201A..... Of course this is my SECOND
wife. The first hated the hobby big time.....

John (WB2TQC)

Bill Otten wrote in message ...
>I am blessed. My lovely wife bought me a new rig this past Christmas. I had
>merely looked and commented on the rig she bought me, it was a complete
>surprise. She actually encourages me to enjoy my hobby.

170. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 15:59:59 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <adtd6qeos1@nic.grnet.gr>
Source record: 43544
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Ok actually I had that problem my self..

What ever I did was hopeless.

Until I talked to my wife seriously about my hobby... AND THEN GAVE HER THE DELIMA

a)rigs , ps ,antennas OR

b)me looking at other women(just looking nothing else)

After 2 minutes I solved my problem... Its worth a try..

"mike coslo" <mjc5@psu.edu> wrote in message news:3CFFB09B.74D30DD1@psu.edu...
> When you are playing with your radio, you are not:
>
> sitting in a bar, drinking away the rent money,
>
> carousing arond with other women,
>
> or a hundred other things that she would have a REAL reason to complain about.
>
> I have been amazed at how many XYL's have so many problems with this hobby.
>
> When my wife threatened to lower the boom on my HF activities due to
> her dislike of ANY antenna, I reminded her of all the above points. Now
> we have a deal, She doesn't complain as long as I keep the antennas
> discrete. So I don't have a big vertical, but do have a nice long dipole
> that I hid in the trees.
>
> Actually she is pretty supportive otherwise, and has even bought me new
> ham toys!
>
> - Mike KB3EIA -
>
>
> KC8SSG wrote:
> >
> > I'm having a hard time getting my wife to get used to me buying radios and
> > stuff. Any help or suggestions would be great!

171. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 16:15:11 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3CFF8A8F.385CF26B@crosslink.net>
Source record: 43633
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

M1nn0w wrote:
>
> Hey Bill,
> My wife did the exact same thing and for our anniversary 2
> weeks ago she bought me a new ICOM V8000 because I was searching around to
> get the finals replaced in my dead TM201A..... Of course this is my SECOND
> wife. The first hated the hobby big time.....
>
> John (WB2TQC)
>
> Bill Otten wrote in message ...
> >I am blessed. My lovely wife bought me a new rig this past Christmas. I had
> >merely looked and commented on the rig she bought me, it was a complete
> >surprise. She actually encourages me to enjoy my hobby.

Same here ... of course my XYL is an 'Extra' and uses the new rig more
than I do but it IS mine ... I think :o).
73 K3DWW

172. PZT transformer source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 17:11:52 UTC
From: artky1k@uninets.net
Message-ID: <3cff9730.20081914@news.uninets.net>
Source record: 43634

Can anyone suggest a source for a PZT transformer?

I know they are fairly new and that they are now widely available.
But, I have an aplication that needs one and I'd like to play around
to see if they work well.

Please email me.

Thanks,

Art

173. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 17:23:32 UTC
From: "n7ws at arrl net"
Message-ID: <3cff9a07.8018888@news.triconet.org>
Source record: 43635
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Wed, 05 Jun 2002 22:41:47 -0600, George Tyrebyter
<GeoTyrebyter@netscape.net> wrote:

|Wes Stewart wrote:
|>
|> On Thu, 06 Jun 2002 04:03:51 GMT, ke7nr@cox.net (dontownsend) wrote:
|>
|> |It took two wives before I found one that doesn't bitch about the
|> |radios. Keep looking.
|>
|> Third time's a charm. This is one expensive hobby.
|
|Which hobby is that? Ham radio or getting married?

Actually, it's the getting un-married part.

My wife reminds me of that often.

Wes

174. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 17:49:02 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3CFFA117.5742926E@bellatlantic.net>
Source record: 43636

w_tom wrote:
>
> All buildings have neutral earthed at the main panel. And
> yet still professionals discuss the common mode surges that
> enter those buildings. They don't discuss converting common
> mode surges to differential mode because that conversion is
> only your speculation. A common mode surge on the hot wire
> arrives at the appliance still as a common mode surge -
> regardless of what happens on any other wire such as the
> neutral.

So in your view, a common mode surge can occur on a single wire.

Any discussion of surge protection with that kind of
thinking is pointless.

>
> Surge protection is about earthing a common mode surge
> before it can enter the building. But plug-in surge
> protectors can contribute to damage even to a powered off
> computer. The surge is provided more possible paths to earth,
> destructively, through the adjacent appliance by the plug-in
> surge protector. Therefore plug-in surge protector
> manufacturers simply forget to mention earth ground or even
> mention what a common mode surge is. No sense providing
> information a customer can use to see them as ineffective.
>
> If earthing a neutral converted common mode surges into
> differential mode surges, then appliance manufacturers would
> routinely install those $0.05 and $0.20 parts inside
> appliances. Those parts are not installed because they are
> not effective. Why then would they ever be effective in a
> power strip? Common mode surges are not converted to
> differential mode by earthing some other wire far away.
> Common mode surge arrives on hot wires to damage an
> appliance. No plug-in surge protector is going to change that
> fact which is why money is best spent on enhancing the 'whole
> house' surge protector system.
>
> ehsjr@bellatlantic.net wrote:
> >
> > w_tom wrote:
> > >
> > > A common mode surge on hot and neutral, but earthed at
> > > breaker box on neutral is still a common mode surge. If it

> > > was 'converted' to a differential mode surge, then when it got
> > > to the equipment, any ground to that equipment would be
> > > irrelevant. Differential mode surges would ignore that earth
> > > ground. But the common mode surge only seeks earth back on
> > > the neutral if it cannot get to earth ground, destructively,
> > > through the appliance.
> >
> > You claim: "But the common mode surge ONLY seeks
> > earth back on the neutral if it cannot get to earth ground,
> > destructively, through the appliance." (Emphasis mine)
> >
> > Any discussion of surge protection with that kind of
> > thinking is pointless.

175. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 18:57:31 UTC
From: mike coslo <mjc5@psu.edu>
Message-ID: <3CFFB09B.74D30DD1@psu.edu>
Source record: 43638
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

When you are playing with your radio, you are not:

sitting in a bar, drinking away the rent money,

carousing arond with other women,

or a hundred other things that she would have a REAL reason to complain about.

I have been amazed at how many XYL's have so many problems with this hobby.

When my wife threatened to lower the boom on my HF activities due to
her dislike of ANY antenna, I reminded her of all the above points. Now
we have a deal, She doesn't complain as long as I keep the antennas
discrete. So I don't have a big vertical, but do have a nice long dipole
that I hid in the trees.

Actually she is pretty supportive otherwise, and has even bought me new
ham toys!

- Mike KB3EIA -

KC8SSG wrote:
>
> I'm having a hard time getting my wife to get used to me buying radios and
> stuff. Any help or suggestions would be great!

176. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 18:58:53 UTC
From: mike coslo <mjc5@psu.edu>
Message-ID: <3CFFB0EC.84BD75DE@psu.edu>
Source record: 43637
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

But there is a bit more there for you than for them, no?

- Mike -

Scott wrote:
>
> Yes it is (a family restaraunt)!! I took my wife and daughter for lunch
> while in Orlando and I loved it! The food was great too ;)
>
> Scott
> N0EDV
>
> "Dana H. Myers" wrote:
> >
> > Dick Carroll wrote:
> > > KC8SSG wrote:
> > >
> > >
> > >>I'm having a hard time getting my wife to get used to me buying radios and
> > >>stuff. Any help or suggestions would be great!
> > >
> > >
> > > Express to her that you're so disappointed you're headed for Hooters.
> >
> > Heck, Hooters is a family restaurant, isn't it?
> >
>

177. Re: TDA1576 as synchr. AM demod. + Level meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 19:23:15 UTC
From: la8ak.xnd@online.no
Message-ID: <3cffb561.8901427@news.online.no>
Source record: 43639

an idea, but you know, in the socialist part of the world you are not
supposed to exchange pictures, now all such newsgroups whether it is
for electronics or other sort of picture exchange has been closed down
by today, mainly because of a trial where an ISP has lost a trial and
all such newsgroups can be misused .

But, when checking further into the matter, the groups you mention
have never been open here

73
Jan-Martin
LA8AK

On Mon, 03 Jun 2002 20:30:04 GMT, "john walton" <jdwalton@comcast.net>
wrote:

>FYI, You can post pictures to the following newsgroups (without
>retaliation): alt.binaries.schematics.electronic or
>alt.binaries.pictures.radio
>
>"J M Noeding" <la8ak.xnd@online.no> wrote in message
>news:3cfa5be4.256520934@news.online.no...
>> On Sun, 02 Jun 2002 14:24:38 GMT, "Bill & Suzie Whatley"
>> <spud286@attbi.com> wrote:
>>
>> >What is URL for .gif file ??
>> >
>> no, I have to mail it, is the address correct?
>>
>> Just wanted to describe an application which wasn't supported by the
>> application note. The device was commonly available at low price and
>> suits my demands, mainly used together with an impedance bridge or
>> RLB. It is many better and later devices, you may even find an SMD
>> (which I don't like). Haven't checked overall performance yet, since I
>> had to mount it into a die-cast box first. Use a similar circuit with
>> MC3356 in my HF-rig for improved S-meter.
>>
>> 73
>> JM
>> --
>> remove ,xnd to reply
>>
>
>

--
remove ,xnd to reply

178. Re: TDA1576 as synchr. AM demod. + Level meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 19:25:14 UTC
From: la8ak.xnd@online.no
Message-ID: <3cffb648.9132893@news.online.no>
Source record: 43640

On Mon, 03 Jun 2002 04:47:46 GMT, "Clifton T. Sharp Jr."
<clifto@clifto.com> wrote:

>J M Noeding wrote:
>> <spud286@attbi.com> wrote:
>> >What is URL for .gif file ??
>>
>> no, I have to mail it, is the address correct?
>
>I'd like a copy. If you like, I can put it up on my site for general access.
>
>--
Yes, it would be nice if you would do so, tnx. Won't expect any
further binary groups to be opened in the near future

73
Jan-Martin
--
remove ,xnd to reply

179. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 19:41:10 UTC
From: laborkei <laborkeiNOSPAM@hotmail.com>
Message-ID: <3cffbeef_4@nopics.sjc>
Source record: 43641
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Talk her into getting her license too.
That way it will be like purchasing a washer and dryer.

What we need Darlin is this, etc.. etc..

"KC8SSG" <kc8ssg@qsl.net> wrote in message news:VXAL8.62$13.1028@news...
> I'm having a hard time getting my wife to get used to me buying radios and
> stuff. Any help or suggestions would be great!
>
> --
> KC8SSG
>
>
>

180. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 20:08:31 UTC
From: Rob <Pse@NoEmail.Com>
Message-ID: <wjPL8.2662$H67.14089@tor-nn1.netcom.ca>
Source record: 43642
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

HI,

Thanks for thr post. Where are the OA1 / OB2 voltage regulators. I don't see them on the schematic.

Do you think it is the caps in the power supply AC4 that is the problem?

If so, what is the best way to determine whether a cap has gone bad??

73's
Rob

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message news:3cfe9cba.479812@news.freeserve.net...
> On Wed, 5 Jun 2002 18:35:50 -0400, "Rob" <Pse@NoEmail.Com> wrote:
>
> >I have opened up the T4XC and R4C and inspected the tubes. They all look
> >pretty good. They are firmly pushed into their seats. But I will try your
> >eraser trick.
> >
> >The problem only occurs after I have transmitted for awhile. Then I start
> >hearing the tone/hum in my speakers in "Transceive mode". When I tap on the
> >T4XC cabinet, I hear the tapping in my speaker and see the S meter jump on
> >the R4C while RECEIVING. Very strange!
> >
> >Recently, I have also been getting reports of a 60 hz hum in my SSB and CW
> >transmissions. Maybe the problem is originating in the AC4 power supply.
> >
> >But keep the suggestions coming. I think it should be fairly easy to
> >isolate the problem
> >
> >73
> >Rob
> >
> >"Dave Edwards" <kd2e@comcast.net> wrote in message
> >news:JcvL8.128$Qg.42204@bin6.nnrp.aus1.giganews.com...
> >> I agree with Bill....It is like one of those things that goes 'bump' in
> >the
> >> night.
> >> I would first suspect a tube has to be reseated. Make sure all

connectors
> >> are tight, and move each control on the front panel while listening to
see
> >> if the sound changes. If the cause is a BAD tube, listen to the sound
and
> >> tap each tube lightltly with the eraser end of a pencil....see if the
> >sound
> >> is effected by a particular tube.
> >> You can tap on other components with the pencil while you are at it.
> >> Regards...Dave
> >> "Rob" <Pse@NoEmail.Com> wrote in message
> >> news:FgsL8.2511$H67.13640@tor-nn1.netcom.ca...
> >> > Hi,
> >> >
> >> > After 10 years of sitting in a box, I just set-up my old Drake C line
> >(R4C
> >> > and T4XC). The R4C is working great. But the T4XC is giving me
> >problems.
> >> > Since it is getting impossible to find anyone in Canada to fix these
old
> >> > radio, perhaps someone can give me some advice.
> >> >
> >> > Problem 1
> >> >
> >> > When I operate the in "Separate mode", everything seems to work
pretty
> >> well.
> >> > But when I go to "transceive" mode (either the R4C or T4XC VFO is
used
> >for
> >> > both transmitting and receiving), problems start. At first it works!
> >But
> >> > after a while, I hear a tone in the receiver. What is really weird
is
> >> that
> >> > when I can tap on the cabinet of the T4XC transmitter, the S meter on
> >the
> >> > R4C moves and I can hear it in the receiver while in RECEIVE mode.
It
> >> seems
> >> > like my old T4XC has a hidden microphone (smile). It must be some
sort
> >of
> >> > weird feedback or ground loop.
> >> >
> >> > If I disconnect the INJ (injection) cable the tone/ feedback
disappears.
> >> > Also when I go back to the separate mode, the tone / feedback
> >disappears.
> >> > Right now the only way I can operate is in "Separate" mode. I have

been
> >> > getting pretty good audio reports on the air.
> >> >
> >> > Does anyone else experienced this? WHat might be wrong? Perhaps a
> >> blocking
> >> > capacitor has gone in the Injection circuit? I doubt it is serious.
But
> >I
> >> > need some help tracking the faulty part down. Any suggestions would
be
> >> > appreciated.
> >> >
> >> > Problem 2
> >> >
> >> > When I tune up on 20 meters, I initially get over 175 watts output
> >power!
> >> > But it soon drops to 100 watts. The power sometimes fluctuate
rapidly
> >at
> >> > times during tune up between 100 and 175 watts. (The plate current
also
> >> > fluctuates between 300 and 450 mils). It can be a challenge at times
to
> >> > tune it. The problem is intermittent.
> >> >
> >> > Any ideas? It looks like another capacitor has gone? How do I track
> >down
> >> > the faulty component?
> >> >
> >> > Rob
> >> > P.S. I really wish I had a VTVM!!
> I'm guessing but obviously something is microphonic.
> Coupled with the 60Hz hum and bearing in mind the lack of use for the
> last 10 years... its most unlikley.. but I have come across
> microphonic capacitors and I suspect the smoothing caps prior to the
> OA1 or OB2 voltage regulators supplying the HT to the VFO.
> As usual, no guarentees etc etc..
> I'm usually wrong ;-)
> atb Mike W G8NXD qthr

181. Using narrow filters with TS940 in digital modes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 20:14:10 UTC
From: Rob <Pse@NoEmail.Com>
Message-ID: <OoPL8.2663$H67.14122@tor-nn1.netcom.ca>
Source record: 43643
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

Has anyone figured out a way to use the narrow filters of the TS940 in the digital modes (using AFSK, etc). Is there a mod available?

Right now you can only use the TS940 narrow filters in CW and FSK. Not very good for PSK31, etc.

73
Rob

182. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 20:33:28 UTC
From: "D. Stussy" <kd6lvw@bde-arc.ampr.org>
Message-ID: <Pine.LNX.4.44.0206062032340.1087-100000@exp.bde-arc.ampr.org>
Source record: 43644
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Thu, 6 Jun 2002, Dick Carroll wrote:
>KC8SSG wrote:
>> I'm having a hard time getting my wife to get used to me buying radios and
>> stuff. Any help or suggestions would be great!
>
> Express to her that you're so disappointed you're headed for Hooters.

The danger of that is that while you're at Hooters, she might be at
Chippendales!

183. Truly universal power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 20:57:11 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <H0QL8.181$g65.3392@news4.ulv.nextra.no>
Source record: 43645

I am really impressed by the power supply of my Braun electric shaver. It
can run from 12 - 240 V AC or DC. Of course it is only 6 Watts. Does anyone
know the secret for making such a universal power supply, it isn't broken
yet so I won't open it!
Wouldn't it be nice be able to plug in your rig everywhere with no concern
for neither voltage nor polarity?

73, Sverre
LA3ZA

www.qsl.net/la3za

184. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 21:06:39 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3cffcdfb.46117767@news.freeserve.net>
Source record: 43646
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

On Thu, 6 Jun 2002 16:08:31 -0400, "Rob" <Pse@NoEmail.Com> wrote:

>HI,
>
>Thanks for thr post. Where are the OA1 / OB2 voltage regulators. I don't
>see them on the schematic.
>
>Do you think it is the caps in the power supply AC4 that is the problem?
>
>If so, what is the best way to determine whether a cap has gone bad??
>
>73's
>Rob

Sorry Rob, I'm not familiar with the AC4, but there has to be voltage stabilisers in there somewhere, but perhaps not OA1 OB2 etc. Duff caps are probably easiest to locate by paralleling a known good smoothing cap with the suspect smoothing caps.

185. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 21:17:42 UTC
From: N4IXT <n4ixt@arrl.net>
Message-ID: <adojpj$11s01$1@ID-105647.news.dfncis.de>
Source record: 43548
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Your problem is you don't have ENOUGH stuff yet. Go find a tail gate session and buy every box of junk and get as many clunker radios as possible. Don't matter if they work or not.

Now come back and pile them into your shack. Everywhere. Make a mess of it. You'll know you hit paydirt when instead of complaining to her mother "he's on that radio again" she now says "he's fooling around with those $&%^# radios again". Once it becomes plural, you have it made.

Now you can sneak in as many new radios as you want, and she'll never notice. If she does catch you sneaking in with one, you can always explain the great trade you made by swapping your old Binford 4305 with quadraflex tuning and heat seeking frequency sensors for it. Don't matter what you say, just jabber on she'll tune you out real quick once you start talking wattages and model numbers and other specs.

Works for me. I also smoke pipes. So far I've acquired four pipes, two radios, an antenna and various pices parts without her noticing.

73's

Robert / N4IXT

"KC8SSG" <kc8ssg@qsl.net> wrote in message news:VXAL8.62$13.1028@news...
> I'm having a hard time getting my wife to get used to me buying radios and
> stuff. Any help or suggestions would be great!
>
> --
> KC8SSG
>
>
>

186. Looking for a plate transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 21:21:50 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3CFFD26E.5030502@charter.net>
Source record: 43547

Hi
i am looking for a plate transformer aprox 1500v at least 1 to 2 amps
120/240 primary extra taps with different voltages ok.
Trying to get something together for a Hb project. One of those old
miltary encased ones would be great. what do you have laying around your
using as a doorstop?
want to do a doubler on the PS to get about 3kv

chris NI4L
--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

187. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 21:23:56 UTC
From: w_tom <w_tom1@usa.net>
Message-ID: <3CFFD2EC.7D1E9954@usa.net>
Source record: 43549

Welcome to how a common mode surge works. Incoming on one AC power wire. Outgoing can be to earth ground on the phone line, through the network (NIC), or maybe even through the frame into a concrete floor. Go back and read those application notes from Polyphaser. Or this so simple demonstration of how common mode surge damage is avoided by enhanced grounding - Ufer ground:
http://scott-inc.com/html/ufer.htm

The destructive common mode surge enters a building on one or on many wires, passes through equipment, than exits on any other path to earth ground. There is no mystery about this 1930 technology demonstrated in those Polyphaser application notes, or here:
http://www.telebyteusa.com/primer/ch6.htm
> Conceptually, lightning protection devices are switches
> to ground. Once a threatening surge is detected, a
> lightning protection device grounds the incoming signal
> connection point of the equipment being protected. Thus,
> redirecting the threatening surge on a path-of-least
> resistance (impedance) to ground where it is absorbed.

or here:
http://www.ipclp.com/html/aud_ho_faq.html
> A properly installed lightning protection system
> intercepts the lightning bolt between cloud and
> earth and harmlessly conducts it to ground without damage.

or here:

http://lists.contesting.com/_towertalk/1997-April/004413.html
> The basic scenario is to install a Single Point Ground
> System that is installed at the building entry. It
> shunts everything to ground before it goes in the building.
> If you can keep it outside, then you don't really have to
> do much inside.

Its a fact that a common mode surge can enter on a single wire. Also, it only takes a single wire to shunt a common mode surge from the air terminal (lightning rod) to earth ground. It only takes a single wire to shunt a CATV surge or phone line(s) surge to earth ground. It only takes one wire to carry a common mode surge, destructively, into household appliances. These are basic EE concepts. Incoming on the single wire and outgoing to earth ground. Basic concept of electricity as demonstrated in primary school science calls

this a complete circuit. Where is this so difficult to
understand?

ehsjr@bellatlantic.net wrote:
>
> w_tom wrote:
> >
> > All buildings have neutral earthed at the main panel. And
> > yet still professionals discuss the common mode surges that
> > enter those buildings. They don't discuss converting common
> > mode surges to differential mode because that conversion is
> > only your speculation. A common mode surge on the hot wire
> > arrives at the appliance still as a common mode surge -
> > regardless of what happens on any other wire such as the
> > neutral.
>
> So in your view, a common mode surge can occur on a single wire.
>
> Any discussion of surge protection with that kind of
> thinking is pointless.
>
> >
> > Surge protection is about earthing a common mode surge
> > before it can enter the building. But plug-in surge
> > protectors can contribute to damage even to a powered off
> > computer. The surge is provided more possible paths to earth,
> > destructively, through the adjacent appliance by the plug-in
> > surge protector. Therefore plug-in surge protector
> > manufacturers simply forget to mention earth ground or even
> > mention what a common mode surge is. No sense providing
> > information a customer can use to see them as ineffective.
> >
> > If earthing a neutral converted common mode surges into
> > differential mode surges, then appliance manufacturers would
> > routinely install those $0.05 and $0.20 parts inside
> > appliances. Those parts are not installed because they are
> > not effective. Why then would they ever be effective in a
> > power strip? Common mode surges are not converted to
> > differential mode by earthing some other wire far away.
> > Common mode surge arrives on hot wires to damage an
> > appliance. No plug-in surge protector is going to change that
> > fact which is why money is best spent on enhancing the 'whole
> > house' surge protector system.

188. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 22:11:33 UTC
From: Rob <Pse@NoEmail.Com>
Message-ID: <T6RL8.2675$H67.14181@tor-nn1.netcom.ca>
Source record: 43550
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

HI Mike,

Well the AC4 power supply is very simple. It produces 650 v DC, 250VDC, -45 to -65 vDC for bias and 12 VAC. (The 12VAC is used to power the tube filaments. I don't think it is ever converted to 12 VDC inside the T4XC).

The AC4 power supply converts the 120/240 VAC to the various DC voltages using seven IN4005 diodes. It has a number of resistors as voltage dividers. To smooth the DC it uses a number of capacitors two 125 MFD capacitors for the 650 volt DC line, two 100 MFD caps for the 150 VDC line and two 20 MFD caps for the -45 to -55 VDC bias line. The caps are all electrolytic caps. (There is also two .01 MFD regular caps for the 12 VAC line)

I suspect that during storage one or more of the electrolytic caps has cracked and dried out. (Isn't that a common problem with electrolytic caps?)

If I connect a good electrolytic cap in parallel, how will that help me identify the problem? Won't I still hear the 60 hz tone / hum etc?

Of course, the problem may be inside the T4XC transmitter and not the AC4 power supply. (smile)

What does "OA1" and "OB2" mean? I am not familiar with these terms.

73
Rob

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3cffcdfb.46117767@news.freeserve.net...
> On Thu, 6 Jun 2002 16:08:31 -0400, "Rob" <Pse@NoEmail.Com> wrote:
>
> >HI,
> >
> >Thanks for thr post. Where are the OA1 / OB2 voltage regulators. I
don't
> >see them on the schematic.
> >
> >Do you think it is the caps in the power supply AC4 that is the problem?
> >
> >If so, what is the best way to determine whether a cap has gone bad??
> >
> >73's
> >Rob
>

> Sorry Rob, I'm not familiar with the AC4, but there has to be voltage
> stabilisers in there somewhere, but perhaps not OA1 OB2 etc. Duff caps
> are probably easiest to locate by paralleling a known good smoothing
> cap with the suspect smoothing caps.
>

189. Re: oscilloscope as monitor scope?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 22:12:43 UTC
From: Bill Turner <w7ti@dslextreme.com>
Message-ID: <a2nvfucr4da1i36e2qnsg8guah5s1c0c9a@4ax.com>
Source record: 43551

On 06 Jun 2002 01:30:34 GMT, w4pqwhs@aol.com (W4pqw HS) wrote:

>couple the scope probe to the center
>of the tee through a small HV cap,like 10 pf. at 1000 v

You might find it more convenient to use a short insulated wire coming out of the tee, and wrap another insulated wire around it, forming a small-value capacitor. This method lets you adjust the amount of capacitance by adjusting the amount of wrap. Even at the legal power limit the voltage will be only a few hundred volts as long as your SWR is low.

A prudent ham will allow for the unexpected however, so 600-volt rated insulation would be a good choice for both wires.

Bill, W7TI

190. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 22:27:49 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3CFFE1E5.D4E66A23@bloomer.net>
Source record: 43552
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Well...maybe, but I'm not complaining ;)

mike coslo wrote:
>
> But there is a bit more there for you than for them, no?
>
> - Mike -
>
> Scott wrote:
> >
> > Yes it is (a family restaraunt)!! I took my wife and daughter for lunch
> > while in Orlando and I loved it! The food was great too ;)
> >
> > Scott
> > N0EDV
> >
> > "Dana H. Myers" wrote:
> > >
> > > Dick Carroll wrote:
> > > > KC8SSG wrote:
> > > > >
> > > > >
> > > > >>I'm having a hard time getting my wife to get used to me buying radios and
> > > > >>stuff. Any help or suggestions would be great!
> > > > >
> > > > >
> > > > > Express to her that you're so disappointed you're headed for Hooters.
> > > >
> > > > Heck, Hooters is a family restaurant, isn't it?
> > > >
> > >

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

191. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 22:43:57 UTC
From: Max <ve3tmt@rac.ca>
Message-ID: <OARL8.12763$LR4.1931841@news20.bellglobal.com>
Source record: 43553
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

"N4IXT" <n4ixt@arrl.net> wrote in message
news:adojpj$11s01$1@ID-105647.news.dfncis.de...
> Your problem is you don't have ENOUGH stuff yet. Go find a tail gate
session
> and buy every box of junk and get as many clunker radios as possible.
Don't
> matter if they work or not.
>
> Now come back and pile them into your shack. Everywhere. Make a mess of
it.
> You'll know you hit paydirt when instead of complaining to her mother
"he's
> on that radio again" she now says "he's fooling around with those $&%^#
> radios again". Once it becomes plural, you have it made.
>
> Now you can sneak in as many new radios as you want, and she'll never
> notice. If she does catch you sneaking in with one, you can always explain
> the great trade you made by swapping your old Binford 4305 with quadraflex
> tuning and heat seeking frequency sensors for it. Don't matter what you
say,
> just jabber on she'll tune you out real quick once you start talking
> wattages and model numbers and other specs.
>
> Works for me. I also smoke pipes. So far I've acquired four pipes, two
> radios, an antenna and various pices parts without her noticing.

And the ever famous "it's not mine, I'm holding it for a friend". I always
dread the "that's not the same radio you had is it?"
I don't know how I've managed to talk myself out of a jam so often.

But I look at it this way, as mentioned above....I'm not out in a bar
drinking away the rent money, or out bowling with the guys. All she has to
do is look in the basement and there I sit..happy, but not yet content.
Between the computers and the radios, I'm surprised she puts up with as much
as she does. But when she needs money for some new clothes, or wants to go
away for a weekend I alway pay. Gets me back in her good books!

192. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 22:47:43 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CFFE68F.51ACB3A8@netscape.net>
Source record: 43554
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Rob wrote:
>

> I don't think it is ever converted to 12 VDC inside the T4XC).

Yes indeed it does. Much of the circuitry is solid state so there is
the normal compliment of rectifier/filtering inside the xmtr.
>

> Of course, the problem may be inside the T4XC transmitter and not the AC4
> power supply. (smile)

I think the tone, etc that you are hearing might be from faulty
interconnecting cables or oxidized relay contacts in the xmtr. This is
probably separate from any hum issues.
>
> What does "OA1" and "OB2" mean? I am not familiar with these terms.

0A2 and 0B2 are common regulator tubes. Not used in the T4XC.

If you don't have a manual and schematic you can download them at
http://bama.sbc.edu

-Bill

193. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 23:24:13 UTC
From: Rob <Pse@NoEmail.Com>
Message-ID: <ZaSL8.2678$H67.14240@tor-nn1.netcom.ca>
Source record: 43555
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hi Bill,

Many thanks for the post! But I hate to disagree with you. But the T4XC (unlike the R4C) has more tubes than transistors. And from I can see the 250 VDC and the -55 VDC lines from the AC4 power supply are used to power the few transistors in the T4XC (resistors are used to drop the voltage). The 12VAC line appears to be only used for the filaments. I don't see anything like a rectifier circuit. (But maybe I am blind (smile))

Taking a closer look at the schematics. It appears that the -55VDC line is fed into the INJECTION jack along with a RF signal from the VFO. Since my hum disappears when I disconnect the INJECTION cable between the T4XC and R4C, I suspect that the -55 VDC line is dirty. Maybe the caps in the power supply have gone. (But I am only guessing!)

Perhaps the dirty -55VDC Bias line is also responsible for a hum in my transmitted signal. Will a dirty BIAS line cause hum in the transmitted signal?

Besides just replacing the caps in the power supply, I don't know how else to identify whether a cap has gone. I hope I can find replacement electrolytic caps - 20 MFD for the bias line (and 125 MFD and 100 MFD for the high voltage lines)

73
Rob

".Bill :-)" <TheRealExray@netscape.net> wrote in message
news:3CFFE68F.51ACB3A8@netscape.net...
> Rob wrote:
> >
>
> > I don't think it is ever converted to 12 VDC inside the T4XC).
>
> Yes indeed it does. Much of the circuitry is solid state so there is
> the normal compliment of rectifier/filtering inside the xmtr.
> >
>
> > Of course, the problem may be inside the T4XC transmitter and not the
AC4
> > power supply. (smile)
>
> I think the tone, etc that you are hearing might be from faulty
> interconnecting cables or oxidized relay contacts in the xmtr. This is
> probably separate from any hum issues.

> >
> > What does "OA1" and "OB2" mean? I am not familiar with these terms.
>
> 0A2 and 0B2 are common regulator tubes. Not used in the T4XC.
>
> If you don't have a manual and schematic you can download them at
> http://bama.sbc.edu
>
> -Bill
>

194. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 23:29:07 UTC
From: Rob <Pse@NoEmail.Com>
Message-ID: <zfSL8.2679$H67.14306@tor-nn1.netcom.ca>
Source record: 43556
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Oh yes I forgot to ask. Will a electroylic cap work for awhile then start acting up after more power is drawn from the power supply? The bias voltage is supplied when the T4XC is turned on but maybe the current increases during transmit!

That is what is happening here. The T4XC works great for the first 5 minutes of transmitting then the hum etc appears in my receiver and in my transmitted signal. It does not stop until the T4XC is turned of and later turned on after it has cooled down.

73
Rob

"Rob" <Pse@NoEmail.Com> wrote in message
news:ZaSL8.2678$H67.14240@tor-nn1.netcom.ca...
> Hi Bill,
>
> Many thanks for the post! But I hate to disagree with you. But the T4XC
> (unlike the R4C) has more tubes than transistors. And from I can see the
> 250 VDC and the -55 VDC lines from the AC4 power supply are used to power
> the few transistors in the T4XC (resistors are used to drop the voltage).
> The 12VAC line appears to be only used for the filaments. I don't see
> anything like a rectifier circuit. (But maybe I am blind (smile))
>
> Taking a closer look at the schematics. It appears that the -55VDC line is
> fed into the INJECTION jack along with a RF signal from the VFO. Since my
> hum disappears when I disconnect the INJECTION cable between the T4XC and
> R4C, I suspect that the -55 VDC line is dirty. Maybe the caps in the power
> supply have gone. (But I am only guessing!)
>
> Perhaps the dirty -55VDC Bias line is also responsible for a hum in my
> transmitted signal. Will a dirty BIAS line cause hum in the transmitted
> signal?
>
> Besides just replacing the caps in the power supply, I don't know how else
> to identify whether a cap has gone. I hope I can find replacement
> electrolytic caps - 20 MFD for the bias line (and 125 MFD and 100 MFD for
> the high voltage lines)
>
> 73
> Rob
>
> ".Bill :-)" <TheRealExray@netscape.net> wrote in message
> news:3CFFE68F.51ACB3A8@netscape.net...

> > Rob wrote:
> > >
> >
> > > I don't think it is ever converted to 12 VDC inside the T4XC).
> >
> > Yes indeed it does. Much of the circuitry is solid state so there is
> > the normal compliment of rectifier/filtering inside the xmtr.
> > >
> >
> > > Of course, the problem may be inside the T4XC transmitter and not the
> AC4
> > > power supply. (smile)
> >
> > I think the tone, etc that you are hearing might be from faulty
> > interconnecting cables or oxidized relay contacts in the xmtr. This is
> > probably separate from any hum issues.
> > >
> > > What does "OA1" and "OB2" mean? I am not familiar with these terms.
> >
> > 0A2 and 0B2 are common regulator tubes. Not used in the T4XC.
> >
> > If you don't have a manual and schematic you can download them at
> > http://bama.sbc.edu
> >
> > -Bill
> >
>
>

195. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 23:38:57 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <loSL8.24966$092.820435@news1.east.cox.net>
Source record: 43557
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

4CX250 tubes aren't the best for IMD performance -- but, they are cheap
and available.

Pete

"Skipp" <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
news:adm4omoip9@woodrow.ucdavis.edu...
>
> In reference to another thread where someone asked questions about
> converting an amplifier from 6LQ6 "sweep tubes" over to 4CX250B "ceramic"
> tubes...
>
> Here's a web link to a few photos of a Dentron GLA-1000B which was
> converted over to a pair of 4CX250's by an Italian Amateur Radio Operator.
> I also have pictures of the same amplifier with some of the newer Russian
> GU7 series tubes on board, but that's off topic. Anyway have a look if
> your interested.
>
> cheers
> skipp@pilotNOSPAMPLEASE.ucdavis.edu
>
> http://sonic.ucdavis.edu/dentron
>
>
> The main page for the sonic server..
>
> http://sonic.ucdavis.edu
> chow for now
> skipp

196. thinking of building a SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-06 23:42:47 UTC
From: Bruno Hach&#65533;' <bruhac@NOSPAM.nbnet.nb.ca>
Message-ID: <XrSL8.4359$f52.569053@news-nb00s0.nbnet.nb.ca>
Source record: 43558

Hi, I'm thinking of building a SW receiver..

Where are the best places to buy parts (crystals, capacitors,transistors, etc) besides Radio Shack?

Thanks,
Bruno Hach&#65533;

197. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 00:04:28 UTC
From: hikezilla@yahoo.com
Message-ID: <9225CADAEbrianiquestnet@209.43.4.41>
Source record: 43559
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

n7ws at arrl net (Wes Stewart) wrote in <3cfee52b.7746436
@news.triconet.org>:

>On Thu, 06 Jun 2002 04:03:51 GMT, ke7nr@cox.net (dontownsend) wrote:
>
>|It took two wives before I found one that doesn't bitch about the
>|radios. Keep looking.
>
>Third time's a charm. This is one expensive hobby.

Not NEARLY as expensive as a few EX WIVES.

198. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 00:18:05 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CFFFBBD.EE3F602B@netscape.net>
Source record: 43560
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Rob wrote:
>
> Hi Bill,
>
> Many thanks for the post! But I hate to disagree with you. But the T4XC
> (unlike the R4C) has more tubes than transistors. And from I can see the
> 250 VDC and the -55 VDC lines from the AC4 power supply are used to power
> the few transistors in the T4XC (resistors are used to drop the voltage).
> The 12VAC line appears to be only used for the filaments. I don't see
> anything like a rectifier circuit. (But maybe I am blind (smile))

Ooops. My mistake. Sure 'nuff is as you describe.
>
> Taking a closer look at the schematics. It appears that the -55VDC line is
> fed into the INJECTION jack along with a RF signal from the VFO. Since my
> hum disappears when I disconnect the INJECTION cable between the T4XC and
> R4C, I suspect that the -55 VDC line is dirty. Maybe the caps in the power
> supply have gone. (But I am only guessing!)
>
> Perhaps the dirty -55VDC Bias line is also responsible for a hum in my
> transmitted signal. Will a dirty BIAS line cause hum in the transmitted
> signal?

Yep, that could do it.
>
> Besides just replacing the caps in the power supply, I don't know how else
> to identify whether a cap has gone. I hope I can find replacement
> electrolytic caps - 20 MFD for the bias line (and 125 MFD and 100 MFD for
> the high voltage lines)

www.mouser.com would be a good start for caps. Not sure if they will
have what you need for the HV though. But since you're getting hum on
receive the HV wouldn't be the culprit.

-Bill

199. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 00:20:45 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3CFFFC5D.8A7FD28A@netscape.net>
Source record: 43561
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Rob wrote:
>
> Oh yes I forgot to ask. Will a electroylic cap work for awhile then start
> acting up after more power is drawn from the power supply? The bias voltage
> is supplied when the T4XC is turned on but maybe the current increases
> during transmit!

Well, it can surely start to degrade after it heats up a bit. There's
no current thru a cap, but transmitting will definitely raise the temp
in the PS. Can you measure any voltage difference in the -55 line in
the hum vs no hum condition? Often a bad cap will pull down the
voltage.
-Bill

200. Re: thinking of building a SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 00:45:12 UTC
From: Bruce Lane <usenet1.5.spamvac@spamgourmet.com>
Message-ID: <MPG.1769a1f8a1bb1d669898cf@news.drizzle.com>
Source record: 43562

In article <XrSL8.4359$f52.569053@news-nb00s0.nbnet.nb.ca>,
bruhac@NOSPAM.nbnet.nb.ca says...

> Hi, I'm thinking of building a SW receiver..
>
> Where are the best places to buy parts (crystals, capacitors,transistors,
> etc) besides Radio Shack?

Ummmm... RS would be about the bottom of my list for any serious
endeavor such as you describe.

Digi-Key and Mouser Electronics would be among my top choices.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

201. Re: thinking of building a SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 00:46:41 UTC
From: Bruno Hach&#65533;' <bruhac@NOSPAM.nbnet.nb.ca>
Message-ID: <RnTL8.4391$f52.571939@news-nb00s0.nbnet.nb.ca>
Source record: 43563

Thanks! Hope they ship to Canada!

Bruno Hache

202. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 02:07:47 UTC
From: Rob <Pse@NoEmail.Com>
Message-ID: <kAUL8.2689$H67.14243@tor-nn1.netcom.ca>
Source record: 43564
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hi Bill,

Well I do not have a VTVM. But I do have a simple VOM. I do not know
whether that will do the trick.

Rob

".Bill :-)" <TheRealExray@netscape.net> wrote in message
news:3CFFFC5D.8A7FD28A@netscape.net...
> Rob wrote:
> >
> > Oh yes I forgot to ask. Will a electroylic cap work for awhile then
start
> > acting up after more power is drawn from the power supply? The bias
voltage
> > is supplied when the T4XC is turned on but maybe the current increases
> > during transmit!
>
> Well, it can surely start to degrade after it heats up a bit. There's
> no current thru a cap, but transmitting will definitely raise the temp
> in the PS. Can you measure any voltage difference in the -55 line in
> the hum vs no hum condition? Often a bad cap will pull down the
> voltage.
> -Bill
>

203. Re: Using narrow filters with TS940 in digital modes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 02:12:15 UTC
From: abockelm@optonline.net
Message-ID: <3d001588.46780297@news.optonline.net>
Source record: 43565
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

On Thu, 6 Jun 2002 16:14:10 -0400, "Rob" <Pse@NoEmail.Com> wrote:

Yes, and no mod required. You use split frequency. Put the
receive freq. in the A VOR in cw mode and use the B VOR in USB
for the send side. You must increase the frequency in B VOR by
appx. 85 Hz. to compensate for the offset in the CW mode. Refer
to your manual to see how to do split frequency. It works very
well.

Al, K2ES

>Has anyone figured out a way to use the narrow filters of the TS940 in the
>digital modes (using AFSK, etc). Is there a mod available?
>
>Right now you can only use the TS940 narrow filters in CW and FSK. Not very
>good for PSK31, etc.
>
>73
>Rob
>
>
>

204. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 02:14:19 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3D0016FB.4792C1DA@netscape.net>
Source record: 43566
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Rob wrote:
>
> Hi Bill,
>
> Well I do not have a VTVM. But I do have a simple VOM. I do not know
> whether that will do the trick.
>
> Rob

It will do just fine. Of course its a whole lot easier just to replace the filter cap(s) in the -55 circuit. You can possibly get something usable at Radio Shack.

-BM

205. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 02:15:02 UTC
From: Rob <Pse@NoEmail.Com>
Message-ID: <7HUL8.2690$H67.14337@tor-nn1.netcom.ca>
Source record: 43567
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hi,

Well I only hear the hum during receive when the Drake C line is in "Transceive" mode where the INJECTION signal from the T4XC is being fed into the R4C. I do not hear the hum in the "Separate" mode where the VFO on the R4C determines the receive frequency and the VFO on the T4XC determines the transmit frequency. The injection signal from the T4XC is not used in that case.

I agree. I doubt the 650 HV is the culprit. It is likely either the 250 VDC or -55 VDC lines. (More likely the -55 VDC line as mentioned in my previous post).

I will see if I can find a pair of 20 MFD electrolytic caps for the -55 line. Do you know what the rule of thumb is to determine the voltage rating. Should I be looking for caps rated at twice the voltage (i.e. 110 volts?)

73
Rob

".Bill :-)" <TheRealExray@netscape.net> wrote in message news:3CFFFBBD.EE3F602B@netscape.net...
> Rob wrote:
> >
> > Hi Bill,
> >
> > Many thanks for the post! But I hate to disagree with you. But the T4XC
> > (unlike the R4C) has more tubes than transistors. And from I can see the
> > 250 VDC and the -55 VDC lines from the AC4 power supply are used to power
> > the few transistors in the T4XC (resistors are used to drop the voltage).
> > The 12VAC line appears to be only used for the filaments. I don't see
> > anything like a rectifier circuit. (But maybe I am blind (smile))
>
> Ooops. My mistake. Sure 'nuff is as you describe.
> >
> > Taking a closer look at the schematics. It appears that the -55VDC line is
> > fed into the INJECTION jack along with a RF signal from the VFO. Since my
> > hum disappears when I disconnect the INJECTION cable between the T4XC

and
> > R4C, I suspect that the -55 VDC line is dirty. Maybe the caps in the
power
> > supply have gone. (But I am only guessing!)
> >
> > Perhaps the dirty -55VDC Bias line is also responsible for a hum in my
> > transmitted signal. Will a dirty BIAS line cause hum in the transmitted
> > signal?
>
> Yep, that could do it.
> >
> > Besides just replacing the caps in the power supply, I don't know how
else
> > to identify whether a cap has gone. I hope I can find replacement
> > electrolytic caps - 20 MFD for the bias line (and 125 MFD and 100 MFD
for
> > the high voltage lines)
>
> www.mouser.com would be a good start for caps. Not sure if they will
> have what you need for the HV though. But since you're getting hum on
> receive the HV wouldn't be the culprit.
>
> -Bill
>

206. Re: thinking of building a SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 02:36:31 UTC
From: ZOOM <kandrparker@sympatico.ca>
Message-ID: <S_UL8.9643$W74.2098307@news20.bellglobal.com>
Source record: 43568

If your in Canada why not buy your parts in Canada????
Electrosonic, Muis, Active Electronics and hundres of other electronic suppliers. Every large city has several places to get parts.

All you have to do is use a phone book.

"Bruno Hach&#65533;'" <bruhac@NOSPAM.nbnet.nb.ca> wrote in message news:RnTL8.4391$f52.571939@news-nb00s0.nbnet.nb.ca...
> Thanks! Hope they ship to Canada!
>
> Bruno Hache
>
>
>

207. Re: Hammarlund SP-600

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 02:39:17 UTC
From: ZOOM <kandrparker@sympatico.ca>
Message-ID: <s1VL8.9649$W74.2100421@news20.bellglobal.com>
Source record: 43569
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

Bob are you sure you have an SP-600? The tuning mechanism is geared not
rubber friction feed here!
If it's not smooth then some of the bushings have dried. A shot of WD-40
will certainly loosen them up but suggest you clean them.

"Bob" <balbert@cnmnetwork.com> wrote in message
news:f3MK8.112471$%o.10689293@bin3.nnrp.aus1.giganews.com...
> The tuning knob lacks friction and doesn't turn the dial. It's a friction
> drive but I don't know what the problem is. Is there a rubber tire that
is
> missing? It looks like brass-to-brass and that doesn't make sense. But I
> can't see where a rubber tire would go.
>
> Help please; I don't have a manual. Most manuals wouldn't show an
exploded
> view of this complex mechanism anyway.
>
> Bob
>
>

208. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 03:27:41 UTC
From: Rob <Pse@NoEmail.Com>
Message-ID: <dLVL8.2697$H67.14255@tor-nn1.netcom.ca>
Source record: 43570
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I can't seem to find anyone selling 20 MFD caps. But It looks like I can easily get 22 MFD electrolytic caps rated for 160 volts from mouser and other places.

Please correect me if I am wrong but I don't think using 22MFD (vs 20 MFD) will be a big deal for use in the AC4 power supply. (I guess I could always use two 10 MFD caps in parallel. But that will be more wiring and I doubt there is much room!)

What do you think. Will 22 MFD electrolytic caps rated for 160 volts work as smoothing caps in the -55 VDC bias line?

Rob

".Bill :-)" <TheRealExray@netscape.net> wrote in message news:3D0016FB.4792C1DA@netscape.net...
> Rob wrote:
> >
> > Hi Bill,
> >
> > Well I do not have a VTVM. But I do have a simple VOM. I do not know
> > whether that will do the trick.
> >
> > Rob
>
> It will do just fine. Of course its a whole lot easier just to replace
> the filter cap(s) in the -55 circuit. You can possibly get something
> usable at Radio Shack.
>
> -BM
>

209. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 03:48:46 UTC
From: kd5jbn@aol.comnospam
Message-ID: <20020606234846.16353.00000595@mb-ma.aol.com>
Source record: 43572
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.homebrew

The way I get my XYL to allow me to buy radios is if she gets the same exact amount in Mad Money to go to Vegas.

210. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 03:49:00 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3D002D2C.46349B09@netscape.net>
Source record: 43571
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Rob wrote:
>
> I can't seem to find anyone selling 20 MFD caps. But It looks like I can
> easily get 22 MFD electrolytic caps rated for 160 volts from mouser and
> other places.
>
> Please correect me if I am wrong but I don't think using 22MFD (vs 20 MFD)
> will be a big deal for use in the AC4 power supply. (I guess I could
> always use two 10 MFD caps in parallel. But that will be more wiring and I
> doubt there is much room!)
>
> What do you think. Will 22 MFD electrolytic caps rated for 160 volts work
> as smoothing caps in the -55 VDC bias line?

The schematic calls for 20uf and the original parts list says 40uf so I guess its fairly non critical. A 22, 33 or even 47 should do the trick. 22 is the standard value these days in place of 20. Voltage is shown as 150vdc, so the common modern equivalent will be the 160. Note that this is a dual capacitor. Space shouldn't be an issue. A 22/160 cap is about the size of a cigarette butt. If you are going to order from Mouser, get the 140-HTRL-**** version (high temp).

211. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 04:02:24 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <tvb0gucm0mspknfhjnh5j446gaqi1i35b1@4ax.com>
Source record: 43573
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I cut a deal with my YF, also a ham. It was this 3 nights out with the boys thing.

I got all the radios I wanted.

She cut it down to two nights out.

Seemed fair to me. {;-)

Jim

"KC8SSG" <kc8ssg@qsl.net>
shared these priceless pearls of wisdom:

->I'm having a hard time getting my wife to get used to me buying radios and
->stuff. Any help or suggestions would be great!

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

212. Re: Looking for a plate transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 04:09:19 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <LnWL8.496$9F.115244171@news.inreach.com>
Source record: 43574

Chris:

If you mean 1500 VAC coming out of the transformer, going into a doubler, you may have more DC than you want. Assuming a capacitor input filter with enough capacitance for good dynamic regulation, the DC output you will get can be about 2.828 times the RMS AC of the transformer...1500 VAC into a doubler will give over 4 KV under no-load conditions. You could use a choke input filter, with enough bleeder current to keep the no-load voltage from climbing too high, but the bleeders will consume many expensive watts.

You may be able to use a transformer more like 1000 - 1100 VAC to give something close to 3 KV.

Roger K6XQ

213. Re: thinking of building a SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 04:40:48 UTC
From: "John S. MacKay" <k35454@direct.ca>
Message-ID: <ug0gocaijkiqda@corp.supernews.com>
Source record: 43578

Bruno Hach&#65533;' <bruhac@NOSPAM.nbnet.nb.ca> wrote in message
news:XrSL8.4359$f52.569053@news-nb00s0.nbnet.nb.ca...
> Hi, I'm thinking of building a SW receiver..
>
> Where are the best places to buy parts (crystals, capacitors,transistors,
> etc) besides Radio Shack?
>
> Thanks,
> Bruno Hach&#65533;
>
>
>
Why build it ? You probably can buy a good used
set a lot cheaper and better. VE7AFN.

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.370 / Virus Database: 205 - Release Date: 6/5/02

214. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 05:03:29 UTC
From: Rob <Pse@NoEmail.Com>
Message-ID: <29XL8.2707$H67.14503@tor-nn1.netcom.ca>
Source record: 43576
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I think I may have narrowed down my problem with my T4XC.

I took off my cover and started to gently knock on the tubes etc with my pen. The minute I hit either V9 (12AX7) or the electrolytic cap beside it (C107?), the S meter would jump to S40 over 9!

I suspect that either V9 (12AX7) or the cap is defective. I hear that tubes can be microphonic but can caps??

Does anyone know where I can get a replacement 12AX7 or a replacement for the 60 MFD 250 vdc electrolytic cap? (I don't think they make the metal electrolytic caps anymore).

Am I on the right track??

73's
Rob

"Dave Edwards" <kd2e@comcast.net> wrote in message
news:JcvL8.128$Qg.42204@bin6.nnrp.aus1.giganews.com...
> I agree with Bill....It is like one of those things that goes 'bump' in
the
> night.
> I would first suspect a tube has to be reseated. Make sure all connectors
> are tight, and move each control on the front panel while listening to see
> if the sound changes. If the cause is a BAD tube, listen to the sound and
> tap each tube lightltly with the eraser end of a pencil....see if the
sound
> is effected by a particular tube.
> You can tap on other components with the pencil while you are at it.
> Regards...Dave
> "Rob" <Pse@NoEmail.Com> wrote in message
> news:FgsL8.2511$H67.13640@tor-nn1.netcom.ca...
> > Hi,
> >
> > After 10 years of sitting in a box, I just set-up my old Drake C line
(R4C
> > and T4XC). The R4C is working great. But the T4XC is giving me
problems.
> > Since it is getting impossible to find anyone in Canada to fix these old
> > radio, perhaps someone can give me some advice.
> >
> > Problem 1
> >
> > When I operate the in "Separate mode", everything seems to work pretty

> well.
> > But when I go to "transceive" mode (either the R4C or T4XC VFO is used
for
> > both transmitting and receiving), problems start. At first it works!
But
> > after a while, I hear a tone in the receiver. What is really weird is
> that
> > when I can tap on the cabinet of the T4XC transmitter, the S meter on
the
> > R4C moves and I can hear it in the receiver while in RECEIVE mode. It
> seems
> > like my old T4XC has a hidden microphone (smile). It must be some sort
of
> > weird feedback or ground loop.
> >
> > If I disconnect the INJ (injection) cable the tone/ feedback disappears.
> > Also when I go back to the separate mode, the tone / feedback
disappears.
> > Right now the only way I can operate is in "Separate" mode. I have been
> > getting pretty good audio reports on the air.
> >
> > Does anyone else experienced this? WHat might be wrong? Perhaps a
> blocking
> > capacitor has gone in the Injection circuit? I doubt it is serious. But
I
> > need some help tracking the faulty part down. Any suggestions would be
> > appreciated.
> >
> > Problem 2
> >
> > When I tune up on 20 meters, I initially get over 175 watts output
power!
> > But it soon drops to 100 watts. The power sometimes fluctuate rapidly
at
> > times during tune up between 100 and 175 watts. (The plate current also
> > fluctuates between 300 and 450 mils). It can be a challenge at times to
> > tune it. The problem is intermittent.
> >
> > Any ideas? It looks like another capacitor has gone? How do I track
down
> > the faulty component?
> >
> > Rob
> > P.S. I really wish I had a VTVM!!
> >
> >
> >
> >
> >
> >

> >
> >
>
>

215. Re: Truly universal power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 05:03:34 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <G8XL8.79371$4i.8293288@bin2.nnrp.aus1.giganews.com>
Source record: 43575

There are two basic ways to design such a power supply.

First, you can put in some sensing elements to decide the input range and switch in the appropriate components.

Second, you can design a power supply that will work from the entire range. It will have a variable duty cycle such that the output is always within certain reasonable limits.

I think you are interested in the second approach. The problem may be efficiency, and the output will be difficult to filter. A short spike of 300 Volts will have to be filtered down to say 12 Volts by virtue of its having a duty cycle of 4% or so. Hard to supply large currents under these conditions, although there is nothing to stop you from trying.

Many computer power supplies will operate from 100-240 Volts without a problem.

The thing that makes the razor supply practical is that it is low power. And doesn't care too much about ripple and other noises.

By the way, if you disassemble it you won't learn a whole lot about its design.

73, Bob

216. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 05:05:20 UTC
From: Rob <Pse@NoEmail.Com>
Message-ID: <NaXL8.2708$H67.14380@tor-nn1.netcom.ca>
Source record: 43577
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Many thanks for the reply. I did not realise that they made high temp caps!! Yes if I order a cap I will get the high temp version but I think it may not be a cap in the power supply after all.

I took off my cover and started to gently knock on the tubes etc with my pen. The minute I hit either V9 (12AX7) or the electrolytic cap beside it (C107?), the S meter would jump to S40 over 9!

I suspect that either V9 (12AX7) or the cap is defective. I hear that tubes can be microphonic but can caps??

Does anyone know where I can get a replacement 12AX7 or a replacement for the 60 MFD 250 vdc electrolytic cap? (I don't think they make the metal electrolytic caps anymore).

Am I on the right track??

73's
Rob

".Bill :-)" <TheRealExray@netscape.net> wrote in message news:3D002D2C.46349B09@netscape.net...
> Rob wrote:
> >
> > I can't seem to find anyone selling 20 MFD caps. But It looks like I can
> > easily get 22 MFD electrolytic caps rated for 160 volts from mouser and
> > other places.
> >
> > Please correect me if I am wrong but I don't think using 22MFD (vs 20 MFD)
> > will be a big deal for use in the AC4 power supply. (I guess I could
> > always use two 10 MFD caps in parallel. But that will be more wiring and I
> > doubt there is much room!)
> >
> > What do you think. Will 22 MFD electrolytic caps rated for 160 volts work
> > as smoothing caps in the -55 VDC bias line?
>
> The schematic calls for 20uf and the original parts list says 40uf so I
> guess its fairly non critical. A 22, 33 or even 47 should do the
> trick. 22 is the standard value these days in place of 20. Voltage is
> shown as 150vdc, so the common modern equivalent will be the 160.
> Note that this is a dual capacitor. Space shouldn't be an issue. A

> 22/160 cap is about the size of a cigarette butt. If you are going to
> order from Mouser, get the 140-HTRL-**** version (high temp).
>

217. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 05:24:08 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3D004378.77E58E07@netscape.net>
Source record: 43579
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Rob wrote:
>
> Many thanks for the reply. I did not realise that they made high temp
> caps!! Yes if I order a cap I will get the high temp version but I think it
> may not be a cap in the power supply after all.
>
> I took off my cover and started to gently knock on the tubes etc with my
> pen. The minute I hit either V9 (12AX7) or the electrolytic cap beside it
> (C107?), the S meter would jump to S40 over 9!
>
> I suspect that either V9 (12AX7) or the cap is defective. I hear that tubes
> can be microphonic but can caps??
>
> Does anyone know where I can get a replacement 12AX7 or a replacement for
> the 60 MFD 250 vdc electrolytic cap? (I don't think they make the metal
> electrolytic caps anymore).
>
> Am I on the right track??
>
> 73's
> Rob

I've never seen a can type cap do anything like that. I'd be more
suspect of the tube or something else in the immediate area.
-Bill

218. Re: thinking of building a SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 06:16:25 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <ZcYL8.25087$LC3.1902471@bgtnsc04-news.ops.worldnet.att.net>
Source record: 43580

One of the best places, period, is Future Electronics. They have a good supply of the Phillips radio parts, along with the Murata ceramic filters. They even have the photo sensitized PC boards, along with the UV exposure light,if you want to roll your own. I've found that if you use Ink Jet or Laser Jet transparancies, if you have a PC board layout program, you can print out your own tools. Digi-Key is a good source for ECS crystal filters, along with the other suppliers that the other folks have mentioned.

Pete KE9OA

ZOOM <kandrparker@sympatico.ca> wrote in message
news:S_UL8.9643$W74.2098307@news20.bellglobal.com...
> If your in Canada why not buy your parts in Canada????
> Electrosonic, Muis, Active Electronics and hundres of other electronic
> suppliers. Every large city has several places to get parts.
>
> All you have to do is use a phone book.
>
>
> "Bruno Hach�'" <bruhac@NOSPAM.nbnet.nb.ca> wrote in message
> news:RnTL8.4391$f52.571939@news-nb00s0.nbnet.nb.ca...
> > Thanks! Hope they ship to Canada!
> >
> > Bruno Hache
> >
> >
> >
>
>

219. Re: thinking of building a SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 08:57:51 UTC
From: knox_k@nemaine.com
Message-ID: <3d00757b.718723@news.nemaine.com>
Source record: 43581

On Thu, 6 Jun 2002 21:40:48 -0700, "John S. MacKay" <k35454@direct.ca>
wrote:

>
>Bruno Hach&#65533;' <bruhac@NOSPAM.nbnet.nb.ca> wrote in message
>news:XrSL8.4359$f52.569053@news-nb00s0.nbnet.nb.ca...
>> Hi, I'm thinking of building a SW receiver..
>>
>> Where are the best places to buy parts (crystals, capacitors,transistors,
>> etc) besides Radio Shack?
>>
>> Thanks,
>> Bruno Hach&#65533;
>>
>>
>>
> Why build it ? You probably can buy a good used
>set a lot cheaper and better. VE7AFN.
>
>

And learn a lot less doing it.

220. Re: Truly universal power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 11:10:14 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <adq4al$h04$1@knossos.btinternet.com>
Source record: 43582

"Sverre Holm (LA3ZA)" <la3za@qsl.net> wrote in message
news:H0QL8.181$g65.3392@news4.ulv.nextra.no...
> I am really impressed by the power supply of my Braun electric shaver. It
> can run from 12 - 240 V AC or DC. Of course it is only 6 Watts. Does
anyone
> know the secret for making such a universal power supply, it isn't broken
> yet so I won't open it!
> Wouldn't it be nice be able to plug in your rig everywhere with no concern
> for neither voltage nor polarity?

It must use some form of switched mode PS, with direct connection (no
transformer) to the supply, with a bridge rectifier. There is a transformer
on the output, of course.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.com
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

221. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 11:49:07 UTC
From: Dwight Stewart <stewart@sc.rr.com>
Message-ID: <3D009DC6.83406641@sc.rr.com>
Source record: 43583
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

KC8SSG wrote:
>
> Help XYL won't warm up

Perhaps a nice, expensive, linear amplifier under the bed might help.
Those things have been known to generate a little heat. If nothing else,
it will (generate a little heat) once your wife finds out how much you
paid for it - many people warm up when they're yelling at someone else.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

222. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 12:10:53 UTC
From: Dwight Stewart <stewart@sc.rr.com>
Message-ID: <3D00A2DB.FCD113BE@sc.rr.com>
Source record: 43584
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Bill Otten wrote:
>
> I am blessed. My lovely wife bought me a
> new rig this past Christmas. I had merely
> looked and commented on the rig she bought
> me, it was a complete surprise. She
> actually encourages me to enjoy my hobby.

Same here. My wife bought my first radio years ago after she realised I wanted one and has never complained once about anything I've purchased since. In fact, I have the perfect wife - she likes fishing, boating, country music, SUVs, cooking steaks on the grill, wearing tight pants, and practical jokes. In fact, she even points out the girls with short skirts I might have missed. What more could you ask for in a woman?

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

223. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 12:13:27 UTC
From: Dwight Stewart <stewart@sc.rr.com>
Message-ID: <3D00A377.C9355081@sc.rr.com>
Source record: 43585
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Scott wrote:
>
> Yes it is (a family restaraunt)!! I took
> my wife and daughter for lunch while in
> Orlando and I loved it! The food was
> great too ;)

They have food at Hooters? Funny, I've never noticed that.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

224. Re: Looking for a plate transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 14:08:39 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <H73M8.152556$%o.14608282@bin3.nnrp.aus1.giganews.com>
Source record: 43586

Try Fair Radio Sales in Lima OH -- they have a website.

"NI4L" <ni4l@charter.net> wrote in message
news:3CFFD26E.5030502@charter.net...
> Hi
> i am looking for a plate transformer aprox 1500v at least 1 to 2 amps
> 120/240 primary extra taps with different voltages ok.
> Trying to get something together for a Hb project. One of those old
> miltary encased ones would be great. what do you have laying around your
> using as a doorstop?
> want to do a doubler on the PS to get about 3kv
>
> chris NI4L
> --
> NI4L CUSTOM RESONANT DIPOLE
> LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
> Made with the same components used by our military forces today
> Custom made to YOUR FREQUENCY of operation
> Let me take the hassle out of making a RESONANT DIPOLE for you.
> Click here for more info... http://www.angelfire.com/nb/ni4l/
>
>

225. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 14:31:14 UTC
From: Bill Turner <w7ti@dslextreme.com>
Message-ID: <gqg1guggl8h85994c738760rt2uo4ou2l1@4ax.com>
Source record: 43588
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Fri, 07 Jun 2002 12:10:53 GMT, Dwight Stewart <stewart@sc.rr.com>
wrote:

> Same here. My wife bought my first radio years ago after she realised
>I wanted one and has never complained once about anything I've purchased
>since. In fact, I have the perfect wife - she likes fishing, boating,
>country music, SUVs, cooking steaks on the grill, wearing tight pants,
>and practical jokes. In fact, she even points out the girls with short
>skirts I might have missed. What more could you ask for in a woman?

Your wife is an absolute jewel. It's always fascinated me how dumb a
lot of women are when it comes to men. And vice versa, I suppose. <g>

Bill, W7TI

226. Re: thinking of building a SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 14:34:09 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d00c342.667342@news.freeserve.net>
Source record: 43587

On Fri, 07 Jun 2002 08:57:51 GMT, knox_k@nemaine.com (Ken Knox (N1JRO)) wrote:

>On Thu, 6 Jun 2002 21:40:48 -0700, "John S. MacKay" <k35454@direct.ca>
>wrote:
>
>>
>>Bruno Hach&#65533;' <bruhac@NOSPAM.nbnet.nb.ca> wrote in message
>>news:XrSL8.4359$f52.569053@news-nb00s0.nbnet.nb.ca...
>>> Hi, I'm thinking of building a SW receiver..
>>>
>>> Where are the best places to buy parts (crystals, capacitors,transistors,
>>> etc) besides Radio Shack?
>>>
>>> Thanks,
>>> Bruno Hach&#65533;
>>>
>>>
>>>
>> Why build it ? You probably can buy a good used
>>set a lot cheaper and better. VE7AFN.
>>
>>
>
>And learn a lot less doing it.

but, sadly, have little financial return on your investment on resale
:-(
Any commercial equipment tends to maintain its resale value, homebrew
is usually an instant write-off of outlay, and bucks for bang,
generally (but by no means always) inferior to commercial.
Mike W, G8NXD qthr

227. Re: Good s-meter for small radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 14:39:41 UTC
From: msenecal@logicon.com
Message-ID: <50ecc828.0206070639.3353bde3@posting.google.com>
Source record: 43589

Good point. I'm more interested in learning how it works than anything.

"Walter" <walter@accessus.net> wrote in message
news:<r%cL8.113074$%y.11860358@bin4.nnrp.aus1.giganews.com>...
> Are you sure that small radio is worth the effort of building up
> an S meter circuit?
>
> Would a voltmeter paralleled in the audio output give you
> enough of a reading of peaks and nulls?
>
> 73...Walter, AG5P
>
>
> "Matt Senecal" <msenecal@logicon.com> wrote in message
> news:50ecc828.0206041136.59e12f73@posting.google.com...
> > What's a good meter to use as an S-meter on a small, 9v radio?
> >

228. Need help installing isolation transformer in S-38C

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 14:48:51 UTC
From: msenecal@logicon.com
Message-ID: <50ecc828.0206070648.7a0c034f@posting.google.com>
Source record: 43590
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.antiques.radio+phono

I recently purchased a Hallicrafters S-38C for my brother. I understand from looking at it that the chassis carries a potential. After making some inquiries I have learned that to remove the shock hazard I need to install an isolation transformer.

While I'm still somewhat ignorant of electronics, I'm fairly handy (I recently restored an old SX-99 to working condition). But I feel that working with transformers is a bit out of my league. I would appreciate some help from someone who has done this before. Basically what I'd like to know is what kind of transformer to buy (be specific), and how/where to install it. Any help would be appreciated!

Thanks!

229. Re: thinking of building a SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 15:04:19 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0206070704.2f1d5cd6@posting.google.com>
Source record: 43591

"John S. MacKay" <k35454@direct.ca> wrote in message
news:<ug0gocaijkiqda@corp.supernews.com>...
> Bruno Hachi¿½' <bruhac@NOSPAM.nbnet.nb.ca> wrote in message
> news:XrSL8.4359$f52.569053@news-nb00s0.nbnet.nb.ca...
> > Hi, I'm thinking of building a SW receiver..
> >
> > Where are the best places to buy parts (crystals, capacitors,transistors,
> > etc) besides Radio Shack?
> >
> > Thanks,
> > Bruno Hachi¿½
> >
> >
> >
> Why build it ? You probably can buy a good used
> set a lot cheaper and better. VE7AFN.
>
>
Well, he didn't cross-post, and this is rec.radio.amateur.homebrew So
it would seem because he wants to build, just like the people who
regularly read this newsgroup.

Michael VE2BVW

230. Re: thinking of building a SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 15:15:04 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0206070715.6d44bde8@posting.google.com>
Source record: 43592

"Bruno Hach?" <bruhac@NOSPAM.nbnet.nb.ca> wrote in message
news:<XrSL8.4359$f52.569053@news-nb00s0.nbnet.nb.ca>...
> Hi, I'm thinking of building a SW receiver..
>
> Where are the best places to buy parts (crystals, capacitors,transistors,
> etc) besides Radio Shack?
>
> Thanks,
> Bruno Hachï¿½

It also helps if you say where in Canada, because in some places
there are still local stores where you can buy parts.

An important thing to watch for is hamfests or fleamarkets put on
by local ham clubs. The Radio Amateurs of Canada keep a list of
such events at http://www.rac.ca What you will find depends on
what people are selling at any given time, but especially if you
are just starting out, they are a great source of staples, without
the higher cost of buying from Radio Shack or even other places.
Along with parts (and you probably won't find the absolute latest
parts), you can usually find data books cheap, back issues of the
amateur radio magazines, test equipment, used books related to amateur
radio and electronics in general.

You can also get a lot of parts out of abondoned electronic equipment.
See a VCR waiting for the garbage truck, and chances are the power
transformer is still good (maybe it will put out voltages that aren't
as useful as a bought transformer, but transformers can be some of
the more expensive parts to buy), plenty of ceramic capacitors to use
for bypassing circuitry, all the resistors you care to pull off the board.
A lot of transistors, useful for when you don't have a crucial
application. Other electronic equipment will likewise offer up
the staples, and depending on what it is, offer up some unique components.
Of course, the more recent it is, the less useful the parts it will
supply.

Your question in some ways depends on what you want to build. If it's
some slick design out of the latest magazine, you will probably have to
mail order, and your choices of places that carry the needed parts may be
limited. But if you are building something from a few years ago, or
something reasonably simply, chances are the parts are readily available
(even at Radio Shack though their prices will be higher).

Michael VE2BVW

231. Re: thinking of building a SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 15:30:14 UTC
From: Bruno Hach&#65533;' <bruhac@NOSPAM.nbnet.nb.ca>
Message-ID: <ak4M8.4670$f52.603841@news-nb00s0.nbnet.nb.ca>
Source record: 43593

I'm located in Atlantic Canada - New Brunswick specifically. I intend to build a SW receiver for a college project.

Thanks,
Bruno Hache

232. Re: thinking of building a SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 15:38:16 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0206070738.5782a659@posting.google.com>
Source record: 43594

knox_k@nemaine.com (Ken Knox (N1JRO)) wrote in message
news:<3d00757b.718723@news.nemaine.com>...

> And learn a lot less doing it.

Though if the original poster doesn't even know where
to buy parts, one might wonder if he really understands
what he's proposing to do.

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

233. Re: thinking of building a SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 16:25:47 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3D00DE8B.9A4D9AF@netscape.net>
Source record: 43595

Mike W wrote:
>
> On Fri, 07 Jun 2002 08:57:51 GMT, knox_k@nemaine.com (Ken Knox
> (N1JRO)) wrote:
>
> >On Thu, 6 Jun 2002 21:40:48 -0700, "John S. MacKay" <k35454@direct.ca>
> >wrote:
> >
> >>
> >>Bruno Hachï¿½' <bruhac@NOSPAM.nbnet.nb.ca> wrote in message
> >>news:XrSL8.4359$f52.569053@news-nb00s0.nbnet.nb.ca...
> >>> Hi, I'm thinking of building a SW receiver..
> >>>
> >>> Where are the best places to buy parts (crystals, capacitors,transistors,
> >>> etc) besides Radio Shack?
> >>>
> >>> Thanks,
> >>> Bruno Hachï¿½
> >>>
> >>>
> >>>
> >> Why build it ? You probably can buy a good used
> >>set a lot cheaper and better. VE7AFN.
> >>
> >>
> >
> >And learn a lot less doing it.
>
> but, sadly, have little financial return on your investment on resale
> :-(
> Any commercial equipment tends to maintain its resale value, homebrew
> is usually an instant write-off of outlay, and bucks for bang,
> generally (but by no means always) inferior to commercial.
> Mike W, G8NXD qthr

So?
-Bill

234. Re: Need help installing isolation transformer in S-38C

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 16:28:52 UTC
From: Sparks W4EAS <sparksw4eas@mindspring.com>
Message-ID: <3D00DF44.1DE1@mindspring.com>
Source record: 43596
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.antiques.radio+phono

It is best NOT to change the internal ckt in the ac/dc set. Instead use
a external isolation xfmr or use two back to back filiment xfmr's. Then
the S-38 is isolated and you can ground and use in a safe mannor.
Otherwise use a polorized plug. I grew up with ac/dc sets in the 50's
Good luck 73 Sparks W4EAS

235. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 17:17:37 UTC
From: AB8MQ <kc8jbo@alt.net>
Message-ID: <adqq59$cf1$0@pita.alt.net>
Source record: 43497
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

"Dwight Stewart" <stewart@sc.rr.com> wrote in message
news:3D009DC6.83406641@sc.rr.com...
> KC8SSG wrote:
> >
> > Help XYL won't warm up
>
>
> Perhaps a nice, expensive, linear amplifier under the bed might help.
> Those things have been known to generate a little heat. If nothing else,
> it will (generate a little heat) once your wife finds out how much you
> paid for it - many people warm up when they're yelling at someone else.
>
>
> Dwight Stewart (W5NET)
>
> http://www.qsl.net/w5net/

LOL!!!!!!!!

236. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 17:35:50 UTC
From: Rob <Pse@NoEmail.Com>
Message-ID: <qa6M8.2786$H67.14657@tor-nn1.netcom.ca>
Source record: 43498
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hi Bill,

I found a spare 12AX7 kicking around. I replaced the suspect 12ax7 with the spare. I get the same behaviour! Maybe my spare is also defective.

The T4XC uses two 12AX7. I am thking of swapping them. I just don't know if it is a good idea.

Or just maybe the tube socket is defective. Maybe I can use some sort of anti-oxidizing stuff (Oxidet?)

The weird hum etc seems to occur only after I transmit for a few minutes. After I stop transmitting for a few minutes, sometimes the hum etc disappears. Very weird. It obviously only occurs when one of the components heats up during transmit.

I am pretty sure there is something wrong with the mic amp / side tone generator circuit. Maybe the electrolytic cap beside the 12ax7is the cause. The cap is connected to the plate of the 12ax7 and to 250 VDC. It might explain why I hear the hum DURING receive (coupled through the Injection cable). But why is it microphonic?

I also notice the plate current going from 300 to 400 mils during tuneup. I think itis the same problem.

Can I still get metal can caps? Or will any 60 MFD electrolytic cap rated for 250 VDC due?

Rob

".Bill :-)" <TheRealExray@netscape.net> wrote in message news:3D004378.77E58E07@netscape.net...
> Rob wrote:
> >
> > Many thanks for the reply. I did not realise that they made high temp
> > caps!! Yes if I order a cap I will get the high temp version but I think it
> > may not be a cap in the power supply after all.
> >
> > I took off my cover and started to gently knock on the tubes etc with my
> > pen. The minute I hit either V9 (12AX7) or the electrolytic cap beside it
> > (C107?), the S meter would jump to S40 over 9!
> >
> > I suspect that either V9 (12AX7) or the cap is defective. I hear that tubes

> > can be microphonic but can caps??
> >
> > Does anyone know where I can get a replacement 12AX7 or a replacement
for
> > the 60 MFD 250 vdc electrolytic cap? (I don't think they make the
metal
> > electrolytic caps anymore).
> >
> > Am I on the right track??
> >
> > 73's
> > Rob
>
>
> I've never seen a can type cap do anything like that. I'd be more
> suspect of the tube or something else in the immediate area.
> -Bill
>

237. Re: oscilloscope as monitor scope?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 18:00:12 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <adqsbc$he2$1@knossos.btinternet.com>
Source record: 43499

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3cfe9edf.1028690@news.freeserve.net...
> On 5 Jun 2002 14:01:54 -0700, gschwab@florida-knife.com (George)
> wrote:
>
> >Does anyone here know how I might use an oscilloscope as a monitor scope?
> >I have a 15 Mhz scope and would like to "see" my transmitters output.
> >Any help greatly appreciated!
> >Thanks
> >George
>
> on what frequency ?. A 1Mhz timbase can 'see' the modulation envelope.

The ARRL Handbook has a circuit for this, using a mixer.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.com
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

238. Re: Schematic & FM info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 18:14:15 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <adtdta$f3c$1@nic.grnet.gr>
Source record: 43545
Cross-posted to: alt.ham-radio.mods,aus.radio.amateur.misc,rec.radio.amateur.homebrew

try here.... nice people....
http://www.cbtricks.com/
"Martin Howells, VK2UMJ" <vk2umj@NOSPAMyahoo.com.au> wrote in message
news:vjjM8.7853$Hj3.24822@newsfeeds.bigpond.com...
> Hi All
>
> I'm looking for a schematic for an old 27MHz CB, PLL02A AM only chassis.
> The actual unit is Ray Jefferson CB-845, but I know this chassis was very
> common amongst various makes/models (Pearce Simpson, etc). I used to have
> the schematics but they got lost somewhere in moving house, so if anyone
> would have a copy they could scan or photocopy, it'd be much appreciated.
>
> Also looking for any info on an FM receive board to build to add to above
> radio for conversion to 10m FM. FM Tx is easy, but the only design for FM
> Rx board I have is very, very old so I'm looking for any recent designs.
> Again, any info very much appreciated.
>
> 73
>
> --
> Martin, VK2UMJ
> vk2umj@NOSPAMyahoo.com.au
>
> **Remove NOSPAM from e-mail address to reply**
>
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.370 / Virus Database: 205 - Release Date: 05/06/2002
>
>

239. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 18:20:55 UTC
From: Roffus <la2ju@chello.no>
Message-ID: <bQ6M8.62$hh5.4162@news01.chello.no>
Source record: 43500
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi

Well i experienced the same problem myself....long time
ago.
But after a while I dicovered that I was using the wrong
tactic on her.

I startet to treat her the way I treat my equippment.
Gently in the beginning; First very smooth..trying out what
band she`s on? Then I check out what mode she`s in?
If she is in the "sleepy" CW-corner....save the poppers boys!
But...if she is on the SSB-plane....I slowly pump up the
volume....Pop a Champagne etc.....watch for the background-noise (bubbles)
appearing in her lower part
of the eyeballs? Now`s the time to put the processor
into play...not too heavy in the beginning...better easy
uppwards with levels of bubbles?
Wait untill the band really opens up...then u give her all
that u`ve got,inncluding the afterburner...forget leagal
limits and go for it !!! (USB or LSB ??? it`s her choice.)

Never had a complaint since I changed my tactics??
Hi hi hi !!

es vy 73!
de Roffy
LA2JU

"KC8SSG" <kc8ssg@qsl.net> skrev i melding news:VXAL8.62$13.1028@news...
> I'm having a hard time getting my wife to get used to me buying radios and
> stuff. Any help or suggestions would be great!
>
> --
> KC8SSG
>
>
>

240. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 18:23:02 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3D00FA06.431F5688@netscape.net>
Source record: 43501
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Rob wrote:
>

> The T4XC uses two 12AX7. I am thking of swapping them. I just don't know
> if it is a good idea.

No problem.
>
> Or just maybe the tube socket is defective. Maybe I can use some sort of
> anti-oxidizing stuff (Oxidet?)

De-oxit?
>
> The weird hum etc seems to occur only after I transmit for a few minutes.
> After I stop transmitting for a few minutes, sometimes the hum etc
> disappears. Very weird. It obviously only occurs when one of the
> components heats up during transmit.

Some freeze spray might help zero in on this.
>
> I am pretty sure there is something wrong with the mic amp / side tone
> generator circuit. Maybe the electrolytic cap beside the 12ax7is the cause.
> The cap is connected to the plate of the 12ax7 and to 250 VDC. It might
> explain why I hear the hum DURING receive (coupled through the Injection
> cable). But why is it microphonic?

Its entirely possible that you have more than one problem. Having a
tube in a low-level/high gain stage like a speech amp that appears
microphonic shouldn't necessarily be considered a problem unless it is
particularly sensitive.
>
> I also notice the plate current going from 300 to 400 mils during tuneup. I
> think itis the same problem.

I'm not sure exactly what you mean. If the idling current is changing
then that might indicate the -55 v line is changing. But erratic output
power/input current could be a zillion different other things.
>
> Can I still get metal can caps? Or will any 60 MFD electrolytic cap rated
> for 250 VDC due?

Use a small 100 mf/250 volt one temporarily to see if the can is really
bad. Can caps are pretty hard to find. Anything you might run across
will probably be older than what you have now!

You've mentioned a number of different symptoms and its hard to see how
they might all be related. I'd urge you to first deal with the basics
by seeing if the 250 or -55 line are different voltages when the radio
is in the 'hum mode'.
>
-Bill

241. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 18:57:43 UTC
From: ehsjr@nospambellatlantic.net
Message-ID: <3D0102A7.E3BACE43@nospambellatlantic.net>
Source record: 43502
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Rob wrote:
>
> I think I may have narrowed down my problem with my T4XC.
>
> I took off my cover and started to gently knock on the tubes etc with my
> pen. The minute I hit either V9 (12AX7) or the electrolytic cap beside it
> (C107?), the S meter would jump to S40 over 9!
>
> I suspect that either V9 (12AX7) or the cap is defective. I hear that tubes
> can be microphonic but can caps??
>
> Does anyone know where I can get a replacement 12AX7 or a replacement for
> the 60 MFD 250 vdc electrolytic cap? (I don't think they make the metal
> electrolytic caps anymore).
>
> Am I on the right track??
>
> 73's
> Rob

You are on the right track. The tube could be the culprit -
or even the socket. The pins may have coroded/losened up
over the years.

For electrolytic caps: in general, the capacitance value
is not critical. You could probably go to 120 mfd with
no problem. You can series 2 equal caps to get double
the voltage rating and half the capacitance rating.

You asked in an earlier post in this thread about
determining if you had a bad electrolytic in the ps
causing the hum. Here's one way to troubleshoot
that: using your VOM on AC, connect one lead to
ground through a .1mfd 450 volt cap. The voltage
rating is not critical - just be sure that it is
higher than the supply voltage by a good margin.
And you could use a .22 mfd or a .01 mfd or anything
in between. The purpose of the cap in this test
is to block DC. What you see on the VOM on the AC
scale is the ripple voltage, and generally it should
be pretty low. If it is within a couple percent of
the DC voltage - say less than 5 volts on a 250 volt
supply - that's probably good. Start with the highest
AC scale and work your way down - that's to protect

your meter.

Parts availability:
12ax7
http://www.audiotubes.com/12ax7.htm
http://tubes_tubes_tubes.tripod.com/tubestubestubes/id22.html
http://www.vacuumtubesinc.com/new3.html
http://home.att.net/~esrc/esrcs3.html
http://www.hamtubes.com/tubes/list3.htm
http://www.tubesandmore.com/silverware.exe/search@g:\tubetest\antique.fxp
(I've bought from them - Antique Electronic Supply - and was satisfied
Those are a few - do a search on Vacuum Tubes & you'll
find more.

For the cap:
200ï¿½F 250VDC "Snap In" Capacitor - G12741 at Electronic Goldmine
for $1.00 - http://sales.goldmine-elec.com/prodlist.asp?catid=2134

180UF 400V ELECTROLYTIC CAPACITOR CAT# 180/400VR radial leads at
All Electronics http://www.allelectronics.com/cgi-bin/category.cgi
(scroll to page 2)

If it must be physically identical to what you've got -
I dunno. I've heard of guys somehow removing the guts
from the original can and stuffing a new cap inside.

242. Re: thinking of building a SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 19:12:36 UTC
From: ehsjr@nospambellatlantic.net
Message-ID: <3D010621.D3EFE80F@nospambellatlantic.net>
Source record: 43503

"John S. MacKay" wrote:
>
> Bruno Hachï¿½' <bruhac@NOSPAM.nbnet.nb.ca> wrote in message
> news:XrSL8.4359$f52.569053@news-nb00s0.nbnet.nb.ca...
> > Hi, I'm thinking of building a SW receiver..
> >
> > Where are the best places to buy parts (crystals, capacitors,transistors,
> > etc) besides Radio Shack?
> >
> > Thanks,
> > Bruno Hachï¿½
> >
> >
> >
> Why build it ? You probably can buy a good used
> set a lot cheaper and better. VE7AFN.
>

And forego the fun and satisfaction of building your own.

243. Re: Need help installing isolation transformer in S-38C

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 19:16:30 UTC
From: k7itm@aol.com
Message-ID: <3200347.0206071116.7d2e1be1@posting.google.com>
Source record: 43504
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.antiques.radio+phono

If I were doing it, I'd install the isolation transformer external to the radio; even though S-38's aren't exactly rare, I wouldn't want to be trying to adding something that would change it from the original. I'd look for a small (100VA? 150VA?) isolation transformer in a case with a cord you can plug into the wall, and a socket into which you can plug the radio. Sorry, I'm not going to get more specific than that...but you might have a look on, say, the MCM Electronics web site for such a beast.

However, the chassis should not be "hot" except through a couple of capacitors, one to each side of the line. The audio output is transformer-isolated, and the antenna input is link-coupled and therefore isolated. It _would_ be a good idea to be sure the caps from the AC line to the chassis are in good condition, and that nobody has done anything to compromise the isolation otherwise. Admittedly, the rules for line isolation are now rather more strict than they were in 1950 or whenever it was built, so an isolation transformer could serve as an added measure of insurance. But you should be able to _ground_ the chassis, also, to provide protection. (Expect the caps would trip a GFCI...)

Cheers,
Tom

msenecal@logicon.com (Matt Senecal) wrote in message news:<50ecc828.0206070648.7a0c034f@posting.google.com>...
> I recently purchased a Hallicrafters S-38C for my brother. I
> understand from looking at it that the chassis carries a potential.
> After making some inquiries I have learned that to remove the shock
> hazard I need to install an isolation transformer.
>
> While I'm still somewhat ignorant of electronics, I'm fairly handy (I
> recently restored an old SX-99 to working condition). But I feel that
> working with transformers is a bit out of my league. I would
> appreciate some help from someone who has done this before. Basically
> what I'd like to know is what kind of transformer to buy (be
> specific), and how/where to install it. Any help would be appreciated!
>
> Thanks!

244. Re: Need help installing isolation transformer in S-38C

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 19:24:40 UTC
From: ehsjr@nospambellatlantic.net
Message-ID: <3D0108E9.34778E29@nospambellatlantic.net>
Source record: 43505
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.antiques.radio+phono

Matt Senecal wrote:
>
> I recently purchased a Hallicrafters S-38C for my brother. I
> understand from looking at it that the chassis carries a potential.
> After making some inquiries I have learned that to remove the shock
> hazard I need to install an isolation transformer.
>
> While I'm still somewhat ignorant of electronics, I'm fairly handy (I
> recently restored an old SX-99 to working condition). But I feel that
> working with transformers is a bit out of my league. I would
> appreciate some help from someone who has done this before. Basically
> what I'd like to know is what kind of transformer to buy (be
> specific), and how/where to install it. Any help would be appreciated!
>
> Thanks!

What you are describing is an isolation transformer. You plug
the transformer into the wall receptacle - and you plug the radio
into the receptacle on the transformer.
Specs: input 120 VAC, output 120VAC. Current - that depends
on how much current the SX99 needs. The isolation transformer
needs to supply at least as much current as the SX99 is rated
for. Bring money - it won't be a 5 dollar item.
Be sure it is an *isolation* transformer. I saw one advertised
somewhere that was an autotransformer, not an isolation
transformer. You do not want an autotransformer.

There is another way to provide the safety you want, and
it is a lot cheaper. You can install a 3 wire cord and
plug, and use the SX99 only with properly grounded
receptacles. The green ground wire in the 3 wire cable
connects to the chassis. The white wire in the cord
is also electrically connected to the chassis through
existing circuitry. You will need to have someone
who knows how tell you which wire (white and black)
connects where.

245. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 19:44:42 UTC
From: Al Bunch <bunchah@nospam.yahoo.com>
Message-ID: <K28M8.13$lS1.671806@news.cpqcorp.net>
Source record: 43506
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Take out an ad:

Addicted to ragchewing, thinking of dropping another $5K on equipment? I have the solution - proven results, you won't buy another thing as long as you have this. One left, hurry before she's gone. Will consider trades for existing new/used equipment or other offers.

...or you could just be blatantly honest...

Take my wife in exchange for your used amateur radio equipment. She won't let me further my hobby so if you're getting out, she'll make sure you stay that way. All trades completely final.

If nobody bites, you can always dangle a high ticket item in front of her that she really really wants and wait for her to start chomping at the bit about getting it, then spring the compromise on her. This could get nasty though when either A) she figures out what you're up to or B) she agrees and that becomes the norm for all of your future purchases.

However you proceed, please - keep us posted so those of us luck...errr..unfortunate enough to not be married yet will know how to handle ourselves should we ever get into the same situation.

73's
-Al Bunch

"KC8SSG" <kc8ssg@qsl.net> wrote in message news:VXAL8.62$13.1028@news...
> I'm having a hard time getting my wife to get used to me buying radios and
> stuff. Any help or suggestions would be great!
>
> --
> KC8SSG
>
>
>

246. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 20:03:29 UTC
From: Rob <Pse@NoEmail.Com>
Message-ID: <Ok8M8.2809$H67.14716@tor-nn1.netcom.ca>
Source record: 43507
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Thanks for the tip for checking out electrolytic caps. I will see if a I have a 400 volt Cap for to hook up top my meter.

I think I should be able to track it down since I can easily get the T4XC into "hum" mode.

73
Rob

<ehsjr@nospambellatlantic.net> wrote in message news:3D0102A7.E3BACE43@nospambellatlantic.net...
>
>
> Rob wrote:
> >
> > I think I may have narrowed down my problem with my T4XC.
> >
> > I took off my cover and started to gently knock on the tubes etc with my
> > pen. The minute I hit either V9 (12AX7) or the electrolytic cap beside
it
> > (C107?), the S meter would jump to S40 over 9!
> >
> > I suspect that either V9 (12AX7) or the cap is defective. I hear that
tubes
> > can be microphonic but can caps??
> >
> > Does anyone know where I can get a replacement 12AX7 or a replacement
for
> > the 60 MFD 250 vdc electrolytic cap? (I don't think they make the
metal
> > electrolytic caps anymore).
> >
> > Am I on the right track??
> >
> > 73's
> > Rob
>
> You are on the right track. The tube could be the culprit -
> or even the socket. The pins may have coroded/losened up
> over the years.
>
> For electrolytic caps: in general, the capacitance value
> is not critical. You could probably go to 120 mfd with

> no problem. You can series 2 equal caps to get double
> the voltage rating and half the capacitance rating.
>
> You asked in an earlier post in this thread about
> determining if you had a bad electrolytic in the ps
> causing the hum. Here's one way to troubleshoot
> that: using your VOM on AC, connect one lead to
> ground through a .1mfd 450 volt cap. The voltage
> rating is not critical - just be sure that it is
> higher than the supply voltage by a good margin.
> And you could use a .22 mfd or a .01 mfd or anything
> in between. The purpose of the cap in this test
> is to block DC. What you see on the VOM on the AC
> scale is the ripple voltage, and generally it should
> be pretty low. If it is within a couple percent of
> the DC voltage - say less than 5 volts on a 250 volt
> supply - that's probably good. Start with the highest
> AC scale and work your way down - that's to protect
> your meter.
>
> Parts availability:
> 12ax7
> http://www.audiotubes.com/12ax7.htm
> http://tubes_tubes_tubes.tripod.com/tubestubestubes/id22.html
> http://www.vacuumtubesinc.com/new3.html
> http://home.att.net/~esrc/esrcs3.html
> http://www.hamtubes.com/tubes/list3.htm
> http://www.tubesandmore.com/silverware.exe/search@g:\tubetest\antique.fxp
> (I've bought from them - Antique Electronic Supply - and was satisfied
> Those are a few - do a search on Vacuum Tubes & you'll
> find more.
>
> For the cap:
> 200µF 250VDC "Snap In" Capacitor - G12741 at Electronic Goldmine
> for $1.00 - http://sales.goldmine-elec.com/prodlist.asp?catid=2134
>
> 180UF 400V ELECTROLYTIC CAPACITOR CAT# 180/400VR radial leads at
> All Electronics http://www.allelectronics.com/cgi-bin/category.cgi
> (scroll to page 2)
>
> If it must be physically identical to what you've got -
> I dunno. I've heard of guys somehow removing the guts
> from the original can and stuffing a new cap inside.

247. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 20:30:04 UTC
From: "D. Stussy" <kd6lvw@bde-arc.ampr.org>
Message-ID: <Pine.LNX.4.44.0206072028570.354-100000@exp.bde-arc.ampr.org>
Source record: 43508
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Fri, 7 Jun 2002, Al Bunch wrote:
>Take out an ad:
>
>Addicted to ragchewing, thinking of dropping another $5K on equipment? I
>have the solution - proven results, you won't buy another thing as long as
>you have this. One left, hurry before she's gone. Will consider trades for
>existing new/used equipment or other offers.
>
>...or you could just be blatantly honest...
>
>Take my wife in exchange for your used amateur radio equipment. She won't
>let me further my hobby so if you're getting out, she'll make sure you stay
>that way. All trades completely final.
>
>If nobody bites, you can always dangle a high ticket item in front of her
>that she really really wants and wait for her to start chomping at the bit
>about getting it, then spring the compromise on her. This could get nasty
>though when either A) she figures out what you're up to or B) she agrees and
>that becomes the norm for all of your future purchases.
>
>However you proceed, please - keep us posted so those of us
>luck...errr..unfortunate enough to not be married yet will know how to
>handle ourselves should we ever get into the same situation.

But for some people, they have to PAY to have someone take her.

Why buy her a diamond? She won't last forever!

248. Re: Hammarlund SP-600

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 20:39:58 UTC
From: davidb@scn.org
Message-ID: <d1a6bf42.0206071239.414c16d2@posting.google.com>
Source record: 43509
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

Roy Lewallen <w7el@eznec.com> wrote in message news:<3CFEDE93.262921D8@eznec.com>...
> In the past, I've found beeswax at sewing stores. And yes, it's very
> different from paraffin wax. Beeswax is soft and kind of sticky.
> Paraffin is hard and waxy.

If there's an outdoor market or farmer's market in your town try that.
I almost always see someone selling beeswax at Portland Saturday Market
(and when I lived in Seattle, Pike Place Market).

--
David Barts
Portland, OR

249. Re: Truly universal power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 21:06:33 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <tf9M8.87622$4i.8831361@bin2.nnrp.aus1.giganews.com>
Source record: 43510

Motorola (ON Semi) has a line of off-line switcher chips which work something like this -- the AC or DC input is rectified and filtered, fed into a MOSFET, the gate of which is controlled (chopped via pulse width modulation) by one of their chips, and the resulting square wave fed into a transformer. The trick is to get the duty cycle of the pulse width modulation low enough so that you get something approximating the required voltage on the other end of the transformer. The feedback loop to the switcher chip is isolated from the line -- either optically or via a separate winding on the transformer. I have a battery charger for one of my cameras which will run on anything from 6VDC to 230 VAC.

"Sverre Holm (LA3ZA)" <la3za@qsl.net> wrote in message news:H0QL8.181$g65.3392@news4.ulv.nextra.no...
> I am really impressed by the power supply of my Braun electric shaver. It
> can run from 12 - 240 V AC or DC. Of course it is only 6 Watts. Does anyone
> know the secret for making such a universal power supply, it isn't broken
> yet so I won't open it!
> Wouldn't it be nice be able to plug in your rig everywhere with no concern
> for neither voltage nor polarity?
>
>
> 73, Sverre
> LA3ZA
>
>
> www.qsl.net/la3za
>
>
>

250. Re: Need help installing isolation transformer in S-38C

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 21:43:21 UTC
From: sven@gordsven.com
Message-ID: <slrnag2acj.rqh.sven@gordsven.com>
Source record: 43511
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.antiques.radio+phono

In article <3D0108E9.34778E29@nospambellatlantic.net>,
ehsjr@nospambellatlantic.net wrote:

> receptacles. The green ground wire in the 3 wire cable
> connects to the chassis. The white wire in the cord
> is also electrically connected to the chassis through
> existing circuitry. You will need to have someone
> who knows how tell you which wire (white and black)
> connects where.

One little piece of information.

You may encounter some three-conductor
power cords
with the following colored conductors: Brown, Blue, Green/Yellow

This is the new color coding that was adopted a couple of years ago by ISO
or some international standards body like that. Europe has used it for
years and some imported power cords are actually coded like this. The
USA hasn't quite adopted it yet, so it's not likely you'll find it in a
hardware store (yet).

Anyway here's the break down:

Live (Hot): Black or Brown (goes to the narrow pin on a polarized plug)

Netrual: White or Blue (goes to the wide pin on a polarized plug)

Ground (Earth): Green or Green/Yellow

--
Sven

251. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 22:15:02 UTC
From: Bill Thomas <bill_thomas@hp.com>
Message-ID: <3D013066.F1B6ECEF@hp.com>
Source record: 43512
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Greetings,

Give her lots of help, especially when she works in
the kitchen. Try to get each item just before she
needs it. Pick up anything she sets down and clean
it and put it away. After a while, she will ask you
to do something else. Then you can go to the radios,
but break off if she asks you to do anything and help
her. You do not want her to think of the radios as
her competition. Check with her before you buy anything.
Ask her lots of questions about what you should do.
Get her to think of the purchase as one of her buying
decisions. Agonize over every choice and share
the experience until she asks you to just buy it
and leave her alone.

Also:
- Fix things for her so she has a reason to
keep you around.
- Remember you have the last words, "Yes dear."
(If you do not believe me, ask anyone happily
married for 50 years.)
- Also, she is always the best. No one cooks
better, looks better, drives better, etc. .
Let others provide the reality checks. You
just provide the always ready support.
- Use humor (not same as ridicule).
- Acknowledge the fact, "You are wrong and
she is right."
- Listen to her but do not try to suggest
solutions to her problems. She wants
acknowledgment she has had an experience.
Read "Men from Mars, Women from Venus."
- Acknowledge and praise every thing she
does for you.
- She puts her life at risk to have your
babies. When someone puts their life at
risk for you, you need to take care of them.

Sincerely,
Bill Thomas

252. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 22:32:45 UTC
From: Hiram <temple@mtmoria.com>
Message-ID: <hwaM8.1169$Pv2.907@newsread2.prod.itd.earthlink.net>
Source record: 43513
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Boy, are you gonna be Sad when you wake up from that Dream :-)

"Dwight Stewart" <stewart@sc.rr.com> wrote in message news:3D00A2DB.FCD113BE@sc.rr.com...
> Bill Otten wrote:
> >
> > I am blessed. My lovely wife bought me a
> > new rig this past Christmas. I had merely
> > looked and commented on the rig she bought
> > me, it was a complete surprise. She
> > actually encourages me to enjoy my hobby.
>
>
> Same here. My wife bought my first radio years ago after she realised
> I wanted one and has never complained once about anything I've purchased
> since. In fact, I have the perfect wife - she likes fishing, boating,
> country music, SUVs, cooking steaks on the grill, wearing tight pants,
> and practical jokes. In fact, she even points out the girls with short
> skirts I might have missed. What more could you ask for in a woman?
>
>
> Dwight Stewart (W5NET)
>
> http://www.qsl.net/w5net/
>

253. Re: thinking of building a SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 23:04:05 UTC
From: "John S. MacKay" <k35454@direct.ca>
Message-ID: <ug2f70t5ghnh7b@corp.supernews.com>
Source record: 43514

.Bill :-) <TheRealExray@netscape.net> wrote in message
news:3D00DE8B.9A4D9AF@netscape.net...
> Mike W wrote:
> >
> > On Fri, 07 Jun 2002 08:57:51 GMT, knox_k@nemaine.com (Ken Knox
> > (N1JRO)) wrote:
> >
> > >On Thu, 6 Jun 2002 21:40:48 -0700, "John S. MacKay" <k35454@direct.ca>
> > >wrote:
> > >
> > >>
> > >>Bruno Hach�' <bruhac@NOSPAM.nbnet.nb.ca> wrote in message
> > >>news:XrSL8.4359$f52.569053@news-nb00s0.nbnet.nb.ca...
> > >>> Hi, I'm thinking of building a SW receiver..
> > >>>
> > >>> Where are the best places to buy parts (crystals,
capacitors,transistors,
> > >>> etc) besides Radio Shack?
> > >>>
> > >>> Thanks,
> > >>> Bruno Hach�
> > >>>
> > >>>
> > >>>
> > >> Why build it ? You probably can buy a good
used
> > >>set a lot cheaper and better. VE7AFN.
> > >>
> > >>
> > >
> > >And learn a lot less doing it.
> >
> > but, sadly, have little financial return on your investment on resale
> > :-(
> > Any commercial equipment tends to maintain its resale value, homebrew
> > is usually an instant write-off of outlay, and bucks for bang,
> > generally (but by no means always) inferior to commercial.
> > Mike W, G8NXD qthr
>
> So?
> -Bill
>
So, does he want a learning project or does he

want a good SW receiver ?? VE7AFN.

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.370 / Virus Database: 205 - Release Date: 6/5/02

254. Re: thinking of building a SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-07 23:27:20 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3D014158.4553BF36@netscape.net>
Source record: 43515

"John S. MacKay" wrote:

> > So?
> > -Bill
> >
> So, does he want a learning project or does he
> want a good SW receiver ?? VE7AFN.

Or something worth selling later as another poster mentioned?

I built a 'nice' receiver in the 70s. Put about $200 in it (in 1970s dollars) and it wasn't too bad a performer. I admittedly got more out of the learning experience.
It was full of nice xtals, filters, 40673s, CA3028As so its probably worth something now.
-Bill WX4A

255. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 00:49:55 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <adrkav$5a4$1@slb7.atl.mindspring.net>
Source record: 43516
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

What a bunch of wimps...LOL !!

Do what I did (this is the third time, so it may not be a perfect plan)....Look them in the eye and with a authoritive voice say "I was a ham when I met you, I'll be a ham when your gone....you pick the time"

Just kidding.

Dan/W4NTI

"Hiram" <temple@mtmoria.com> wrote in message news:hwaM8.1169$Pv2.907@newsread2.prod.itd.earthlink.net...
> Boy, are you gonna be Sad when you wake up from that Dream :-)
>
>
> "Dwight Stewart" <stewart@sc.rr.com> wrote in message news:3D00A2DB.FCD113BE@sc.rr.com...
> > Bill Otten wrote:
> > >
> > > I am blessed. My lovely wife bought me a
> > > new rig this past Christmas. I had merely
> > > looked and commented on the rig she bought
> > > me, it was a complete surprise. She
> > > actually encourages me to enjoy my hobby.
> > >
> >
> > Same here. My wife bought my first radio years ago after she realised
> > I wanted one and has never complained once about anything I've purchased
> > since. In fact, I have the perfect wife - she likes fishing, boating,
> > country music, SUVs, cooking steaks on the grill, wearing tight pants,
> > and practical jokes. In fact, she even points out the girls with short
> > skirts I might have missed. What more could you ask for in a woman?
> >
> >
> > Dwight Stewart (W5NET)
> >
> > http://www.qsl.net/w5net/
> >
>
>

256. Re: SP-600 dial slip fix

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 01:17:09 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <pWcM8.159745$Kp.15027110@bin7.nnrp.aus1.giganews.com>
Source record: 43517

I couldn't get to that page.

Anyway I don't want to modify this radio. I'm going to sell it once I have my fun with it.

73, Bob

257. Re: Need help installing isolation transformer in S-38C

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 01:27:36 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D015D88.9F9E7C53@eznec.com>
Source record: 43518
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.antiques.radio+phono

Tom Bruhns wrote:
> . . . But you should be able to
> _ground_ the chassis, also, to provide protection. (Expect the caps
> would trip a GFCI...)

I wouldn't do that! Those capacitors can carry quite a bit of current. My first receiver was an S-38D, which I once grounded. When I turned on the power, an arc formed at the power switch, and it continued until I raced downstairs and frantically threw all the house's circuit breakers. (The arc was between me and the plug.) This made a big impression on my parents, who never forgot it. I didn't either. And I'm sure you won't, either, if it happens to you.

Use that isolation transformer!

Roy Lewallen, W7EL

258. Why bother?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 03:47:37 UTC
From: Roger Brown <rogerbrown@gci.net>
Message-ID: <ug305p5j5frr9f@corp.supernews.com>
Source record: 43519
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.antiques.radio+phono

AC/DC's are no problem. I don't understand why you would bother. Granted, it was a cheap way to do things back then. They are not, however, particularly unsafe with normal precautions. The S-38 was not a serious communications receiver anyway (more geared to SWL'ing). Used for causual listening - I would think it would be fine the way it is. As someone else stated - many of us grew up with AC/DC sets and they hardly ever caused any problems.
R.G. Brown, NL7FP

259. Re: Hammarlund SP-600

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 04:05:25 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <9ofM8.166669$Oa1.15873027@bin8.nnrp.aus1.giganews.com>
Source record: 43521
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

I fixed it! I added a spring to increase idler pressure and now it works perfectly. What a great radio! And it's beautiful, if you like well made and nicely designed machinery.

Now, unfortunately, I will have to sell it. It's a beauty, pretty close to mint condition, and everything on it works as it should. Covers from 550 kHz to 54 MHz, six positions of selectivity, S meter and audio meter, has accessory crystals for all WWV frequencies (including some they don't transmit on any more), and a lovely cabinet.

Calibration is just about dead on. It's stable too.

Does anyone have an idea of its value? It's a half century old, and represents a style that no longer is manufactured, from a company that, I believe, is long gone.

73, Bob K6DDX

260. Re: Why bother?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 04:05:53 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3D0182A1.73D3D0B@netscape.net>
Source record: 43520
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.antiques.radio+phono

Roger Brown wrote:
>
> AC/DC's are no problem. I don't understand why you would bother. Granted,
> it was a cheap way to do things back then. They are not, however,
> particularly unsafe with normal precautions. The S-38 was not a serious
> communications receiver anyway (more geared to SWL'ing). Used for causual
> listening - I would think it would be fine the way it is. As someone else
> stated - many of us grew up with AC/DC sets and they hardly ever caused any
> problems.
> R.G. Brown, NL7FP

The S-38 I had, I forget which model, had the chassis isolated from the
metal cabinet via rubber mountings. So it wasn't an automatic killer
<G>.
If the rig in question also has them, restoring those mounts should be
the first order of business.
-Bill

261. Re: thinking of building a SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 04:37:42 UTC
From: ZOOM <kandrparker@sympatico.ca>
Message-ID: <oSfM8.12203$W74.2525198@news20.bellglobal.com>
Source record: 43522

Well those who never built anything (and I don't mean a kit) will never know the satisfaction that comes from seeing something you designed actually work.
The value in doing this is priceless regardless how good the design is. Homebrew is about learning. It doesn't have to be complex and can be something as simple as a keyer or oscillator. Nearly Anyone who has the desire can build something regardless of their ability. It's good for your mind.

Robert
VE3RPF

"John S. MacKay" <k35454@direct.ca> wrote in message
news:ug2f70t5ghnh7b@corp.supernews.com...
>
> .Bill :-) <TheRealExray@netscape.net> wrote in message
> news:3D00DE8B.9A4D9AF@netscape.net...
> > Mike W wrote:
> > >
> > > On Fri, 07 Jun 2002 08:57:51 GMT, knox_k@nemaine.com (Ken Knox
> > > (N1JRO)) wrote:
> > >
> > > >On Thu, 6 Jun 2002 21:40:48 -0700, "John S. MacKay"
<k35454@direct.ca>
> > > >wrote:
> > > >
> > > >>
> > > >> >>Bruno Hach&#65533;' <bruhac@NOSPAM.nbnet.nb.ca> wrote in message
> > > >> >>news:XrSL8.4359$f52.569053@news-nb00s0.nbnet.nb.ca...
> > > >> >>> Hi, I'm thinking of building a SW receiver..
> > > >> >>>
> > > >> >>> Where are the best places to buy parts (crystals,
> > capacitors,transistors,
> > > >> >>> etc) besides Radio Shack?
> > > >> >>>
> > > >> >>> Thanks,
> > > >> >>> Bruno Hach&#65533;
> > > >> >>>
> > > >> >>>
> > > >> >>>
> > > >> >> Why build it ? You probably can buy a
good
> used
> > > >> >>set a lot cheaper and better. VE7AFN.

> > > >>
> > > >>
> > > >
> > > >And learn a lot less doing it.
> > >
> > > but, sadly, have little financial return on your investment on resale
> > > :-(
> > > Any commercial equipment tends to maintain its resale value, homebrew
> > > is usually an instant write-off of outlay, and bucks for bang,
> > > generally (but by no means always) inferior to commercial.
> > > Mike W, G8NXD qthr
> >
> > So?
> > -Bill
> >
> So, does he want a learning project or does he
> want a good SW receiver ?? VE7AFN.
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.370 / Virus Database: 205 - Release Date: 6/5/02
>
>

262. Re: Hammarlund SP-600

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 05:11:07 UTC
From: Phil B <pcb999@NOSPAMcomcast.net>
Message-ID: <LlgM8.27521$Qg.2291427@bin6.nnrp.aus1.giganews.com>
Source record: 43523
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

Bob,

One now on e-bay. Currently at $355 with 2 days to go.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1358046266

And ones completed:
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1353698363
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=2105270457

Phil B.

"Bob" <balbert@cnmnetwork.com> wrote in message
news:9ofM8.166669$Oa1.15873027@bin8.nnrp.aus1.giganews.com...
> I fixed it! I added a spring to increase idler pressure and now it
works
> perfectly. What a great radio! And it's beautiful, if you like
well made
> and nicely designed machinery.
>
> Now, unfortunately, I will have to sell it. It's a beauty, pretty
close to
> mint condition, and everything on it works as it should. Covers
from 550
> kHz to 54 MHz, six positions of selectivity, S meter and audio
meter, has
> accessory crystals for all WWV frequencies (including some they
don't
> transmit on any more), and a lovely cabinet.
>
> Calibration is just about dead on. It's stable too.
>
> Does anyone have an idea of its value? It's a half century old, and
> represents a style that no longer is manufactured, from a company
that, I
> believe, is long gone.
>
> 73, Bob K6DDX
>
>

263. Re: Hammarlund SP-600

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 06:18:22 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <OkhM8.167110$Gs.15525403@bin5.nnrp.aus1.giganews.com>
Source record: 43524
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

Thanks for those links! I see the two completed sales were at $405 and $785. If there is one on ebay at $355 with bidding in process, I guess mine should be worth something in the vicinity of $400. (I think the $785 figure is too high, but what do I know.)

Mine includes a very nice case.

73, Bob

264. kenwood tr7625

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 06:49:26 UTC
From: jorge <jormartin@recol.es>
Message-ID: <3d01a897@news.airtel.net>
Source record: 43525

i need to buy the tr7625 kenwood service manual

265. Re: Hammarlund SP-600

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 07:11:36 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3D01AE28.2D6A4489@netscape.net>
Source record: 43526
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

Bob wrote:
>
> Thanks for those links! I see the two completed sales were at $405 and
> $785. If there is one on ebay at $355 with bidding in process, I guess mine
> should be worth something in the vicinity of $400. (I think the $785 figure
> is too high, but what do I know.)
>
> Mine includes a very nice case.
>
> 73, Bob

There's a number of SP-600 versions. Some merit more than others.
-Bill

266. Schematic & FM info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 08:39:16 UTC
From: "Martin Howells, VK2UMJ" <vk2umj@NOSPAMyahoo.com.au>
Message-ID: <vjjM8.7853$Hj3.24822@newsfeeds.bigpond.com>
Source record: 43527
Cross-posted to: alt.ham-radio.mods,aus.radio.amateur.misc,rec.radio.amateur.homebrew

Hi All

I'm looking for a schematic for an old 27MHz CB, PLL02A AM only chassis. The actual unit is Ray Jefferson CB-845, but I know this chassis was very common amongst various makes/models (Pearce Simpson, etc). I used to have the schematics but they got lost somewhere in moving house, so if anyone would have a copy they could scan or photocopy, it'd be much appreciated.

Also looking for any info on an FM receive board to build to add to above radio for conversion to 10m FM. FM Tx is easy, but the only design for FM Rx board I have is very, very old so I'm looking for any recent designs. Again, any info very much appreciated.

73

--
Martin, VK2UMJ
vk2umj@NOSPAMyahoo.com.au

Remove NOSPAM from e-mail address to reply

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.370 / Virus Database: 205 - Release Date: 05/06/2002

267. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 09:07:40 UTC
From: Dwight Stewart <stewart@sc.rr.com>
Message-ID: <3D01C99B.11007AC3@sc.rr.com>
Source record: 43528
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Bill Turner wrote:
>
> On Fri, 07 Jun 2002 12:10:53 GMT, Dwight Stewart <stewart@sc.rr.com>
> wrote:
>
> > Same here. My wife bought my first radio
> > years ago after she realised I wanted one
> > and has never complained once about
> > anything I've purchased since. In fact, I
> > have the perfect wife - she likes fishing,
> > boating, country music, SUVs, cooking steaks
> > on the grill, wearing tight pants, and
> > practical jokes. In fact, she even points
> > out the girls with short skirts I might
> > have missed. What more could you ask for
> > in a woman?
>
> Your wife is an absolute jewel. It's always
> fascinated me how dumb a lot of women are
> when it comes to men. (snip)

Oh, you have that right. How I rounded her up, and why she continues
to put up with me, is far beyond my comprehension. I guess love is a
powerful thing - it screws up a person's mind, and their common sense.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

268. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 09:10:54 UTC
From: Dwight Stewart <stewart@sc.rr.com>
Message-ID: <3D01CA5D.5D50DD46@sc.rr.com>
Source record: 43530
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hiram wrote:
>
> Boy, are you gonna be sad when you wake up
> from that Dream :-)

Well, it's a dream that has been going on for over 20 years, so, at this point, I don't intend to ever wake up. Excuse me, I have to pull up the blankets again.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

269. Re: Hammarlund SP-600

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 09:31:24 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D01CEEC.5976BB43@eznec.com>
Source record: 43529
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

I wouldn't put any weight at all on an ebay price while bidding is in process. It's not at all uncommon for prices to change a huge amount in the last minute of bidding. Ebay offers automated bid raising, and there are vendors that offer products to refine the automated bidding process. So a huge number of bids can be, and often are, given in the final seconds. It's not like the auction down at the arena. The final prices are the only thing you should go by.

Roy Lewallen, W7EL

Bob wrote:
>
> Thanks for those links! I see the two completed sales were at $405 and
> $785. If there is one on ebay at $355 with bidding in process, I guess mine
> should be worth something in the vicinity of $400. (I think the $785 figure
> is too high, but what do I know.)
>
> Mine includes a very nice case.
>
> 73, Bob

270. Re: Good s-meter for small radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 11:36:00 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <A_IM8.26682$LC3.2043466@bgtnsc04-news.ops.worldnet.att.net>
Source record: 43531

You can use a JFET to buffer the AGC voltage from the detector diode to drive an S-Meter. If you need gain, use a common source; if you have enough driving voltage, use a source follower.

Pete KE9OA

Matt Senecal <msenecal@logicon.com> wrote in message news:50ecc828.0206070639.3353bde3@posting.google.com...
> Good point. I'm more interested in learning how it works than anything.
>
> "Walter" <walter@accessus.net> wrote in message news:<r%cL8.113074$%y.11860358@bin4.nnrp.aus1.giganews.com>...
> > Are you sure that small radio is worth the effort of building up
> > an S meter circuit?
> >
> > Would a voltmeter paralleled in the audio output give you
> > enough of a reading of peaks and nulls?
> >
> > 73...Walter, AG5P
> >
> >
> > "Matt Senecal" <msenecal@logicon.com> wrote in message
> > news:50ecc828.0206041136.59e12f73@posting.google.com...
> > > What's a good meter to use as an S-meter on a small, 9v radio?
> > >

271. 6-160 wire antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 12:12:46 UTC
From: KC8SSG <kc8ssg@qsl.net>
Message-ID: <2xmM8.111$13.1607@news>
Source record: 43532

I need to brew a 6-160 antenna but it cant be any longer than about 90 feet.
I do have a tuner. Could you guys give me some ideas on afairly good
performance dipole?Thanks alot fellas

--
KC8SSG

272. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 12:24:31 UTC
From: Dwight Stewart <stewart@sc.rr.com>
Message-ID: <3D01F799.EA631485@sc.rr.com>
Source record: 43533
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Matt wrote:
>
> I agree - instead of "honey look at this
> beautiful chainsaw I bought you for your
> birthday" (and her "honey look at this
> lovely perfume I bought you") go down the
> approach of "look at this beautiful ham
> radio I bought for you honey"

No, a much better approach to that is to say you're buying radio equipment so the two of you can talk as she is riding around town in the car. This works especially well if the two of you don't communicate much around the house in the first place - some talk deprived wives will do almost anything to talk more (especially if she watches talk shows aimed at women - these shows insist "communications" is the holy grail of marriage).

If she isn't fully convinced, explain how a $1500 base radio, a $500 mobile, and several thousand dollars worth of accessories (power supplies, meters, antennas, and so forth), is much cheaper than a cellular phone when you include the monthly charges for the cellular. Okay, perhaps you shouldn't mention the prices unless she is really dumb.

By the way, don't worry about actually having to talk once you get the equipment. If you purchase a radio with enough knobs and buttons, she will never figure out how to use it. Especially if you're a little vague when explaining it to her, and you slightly change the instructions each time (insist she must turn the frequency knob this direction the first time you explain it and the other direction the next time).

Don't forget to scare her a little as you explain how to use the radio. For example, "never touch this (something almost impossible not to touch) when you're using the radio or you'll break it." Mention how expensive the radio is and how much it will cost to repair if she breaks it.

If you're good at all this, she will never figure out how to use the radio, and will too afraid to try. At that point, you can blame the lack of ability to talk on her and she will actually believe it.

After about a month, explain (as sincerely as you can) how much of a mistake it was to get a radio for her car ("it's just too complicated for you to use in a car"). Offer to get her a cellular phone instead - much easier to use. You can then move her radio into your vehicle and have a nice mobile to use.

One last thing, if you really do get a cellular phone for her, don't forget to take the phone off the hook at home whenever she is driving around - you'll be far too busy talking on the radio to actually talk to her. :-)

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

273. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 12:25:51 UTC
From: ricknj10@hotmail.com
Message-ID: <3d01f62e.3385376@news.eclipse.net>
Source record: 43534
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

>And the ever famous "it's not mine, I'm holding it for a friend". I always
>dread the "that's not the same radio you had is it?"
>I don't know how I've managed to talk myself out of a jam so often.
>

Your technique is good, just not fine tuned quite yet.
Try this, it's low risk:

Bring a rig from your car through the kitchen. When she asks, tell
her you are going to fix it for a guy at work. After it is "fixed"
take it back right through the kitchen, make sure she sees it. Make
sure she sees equipment LEAVING the house, this is crucial, it's the
patented part of my procedure. Keep this up, doesn't matter what the
crap is (old test equipment, HTs, old power supplies, new transceivers
in nice clean boxes). When she is trained well you will know it, she
won't even look up, or else she will say, "Please get those Yaesu
boxes into the basement and out of my kitchen.!"
"Yes, Dear"

Rick K2XT

274. Re: Why bother?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 12:31:17 UTC
From: Williams <spikewilliams@qx.net>
Message-ID: <ug3u1kouhuotd4@corp.supernews.com>
Source record: 43535
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.antiques.radio+phono

The non-survivors are not around to complain, nor to give grateful credit to the Almighty for their deliverance.

275. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 12:35:24 UTC
From: Dwight Stewart <stewart@sc.rr.com>
Message-ID: <3D01FA26.87D7258@sc.rr.com>
Source record: 43536
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Roffus wrote:
>
> (snip) I started to treat her the way I treat
> my equipment. Gently in the beginning; First
> very smooth...trying out what band she`s on?
> Then I check out what mode she`s in? If she
> is in the "sleepy" CW-corner...save the poppers
> boys! But...if she is on the SSB-plane....I
> slowly pump up the volume....Pop a Champagne
> etc.....watch for the background-noise (bubbles)
> appearing in her lower part of the eyeballs?
> Now`s the time to put the processor into
> play...not too heavy in the beginning...better
> easy upwards with levels of bubbles? Wait
> until the band really opens up...then u give
> her all that u`ve got including the
> afterburner...forget legal limits and go
> for it !!! (snip)

Good grief, Roffus. After reading that, even I would agree that you've
been spending way, way, too much time with your radio equipment. :-)

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

276. Re: Why bother?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 12:38:39 UTC
From: ricknj10@hotmail.com
Message-ID: <3d01fa03.4365940@news.eclipse.net>
Source record: 43537
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.antiques.radio+phono

>> AC/DC's are no problem. I don't understand why you would bother.

When I was a kid in the 50's, we had a 78 rpm record player with a
metal arm on it. We'd use it on the back porch which had a concrete
floor, and we kids were always barefoot.
Sometimes we would grab that arm and get the s___ shocked out of us.
We figured out (we didn't know why) but if you put the plug in the
wall the other way it wouldn't shock us.
Geniuses we were.

277. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 12:52:04 UTC
From: Dwight Stewart <stewart@sc.rr.com>
Message-ID: <3D01FE09.3406D020@sc.rr.com>
Source record: 43538
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Al Bunch wrote:
>
> Take out an ad:
>
> Addicted to ragchewing, thinking of dropping
> another $5K on equipment? I have the
> solution - proven results, you won't buy
> another thing as long as you have this. One
> left, hurry before she's gone. Will consider
> trades for existing new/used equipment or
> other offers.

To sweeten the pot, you could put the ad in the "business opportunities" section - a woman like that would probably be thrilled to help other wives with their husbands' radio addictions. When the wife gets tired of screaming at the husband, the "hired gun" could continue nagging for her. Of course, doing this probably won't make you too popular with the other radio operators in town, but at least she'll be out of your hair if someone takes you up on the deal - that is until your new wife hires her down the road. :-)

> ...or you could just be blatantly honest...
>
> Take my wife in exchange for your used
> amateur radio equipment. She won't let me
> further my hobby so if you're getting out,
> she'll make sure you stay that way. All trades
> completely final.

LOL.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

278. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 14:19:10 UTC
From: cprstn54zz@att.net
Message-ID: <3d021055.87138000@news-server.optonline.net>
Source record: 43540
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Thu, 06 Jun 2002 03:48:05 GMT, "KC8SSG" <kc8ssg@qsl.net> wrote:
>I'm having a hard time getting my wife to get used to me buying radios and
>stuff. Any help or suggestions would be great!

More than any other [basically nonproductive] hobby I have ever
pursued, my wife just doesn't get ham radio and thinks it is
ridiculous. Every time the UPS man dropped off another box, I took
grief. Yet she likes and participates in off-roading, fishing,
camping, kayaking, etc.

I had to buy peace by agreeing to $3,000 more in new car frills.

Ken KC2JDY

Ken
(to reply via email
remove "zz" from address)

279. Re: 6-160 wire antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 14:24:52 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <3d0212f3_1@newsa.ev1.net>
Source record: 43539

Read an antenna book.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"KC8SSG" <kc8ssg@qsl.net> wrote in message news:2xmM8.111$13.1607@news...
> I need to brew a 6-160 antenna but it cant be any longer than about 90
feet.
> I do have a tuner. Could you guys give me some ideas on afairly good
> performance dipole?Thanks alot fellas
>
> --
> KC8SSG
>
>
>

280. NF.ZIP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 14:37:52 UTC
From: wa0goz@arrl.net
Message-ID: <3D0216C0.49CC@arrl.net>
Source record: 43541

There was a program to calculate field intensities written by Brian Beezley and distributed free under the name of NF.ZIP

I can't find my copy and can't find it on the web. Does anyone know where I can get it or can anyone send me a copy by e-mail?

Thanks and 73

Henry WA0GOZ

281. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 16:18:15 UTC
From: Rob <Pse@NoEmail.Com>
Message-ID: <I7qM8.2893$H67.15135@tor-nn1.netcom.ca>
Source record: 43542
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I found Deoxit! But on their website, Dexoit comes in many flavours. (see
below). What is the best for cleaning tube sockets? POTS?

Part No. D5S-6, DeoxIT D5, 5 oz. spray
Part No. D5MS-15, DeoxIT D5, 15 gr. minispray
Part No. DP5S-6, DeoxIT DP5, 150 ml. pump spray
Part No. D100S-2, DeoxIT D100, 2 oz. spray
Part No. K-D100P, DeoxIT Pen
Part No. K-D50W, DeoxIT Wipes, 50 count
Part No. D5L-32, DeoxIT D5, 944 ml. container

How so you use Deoxit? Do you just spray into the holes, wipe off the
excess and reinsert the tube?

73's
Rob

".Bill :-)" <TheRealExray@netscape.net> wrote in message
news:3D00FA06.431F5688@netscape.net...
> Rob wrote:
> >
>
> > The T4XC uses two 12AX7. I am thking of swapping them. I just don't
know
> > if it is a good idea.
>
> No problem.
> >
> > Or just maybe the tube socket is defective. Maybe I can use some sort
of
> > anti-oxidizing stuff (Oxidet?)
>
> De-oxit?
> >
> > The weird hum etc seems to occur only after I transmit for a few
minutes.
> > After I stop transmitting for a few minutes, sometimes the hum etc
> > disappears. Very weird. It obviously only occurs when one of the
> > components heats up during transmit.
>
> Some freeze spray might help zero in on this.
> >
> > I am pretty sure there is something wrong with the mic amp / side tone
> > generator circuit. Maybe the electrolytic cap beside the 12ax7is the

cause.
> > The cap is connected to the plate of the 12ax7 and to 250 VDC. It
might
> > explain why I hear the hum DURING receive (coupled through the Injection
> > cable). But why is it microphonic?
>
> Its entirely possible that you have more than one problem. Having a
> tube in a low-level/high gain stage like a speech amp that appears
> microphonic shouldn't necessarily be considered a problem unless it is
> particularly sensitive.
> >
> > I also notice the plate current going from 300 to 400 mils during
tuneup. I
> > think itis the same problem.
>
> I'm not sure exactly what you mean. If the idling current is changing
> then that might indicate the -55 v line is changing. But erratic output
> power/input current could be a zillion different other things.
> >
> > Can I still get metal can caps? Or will any 60 MFD electrolytic cap
rated
> > for 250 VDC due?
>
> Use a small 100 mf/250 volt one temporarily to see if the can is really
> bad. Can caps are pretty hard to find. Anything you might run across
> will probably be older than what you have now!
>
> You've mentioned a number of different symptoms and its hard to see how
> they might all be related. I'd urge you to first deal with the basics
> by seeing if the 250 or -55 line are different voltages when the radio
> is in the 'hum mode'.
> >
> -Bill
>

282. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 16:34:38 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3D02321E.D733EC7F@netscape.net>
Source record: 43543
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Rob wrote:
>
> I found Deoxit! But on their website, Dexoit comes in many flavours. (see
> below). What is the best for cleaning tube sockets? POTS?
>
> Part No. D5S-6, DeoxIT D5, 5 oz. spray
> Part No. D5MS-15, DeoxIT D5, 15 gr. minispray
> Part No. DP5S-6, DeoxIT DP5, 150 ml. pump spray
> Part No. D100S-2, DeoxIT D100, 2 oz. spray
> Part No. K-D100P, DeoxIT Pen
> Part No. K-D50W, DeoxIT Wipes, 50 count
> Part No. D5L-32, DeoxIT D5, 944 ml. container
>
> How so you use Deoxit? Do you just spray into the holes, wipe off the
> excess and reinsert the tube?
>
> 73's
> Rob

I typically use the D5-5 oz spray. (Thats about all I can afford) For
tubes/sockets I just spray the tube pins then insert the tube in the
socket while wet and wiggle it around a bit. Let it sit for a while so
that whatever deoxidizing it does has a chance to take effect.
After about 15 minutes wipe up any excess. You can use this also on the
phono jacks of your interconnecting cables, bandswitch, noisy pots, etc.
DON'T use any sprays on the radio while its powered up!

-Bill

283. Re: Schematic & FM info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 17:46:15 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0206080946.3d3292f3@posting.google.com>
Source record: 43546
Cross-posted to: alt.ham-radio.mods,aus.radio.amateur.misc,rec.radio.amateur.homebrew

"Martin Howells, VK2UMJ" <vk2umj@NOSPAMyahoo.com.au> wrote in message
news:<vjjM8.7853$Hj3.24822@newsfeeds.bigpond.com>...
> Hi All
>
> I'm looking for a schematic for an old 27MHz CB, PLL02A AM only chassis.
> The actual unit is Ray Jefferson CB-845, but I know this chassis was very
> common amongst various makes/models (Pearce Simpson, etc). I used to have
> the schematics but they got lost somewhere in moving house, so if anyone
> would have a copy they could scan or photocopy, it'd be much appreciated.
>
> Also looking for any info on an FM receive board to build to add to above
> radio for conversion to 10m FM. FM Tx is easy, but the only design for FM
> Rx board I have is very, very old so I'm looking for any recent designs.
> Again, any info very much appreciated.
>
How you add FM might depend on the conversion scheme of the receiver.

Assuming it uses a 10.7MHz first IF, dig the FM IF strip out of
some consumer equipment. 49MHz Superhet walkie talkies (they are
license free at least in North America), often but not always are
double conversion. A lot of 49MHz cordless phones are likewise (and
between the base and handheld, offer up two FM IF strips).
Scanners would too, and of course a lot of two-way equipment.
Find the right piece of equipment, and you'll get a wideband filter
at 10.7MHz (often a ceramic filter from FM BCB use), an IC that will
do the conversion to 455KHz and provide the full FM IF strip, a crystal
to do the conversion to 455KHz, a 455KHz narrow deviation ceramic
filter, and the coil for the FM detector. You may also find something
along these lines in older cellphones, but I'm not sure how often they
used a 10.7MHz IF.

Depending on what the equipment, you'd either leave the circuit board
intact, and feed the IF signal from the CB set. Or maybe cut away
the unneeded circuitry. In some cases, it might just be easier to
extract the components, and build it up on a new circuit board.

You may only need the 455KHz area, if the CB set uses that for
it's IF, and you can find a spot where the bandwidth is enough
for FM (maybe not much of a problem, because I gather a lot of
those double conversion CB sets likewise used a broadcast FM
deviation ceramic filter at 10.7MHz.

The neat thing about the above is that you will get all the
components in one place; I find these things at garage sales

quite a bit, for under ten dollars (well, not the scanners).

Just about any old limiter/fm detector IC will work at 455KHz,
so you really have plenty of options, so long as the IF bandwidth
is wide enough.

Michael VE2BVW

284. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 18:27:17 UTC
From: Dan <n7slc@yahoo.com>
Message-ID: <adtibmpms1@terabinaries.xmission.com>
Source record: 43447
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Worked for me as well. There are worse hobbies!

Dan

"Deos" <lineoffiretoday@yahoo.com> wrote in message
news:adtd6qeos1@nic.grnet.gr...
>
> Ok actually I had that problem my self..
>
> What ever I did was hopeless.
>
> Until I talked to my wife seriously about my hobby... AND THEN GAVE HER
THE
> DELIMA
>
> a)rigs , ps ,antennas OR
>
> b)me looking at other women(just looking nothing else)
>
> After 2 minutes I solved my problem... Its worth a try..
>
> "mike coslo" <mjc5@psu.edu> wrote in message
> news:3CFFB09B.74D30DD1@psu.edu...
> > When you are playing with your radio, you are not:
> >
> > sitting in a bar, drinking away the rent money,
> >
> > carousing arond with other women,
> >
> > or a hundred other things that she would have a REAL reason to complain
> about.
> >
> > I have been amazed at how many XYL's have so many problems with this
> hobby.
> >
> > When my wife threatened to lower the boom on my HF activities due to
> > her dislike of ANY antenna, I reminded her of all the above points. Now
> > we have a deal, She doesn't complain as long as I keep the antennas
> > discrete. So I don't have a big vertical, but do have a nice long dipole
> > that I hid in the trees.
> >
> > Actually she is pretty supportive otherwise, and has even bought me new
> > ham toys!
> >

> > - Mike KB3EIA -
> >
> >
> > KC8SSG wrote:
> > >
> > > I'm having a hard time getting my wife to get used to me buying radios
> and
> > > stuff. Any help or suggestions would be great!
>
>

285. Re: 6-160 wire antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 20:49:47 UTC
From: John <john@clavin.freeserve.co.uk>
Message-ID: <adtoat$ut0$1@newsg2.svr.pol.co.uk>
Source record: 43448

That was clever wasnt it, the "read a book" remark!....

You have a few options.

Obviously you could use an end fed wire, with a decent earth and good ATU.

There are so many good auto ATUs out there that you could just hang your 90 feet of copper, as much in the clear as possible and get the auto ATU to do all the hard work. Simple, OK results and the ATU does all the hard work! ....but not very Homebrew :)

I am a BIG fan of the W3EDP type antenna. The antenna element is 84 feet long, ideal for you. It covers 3.5 to 30Mhz, and requires some short counterpoises instead of a proper earth. Have a look at this example... http://www.g3ycc.karoo.net/w3edp.htm

As for how you would use it on 160M, Im sure its possible, with a longer counterpoise, and switch in a second cap! But as for 6M, I'd recommend a second antenna, maybe a simple dipole, or for some extra gain, perhaps a double extended zepp(should hide nicely in the loft if low profile is a concern)

Trapped dipoles are also an option, but if more than 3 bands are attempted, the system becomes very lossy. ...for 160 - 6M, I would even attempt it.

John, G0WPA

"KC8SSG" <kc8ssg@qsl.net> wrote in message news:2xmM8.111$13.1607@news...
> I need to brew a 6-160 antenna but it cant be any longer than about 90 feet.
> I do have a tuner. Could you guys give me some ideas on afairly good
> performance dipole?Thanks alot fellas
>
> --
> KC8SSG
>
>
>

286. Re: 6-160 wire antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 20:52:14 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3D026E7E.9816BF21@bloomer.net>
Source record: 43449

You might try a "fan dipole" which is basically multiple dipoles fed
from a single coax. I made one that was a half size, half wave dipole
for 160M with loading coils at the halfway points so that it was about
120 feet long or so, then a dipole for 75M and 15M. This avoids traps
and will give you normal sized dipoles (in your case, <= 90 feet)) on
40M through 6M. They all interact, so you need to prune each dipole, but
once you have them tuned, it's done and ready to work.

73,
Scott N0EDV

KC8SSG wrote:
>
> I need to brew a 6-160 antenna but it cant be any longer than about 90 feet.
> I do have a tuner. Could you guys give me some ideas on afairly good
> performance dipole?Thanks alot fellas
>
> --
> KC8SSG

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

287. Re: Schematic & FM info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 21:52:32 UTC
From: "Martin Howells, VK2UMJ" <vk2umj@NOSPAMyahoo.com.au>
Message-ID: <eXuM8.8061$Hj3.25596@newsfeeds.bigpond.com>
Source record: 43450
Cross-posted to: alt.ham-radio.mods,aus.radio.amateur.misc,rec.radio.amateur.homebrew

Thanks for the info. I managed to locate a schematic diagram for another identical radio, I think it was just hiding away until I asked others for help!!

73

--
Martin, VK2UMJ
vk2umj@NOSPAMyahoo.com.au

Remove NOSPAM from e-mail address to reply

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.370 / Virus Database: 205 - Release Date: 05/06/2002

288. Hairpin filter software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 23:02:27 UTC
From: Mark Mansfield <mmans@aeneas.net>
Message-ID: <pWwM8.481$Ko6.127046@news.uswest.net>
Source record: 43452

Does anyone know of software for designing hairpin filters on printed
circuit boards that
is within the reach of home hobbyist?
I know there are some expensive software packages available but I can't
afford it and was looking
for something more reasonable that the homebrewer could use to design
filters in the 500MHz to
5GHz range.
Thanks!
Mark

289. 4 SALE HICKOCK FREQ COUNTER 10-500MHZ

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-08 23:13:49 UTC
From: WILLIAM C FORVIK <n0mnb@email.msn.com>
Message-ID: <OGk9BmzDCHA.1868@cpimsnntpa03>
Source record: 43451
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

GOOD CONDITION 50$ B/O SENSITIVE..
N0MNB@AMSAT.ORG

290. Re: Need help installing isolation transformer in S-38C

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-09 01:17:56 UTC
From: Ron Banks <rjb5@csinet.net>
Message-ID: <81yM8.563$kW1.285799@newshog.newsread.com>
Source record: 43453
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.antiques.radio+phono

Have you considered a computer uninterruptible power supply? There are usually a lot of them on ebay as IT departments upgrade their equipment. Battery condition wouldn't be an issue as isolation is your only need.

Another source of transformers is automotive battery chargers and Malibu light power supplies. I see a lot of these at garage sales. Hooking two reasonably matched transformers back to back as previously mentioned would get you an inexpensive isolation solution for your bench.

I once converted an S-38E (bought without tubes) using the power transformer from a junk audio generator. I used a silicon diode to replace the rectifier tube and rewired the other sockets for 6 volt filament tubes. It worked fine. Just make sure the 6.3 volt winding will power the remaining 4 tubes.

Regards,

Ron Banks

"Matt Senecal" <msenecal@logicon.com> wrote in message news:50ecc828.0206070648.7a0c034f@posting.google.com...
> I recently purchased a Hallicrafters S-38C for my brother. I
> understand from looking at it that the chassis carries a potential.
> After making some inquiries I have learned that to remove the shock
> hazard I need to install an isolation transformer.
>
> While I'm still somewhat ignorant of electronics, I'm fairly handy (I
> recently restored an old SX-99 to working condition). But I feel that
> working with transformers is a bit out of my league. I would
> appreciate some help from someone who has done this before. Basically
> what I'd like to know is what kind of transformer to buy (be
> specific), and how/where to install it. Any help would be appreciated!
>
> Thanks!

291. Re: thinking of building a SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-09 03:52:36 UTC
From: msbob <msbob@hotmail.com-edy>
Message-ID: <3D02D104.D90679E8@hotmail.com-edy>
Source record: 43454

"Bruno Hachï¿½'" wrote:
>
> I'm located in Atlantic Canada - New Brunswick specifically. I intend to
> build a SW receiver for a college project.

Bruno,

Digikey <http://www.digikey.ca/> and Newark
<http://search.newark.com/canada/welcome.phtml> have Canadian pricing
for their online ordering. Otherwise just about any US electronic
component retailer will ship to Canada; Mouser, Jameco, etc. See
Google's Directory or dmoz.org.

If you are looking for a kit, you might consider kits from Ten-Tec
<http://www.tentec.com/rcvrkit.htm>, or Ramsey Electronics
<http://www.ramseyelectronics.com/cgi-bin/commerce.exe?preadd=action&key=SR2>,
Vectronics
<http://www.vectronics.com/vectronics/products.php?prodid=VEC-102K>, MFJ
Enterprices
<http://www.mfjenterprises.com/products.php?prodid=MFJ-8100K>

or some cheaper ones from
<http://www.sciplus.com/category.cfm?subsection=2> or
<http://www.elexp.com/kit_2srk.htm>.

Another idea is the ZN414Z or its replacement the MK484. I'm not aware
of a North American supplier of the ZN414Z / MK484. The MK484 is
available from Maplin.co.uk at 42 pence (about 1 dollar Canadian). You
can make a very simple Tuned RF receiver with a MK484. See
<http://www.mitedu.freeserve.co.uk/Circuits/RF/ZN414SW.htm> and
<http://w1.859.telia.com/~u85920178/rx/zn414.htm>.

--
msbob <at> hotmail <dot> com

292. Re: 6-160 wire antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-09 04:52:48 UTC
From: ehsjr@nospambellatlantic.net
Message-ID: <3D02DF82.3F5B792A@nospambellatlantic.net>
Source record: 43455

KC8SSG wrote:
>
> I need to brew a 6-160 antenna but it cant be any longer than about 90 feet.
> I do have a tuner. Could you guys give me some ideas on afairly good
> performance dipole?Thanks alot fellas
>
> --
> KC8SSG

Maybe a dipole isn't your best bet. If you can string up a loop
antenna with about 270' feet total wire in the loop, you'll
have an antenna that will cover 80 - 6 with proper feed and
your tuner. I feed mine with ladder line to a fat 4:1 current
balun with a short piece of coax from the balun to the rig.
For 160, I short the coax at the PL 259, and feed the thing as a
random wire. I ran some 120' runs of wire on top of the ground and
tied them to ground at station ground. On 160 and 80, this is a
skywarmer antenna with effective coverage of about 300 miles.
On higher frequencies it acts more like a dipole. It stinks on 6
meters - but you _can_ load it and use it there. But on 6,
you can install a dedicated dipole in addition to the loop.

293. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-09 12:05:29 UTC
From: Mark Hall <mark.hall34@verizon.net>
Message-ID: <3D034347.5FD70AAD@verizon.net>
Source record: 43456

The VIA plots the SWR response of an antenna over Freq on the built in LCD. The computer hook up is "After the Fact" for documenting the response. It also measures complex impedance including sign. Probably could be built with $45 worth of parts, and the kit sold for ~$125 to $150. If properly designed, accurate, stable, Calculator sized, and didn't eat batteries, it would put the MFJ 259B/269, Autek RF-1 and AEA Via out of business. If you need someone to design the digital part (PIC programmer Expert here) I'll volunteer! I'm not much good with RF design or complex impedance stuff, but from the A/D converter back, I'm darned good.

'73 KI4Z

Pete Gianakopoulos wrote:

> Hi folks,
> I've been feeling creative lately, and have been thinking about
> developing a series of high performance kits, including receivers,
> preselectors, etc. Let me know what any of you would like to see, and maybe
> I could develop your idea along. The approach that I am thinking of taking
> is to make the printed circuit board and the parts available, and leave it
> up to the builder for packaging in the enclosure. Interested parties can
> e-mail me directly.
> Thanks!
>
> Pete Gianakopoulos KE9OA
> Chicago, Il.

294. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-09 12:47:02 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ug6k3ji9s7je8e@corp.supernews.com>
Source record: 43457

This sounds like a very cool idea. Something along these lines has been on my homebrew to-do list for a while now, but it's behind a few other projects. I, too, could contribute to the PIC part.

..

"Mark Hall" <mark.hall34@verizon.net> wrote in message news:3D034347.5FD70AAD@verizon.net...
> The VIA plots the SWR response of an antenna over Freq on the built in LCD.

295. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-09 12:55:56 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ug6k3k2raafq8f@corp.supernews.com>
Source record: 43458

Another thought.....

One of the things on my to-do list has been a purpose-built rig for traffic. Traffic nets have a pretty structured way of operating. Generally, NCS is on some theoretically fixed frequency, but never quite right. Stations are expected to zero beat him, so the net frequency needs some adjustment, but never more than about 1 KHz. Traffic is passed off the net frequency, up or down some integral multiple of some standard spacing, usually 3 KHz.

I had been thinking of a rig with buttons or perhaps a low resolution shaft encoder for + and - 3, 6, and 9 khz. It also occurred to me that an automatic zero beat of NCS wouldn't be all that tough. It also hit me that a LED for each of those frequencies to indicate it was busy would be useful and maybe not too tough.

Since nets tend to operate on 80, and 80 isn't all that QRP friendly, something on the order of 25-50 watts would seem to be about right. Balancing that, the need to operate under adverse conditions would dictate low current draw (thus the need for something other than my 20 amp rice box).

This would be mostly interesting to ARES/RACES types, tho, so I don't know how big the market would be.

..

296. Re: 6-160 wire antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-09 13:04:53 UTC
From: Mark Hall <mark.hall34@verizon.net>
Message-ID: <3D035134.FA73BC8C@verizon.net>
Source record: 43459

When in doubt, go with a Loop.. Open Wire + tuner. You'll end up with a wierd pattern on the higher frequencies, and "Cloud Warmer" on the lower freq's, but... I'm convinced the loop configuration beats a tunered (?) multi-band dipole in every regard. At 2 Wavelengths and more it's hard to beat as a "One for All" antenna. On 10 and 6 you might do better with a second antenna. My 568' loop at 30 Feet kicks arse from 80 through 15 on CW portion of the band.. I've never tried it on 10 or 6. You're mileage may vary..

'73 KI4Z

ehsjr@nospambellatlantic.net wrote:

> KC8SSG wrote:
> >
> > I need to brew a 6-160 antenna but it cant be any longer than about 90 feet.
> > I do have a tuner. Could you guys give me some ideas on afairly good
> > performance dipole?Thanks alot fellas
> >
> > --
> > KC8SSG
>
> Maybe a dipole isn't your best bet. If you can string up a loop
> antenna with about 270' feet total wire in the loop, you'll
> have an antenna that will cover 80 - 6 with proper feed and
> your tuner. I feed mine with ladder line to a fat 4:1 current
> balun with a short piece of coax from the balun to the rig.
> For 160, I short the coax at the PL 259, and feed the thing as a
> random wire. I ran some 120' runs of wire on top of the ground and
> tied them to ground at station ground. On 160 and 80, this is a
> skywarmer antenna with effective coverage of about 300 miles.
> On higher frequencies it acts more like a dipole. It stinks on 6
> meters - but you _can_ load it and use it there. But on 6,
> you can install a dedicated dipole in addition to the loop.

297. Re: Need help installing isolation transformer in S-38C

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-09 13:32:47 UTC
From: Dave Holford <holford@sympatico.ca>
Message-ID: <3D0358FF.A7718FA1@sympatico.ca>
Source record: 43460
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.antiques.radio+phono

Matt Senecal wrote:
>
> I recently purchased a Hallicrafters S-38C for my brother. I
> understand from looking at it that the chassis carries a potential.
> After making some inquiries I have learned that to remove the shock
> hazard I need to install an isolation transformer.
>
> While I'm still somewhat ignorant of electronics, I'm fairly handy (I
> recently restored an old SX-99 to working condition). But I feel that
> working with transformers is a bit out of my league. I would
> appreciate some help from someone who has done this before. Basically
> what I'd like to know is what kind of transformer to buy (be
> specific), and how/where to install it. Any help would be appreciated!
>
> Thanks!

I had exactly the same problem with an S-53.
After checking around with some people with experience I removed the 2
wire power cord and the two capacitors from line to chasis.
I then installed a three wire cord and connected the ground wire (green)
to the chasis. I did not install any capacitors from line to ground.

Works like a charm! And it is safe!

This fix works just fine and involves an absolute minimum of work and
cost. However, for the purists, it does involve modifying the radio;
even though it is a minor mod and easily reversed if you prefer to live
dangerously.

Still wonder about the guy I bought it from since he had it sitting on a
metal radiator (one of those old hot water things which I assume would
be grounded). Maybe that's why I got such a good price.

Good luck
Dave VE3HLU

298. Re: thinking of building a SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-09 13:48:04 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <ug6n4oq7bkrf03@corp.supernews.com>
Source record: 43461

check this url for a complete kit for $90.00...
I saw it at Hamcom in Dallas yesterday and was impressed..
it is well designed and comes with all parts, boards, and instructins and
the guy doing it is very good, friendly and helpful..
I think I'll get one later this year for a winter build.
It's the best valuye I've ever seen..
And you can upgrade later to a digtial readout or now, superstable etc.
good luck..
hank wd5jfr

"Bruno Hach&#65533;'" <bruhac@NOSPAM.nbnet.nb.ca> wrote in message
news:XrSL8.4359$f52.569053@news-nb00s0.nbnet.nb.ca...
> Hi, I'm thinking of building a SW receiver..
>
> Where are the best places to buy parts (crystals, capacitors,transistors,
> etc) besides Radio Shack?
>
> Thanks,
> Bruno Hach&#65533;
>
>
>

299. Re: Another 10.7 MHz IF filter question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-09 16:23:13 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3D0380F1.99B27140@mfi.net>
Source record: 43468

Michael Black wrote:
>
> pdrunen@aol.com (PDRUNEN) wrote in message
news:<20020530231040.04266.00001269@mb-fh.aol.com>...
> > Hi Group,
> >
> > I am looking for a 10.7 MHz IF filter also, however I need a 2 MHz bandwidth.
> > The largest bandwidth I have found to be in the FMBC receivers at about 200KHz.
> >
> >
> > Is there a method to reduce the Q or whatever in the 10.7 MHz 200KHz filter so
> > that it increases the -3db BW to 2 MHz?
> >
> > How about a two crystal filter with Lower freq crystal at 8.7MHz and Upper Freq
> > at 12.7 MHz ?
> >
> > How about a discrete(L/C) or active (op-amp) filter?
> >
> > Others????
> >
> > Thanks,
> >
> > Paul
>
> The way to do this is to look back before crystal and ceramic filters
> were common.
>
> If there was a need for such a wide IF, it would be supplied by
> a string of IF transformers, usually spaced out between IF stages.
> Early FM broadcast receivers would do exactly this. If the bandwidth
> was too narrow, they'd either load down the IF transformers with
> resistors to broaden the response, or move to a higher IF where the
> bandwidth was easier to get, or sometimes both.

Stagger tuning will help spread out the bandwidth, when you have
multiple if stages. You tune one towards the bottom edge, the next to
the center frequency, and a third near the top edge. If you have more
stages, you adjust the pattern to give you a wider, flat response. A
sweep generator, or a tunable generator with a fairly flat output and a
diode detector after the last stage can be used to align it. (Unless
you're blessed with a network analyzer on your bench!)

> Back then, such a broad passband was either through calculations
> you didn't see in the amateur books, or was haphazard. Now, you
> might want to look at the sections of the books that deal with

> fixed front-end filters; since people have done this sort of
> thing, to do away with a preselector tuning, I'd say the information
> is now more readily available. But of course, the wider the passband,
> the harder it may be to get it nice and flat.
>
> Ceramic, crystal and active filters tend to be solutions for narrow
> band filters. It wouldn't make sense to start with such schemes,
> and then try to broaden them, when even something like a string
> of IF transformers might not easily offer up 2MHz of bandwidth.
>
> You might want to look into SAW filters, though I don't know if
> they'd provide 2MHz bandwidth or be available at 10.7MHz. The only
> place I've come across them is in TV sets and VCRs, where they
> supply a 6MHz or so passband in the 40MHz range.
>
> One thing about design is that it's the end results that are important,
> not specific points. So unless you offer up why this filter has
> to be at 10.7MHz, or perhaps even what you need a 2MHz passband
> for, finding a solution may not be so easy. Moving to a different
> center frequency might make sense, except if there is a good
> reason for it to be at 10.7MHz. Remember, one could always do
> a conversion from a higher frequency, if necessary.
>
> Michael VE2BVW

300. oops forgot url

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-09 16:43:48 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <ug71e7n1qf42f0@corp.supernews.com>
Source record: 43462

http://www.pan-tex.net/usr/r/receivers/
"Bruno Hach&#65533;'" <bruhac@NOSPAM.nbnet.nb.ca> wrote in message
news:XrSL8.4359$f52.569053@news-nb00s0.nbnet.nb.ca...
> Hi, I'm thinking of building a SW receiver..
>
> Where are the best places to buy parts (crystals, capacitors,transistors,
> etc) besides Radio Shack?
>
> Thanks,
> Bruno Hach&#65533;
>
>
>

301. Re: Need help installing isolation transformer in S-38C

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-09 18:11:03 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <WSMM8.224090$Po6.363881@rwcrnsc52.ops.asp.att.net>
Source record: 43463
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.antiques.radio+phono

First a good schematic for your specific model helps (their were 5? versions
of the S-38 model)

S-38 Schematic

http://www.nostalgiaair.org/Riders/showinfo.asp?PATH=HAL&IMG=_HAL_15-59.gif&
INF=S38

This was discussed at some length in December 2001 on the boatanchors forum

[earlier post]

Some useful links for further research (and ideas):

http://antiqueradio.org/halli08.htm

Here is an excellent web site for S-38 restoration notes. He even
demonstrates how he "recast" the knobs and notes that the rubber isolators
are absolutely necessary for a SAFE chassis (AC/DC) with the S-38.

http://www.concentric.net/~Stwradio/hals38.htm

http://www.concentric.net/~Stwradio/hals38.htm#Hallicrafters%20S-38%20Restor
ation

and more S-38 links !!
http://www.concentric.net/~Stwradio/hals38.htm#S-38%20Links

add an S-meter
http://antiqueradio.org/art/smeter03.jpg

http://antiqueradio.org/smeter.htm

The Hallicrafters Collectors' Web Site:
http://www.w9wze.org/

Here were my notes on the internal isolation "torroid transformer"
discussion for the S-38:

The UK audio designers gave me an idea to look at a toroidal transformer, as
a possible isolation transformer under the S-38 chassis, instead of the
traditional external isolation transformer Stancor P6410 (50 VA rating).

I received and e-mail for Brian Gladstone, Director of Engineering at
Plitron Corporation in Canada
http://www.plitron.com

BTW S-38 draws 30 watts at 110 Volt according to specs

Plitron makes Toroidal transformers, and by my measurements one of their 50 VA units will slip right in under the S-38 chassis. You can mount it with one screw (use the hole for the old multi-section electrolytic).
You can select from a couple of secondary voltage (110, 117 vac) models.

Presto, same $ 35.00 USD price (thanks to CDN / USD exchange rates) as a separate Stancor P6410 (50 VA rating), without hauling around an external unit.

The AC power cord (on this particular unit under discussion) must be changed to a polarized plug &
fused as well as the rubber isolation mounts repaired/replaced. Then you will again have a SAFE chassis around children. A power switch, if desired, could be mounted on the back chassis (or rework the receive/standby switch on front panel).

I e-mailed to Bob Eslinger, KR1U and he would be interested in hearing from S-38 restorers who are using this approach Torroid transformers, due to their low profile, might be a solution for some of his antique radio restoration clients wishing to maintain appearance, without the external isolation transformer.

[end of earlier post]

Greg
w9gb

"Matt Senecal" <msenecal@logicon.com> wrote in message
news:50ecc828.0206070648.7a0c034f@posting.google.com...
> I recently purchased a Hallicrafters S-38C for my brother. I
> understand from looking at it that the chassis carries a potential.
> After making some inquiries I have learned that to remove the shock
> hazard I need to install an isolation transformer.
>
> While I'm still somewhat ignorant of electronics, I'm fairly handy (I
> recently restored an old SX-99 to working condition). But I feel that
> working with transformers is a bit out of my league. I would
> appreciate some help from someone who has done this before. Basically
> what I'd like to know is what kind of transformer to buy (be
> specific), and how/where to install it. Any help would be appreciated!
>
> Thanks!

302. Re: oops forgot url

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-09 18:18:26 UTC
From: Bruno Hach&#65533;' <bruhac@NOSPAM.nbnet.nb.ca>
Message-ID: <SZMM8.5062$f52.700640@news-nb00s0.nbnet.nb.ca>
Source record: 43464

Thanks!

Bruno Hach&#65533;

303. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-09 18:38:27 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D03A079.5FE047C7@clifto.com>
Source record: 43465
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Rob wrote:
> I found Deoxit! But on their website, Dexoit comes in many flavours. (see
> below). What is the best for cleaning tube sockets? POTS?
>
> Part No. D5S-6, DeoxIT D5, 5 oz. spray
> Part No. D5MS-15, DeoxIT D5, 15 gr. minispray
> Part No. DP5S-6, DeoxIT DP5, 150 ml. pump spray
> Part No. D100S-2, DeoxIT D100, 2 oz. spray
> Part No. K-D100P, DeoxIT Pen
> Part No. K-D50W, DeoxIT Wipes, 50 count
> Part No. D5L-32, DeoxIT D5, 944 ml. container
>
> How so you use Deoxit? Do you just spray into the holes, wipe off the
> excess and reinsert the tube?

I have three forms; the D100S-2, the D5S-6 and D100L-25C. For tube sockets I recommend the full-strength stuff, and rather than use the spray can I'd use the long capillary-tube gizmo that comes with the 25 ml container. Basically: get it all over the pin and the socket contact, then work the tube in and out of the socket, wiggle it, etc. Whatever makes the pin rub against the contact surface of the socket contact is what will clean the socket.

The D100L-25C is full-strength in a tiny bottle. It only seems expensive. I bought my first bottle in 1995, have used it on just about every contact I could get it on, and I still have about 1/4 bottle left. Their site has gone Javascript so I can't see if it's still offered on their site, but some electronics distributor around you should have some left if they don't.

Use the 100% stuff for tube sockets. The 5% stuff is okay for pots and switches and uses where you need to spray a lot of the stuff onto the contacts, but when there's only a small amount of surface that needs it, the 100% stuff works better and isn't wasteful.

Of all places, Radio Shack has at least some forms of DeOxit in their catalog. Not available in the stores, but they can order it for you.

--
If spammers weren't stupid, they'd be the idle rich instead of spammers.
- Morely Dotes

304. Re: thinking of building a SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-09 18:57:44 UTC
From: "Eike Lantzsch, ZP6CGE" <eikelan@gmx.net>
Message-ID: <slrnag7998.eot.eikelan@ID-77364.user.dfncis.de>
Source record: 43466

Henry Kolesnik wrote:
> check this url for a complete kit for $90.00...

Am I blind? Which URL please...

> I saw it at Hamcom in Dallas yesterday and was impressed..
> it is well designed and comes with all parts, boards, and instructins and
> the guy doing it is very good, friendly and helpful..
> I think I'll get one later this year for a winter build.
> It's the best valuye I've ever seen..
> And you can upgrade later to a digtial readout or now, superstable etc.
> good luck..
> hank wd5jfr
>
> "Bruno Hachï¿½'" <bruhac@NOSPAM.nbnet.nb.ca> wrote in message
> news:XrSL8.4359$f52.569053@news-nb00s0.nbnet.nb.ca...
> > Hi, I'm thinking of building a SW receiver..
> >
> > Where are the best places to buy parts (crystals, capacitors,transistors,
> > etc) besides Radio Shack?
> >
> > Thanks,
> > Bruno Hachï¿½
> >
> >
> >
>
>

Kind Regards, Eike

305. Re: TDA1576 as synchr. AM demod. + Level meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-09 20:18:24 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D03B787.4B617301@clifto.com>
Source record: 43467

J M Noeding wrote:
> <clifto@clifto.com> wrote:
> >If you like, I can put it up on my site for general access.
> >
> Yes, it would be nice if you would do so, tnx.

http://www.clifto.com/TDA1576_cct.gif

--
If spammers weren't stupid, they'd be the idle rich instead of spammers.
- Morely Dotes

306. Re: best Speech Processor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 01:53:37 UTC
From: richey@epix.net
Message-ID: <3d04050e.21857304@news.epix.net>
Source record: 43469
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I've built and used the TenTec 1551 Speech Processor Kit.
http://www.tentec.com/amaccyKit.htm#1551store
Worked quite well on an old Atlas 210X. It's a small board so you
could probably install it inside most boatanchors.

If you want an RF speech processor, you may be able to find one of the
Daiwa's that were supposed to be quite good, RF-440, RF-660.

Jim

"Rob" <Pse@NoEmail.Com> wrote:

>I have an old boat anchor. I would like to improve its DX performance with
>a speech processor. What is the best external speech processor out there?
>Does someone still make them or will I have to build one?
>
>Rob
>
>
>

307. fs: 3 CENTRALAB Ceramic Switches 10 pole, 3 position NEW!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 03:31:00 UTC
From: rlucch2098@aol.com
Message-ID: <20020609233100.08384.00000589@mb-cd.aol.com>
Source record: 43470

Hi Fellas;
I have for SALE:
3 NOS in boxes, CENTRALAB PA-2031 ceramic switches!
All have papers & knobs 'cept one!
Price is $20ppd for all 3!

http://www.myradioroom.com/centralab1.jpg

http://www.myradioroom.com/centralab2.jpg

Thanks es 73..........RICH-WA2RQY RLUCCH2098@aol.com
Manual Copies @ http://www.myradioroom.com/manualsale.html
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

308. FS: QVS & SIMPSON panel meters>>REDUX

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 03:33:41 UTC
From: rlucch2098@aol.com
Message-ID: <20020609233341.08384.00000594@mb-cd.aol.com>
Source record: 43471

Hi Guys;
The meters below have been reduced to half the price.
Now, $35.00 Shipped for all 4 meters!!

<< Hi All;
I have for sale:
The first is a Pair of QVS large panel meters, Pic tell info.
Price is $32.00ppd.

http://www.myradioroom.com/2qvsmeters1.jpg

http://www.myradioroom.com/2qvsmeters2.jpg
Second set are both Simpson Large panel meters.
Price for these is $35.00ppd>>

http://www.myradioroom.com/2simpson1.jpg

http://www.myradioroom.com/2simpson2.jpg
Glass may need re-gluing on a few!
I only tested them by quickly by appling(tapping) a real low voltage, just to
see it the needle moved, nothing else!

Thanks es 73..........RICH-WA2RQY RLUCCH2098@aol.com
Manual Copies @ http://www.myradioroom.com/manualsale.html
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

309. FS: Unbuilt Heathkit HD-15 phone patch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 03:38:59 UTC
From: rlucch2098@aol.com
Message-ID: <20020609233859.08384.00000598@mb-cd.aol.com>
Source record: 43472

Hi Fellas;
I have for SALE:
Heathkit HD-15 phone patch, unbuilt, box opened for inspection.
Price is $75 + Shipping!
Thanks es 73..........RICH-WA2RQY RLUCCH2098@aol.com
Manual Copies @ http://www.myradioroom.com/manualsale.html
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

310. I passed!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 04:11:44 UTC
From: Matt Patterson <mattpatt@1starnet.com>
Message-ID: <4GVM8.178712$Kp.17247748@bin7.nnrp.aus1.giganews.com>
Source record: 43473

Passed Element 4 today to upgrade to Extra! I'm excited! I couldn't hold it in any longer, I just had to tell someone. :-) I've went from Tech to Extra in 2 months.

Matt
KC5YTV / AE

311. Schematic - TRC-2005

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 05:28:22 UTC
From: "Martin Howells, VK2UMJ" <vk2umj@NOSPAMyahoo.com.au>
Message-ID: <IIWM8.9250$Hj3.28620@newsfeeds.bigpond.com>
Source record: 43474
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hi all,

I'm searching for the schematic diagram for a Realistic TRC-2005. This is a 27MHz FM CB made for UK. If anyone has, or knows where I can get, a copy of the schematic for this CB please e-mail me.

Thanks

73
--
Martin, VK2UMJ
vk2umj@NOSPAMyahoo.com.au

Remove NOSPAM from e-mail address to reply

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.370 / Virus Database: 205 - Release Date: 05/06/2002

312. Re: Another 10.7 MHz IF filter question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 05:36:01 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <obd8guokcr41sm80rmqdesasn2nmehtlrj@4ax.com>
Source record: 43475

On 31 May 2002 09:53:06 -0700, blackm00@cam.org (Michael Black) wrote:

>If there was a need for such a wide IF, it would be supplied by
>a string of IF transformers, usually spaced out between IF stages.
>Early FM broadcast receivers would do exactly this. If the bandwidth
>was too narrow, they'd either load down the IF transformers with
>resistors to broaden the response, or move to a higher IF where the
>bandwidth was easier to get, or sometimes both.

It might be a god idea to start out with an old FM broadcast receiver with traditional IF transformers. The coupling the resonant LC sections determines the frequency response. In ordinary receivers the distance between the coils within the can determined the coupling and it was selected to give the required bandwidth. However, increasing the coupling between these sections will broaden the frequency response in the passband, without destroying the skirts of the frequency response. With a very firm connection between the LC sections, two peaks will appear in the frequency response with a small dip between them.

The resonators can be connected with a capacitor between the "hot" side of each coil, or by connecting the cold sides of the coils together and ground that point through a common coil or capacitor.

For instance "Solid State Design for radio amateurs" by Wes Hayward and Dough DeMaw contains some preselector examples and in the appendix some formulas and examples of various bandpass filters.

Paul OH3LWR

313. Re: Hammarlund SP-600

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 06:13:22 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <6sXM8.115186$4i.11253653@bin2.nnrp.aus1.giganews.com>
Source record: 43476
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

Well it seems that the auction ended at $520. The previous ones were at $405 and (gasp) $785. That's an average of $570.

Now I have a rough idea of what mine is worth. Thanks for your help.

Bob

314. Re: Hairpin filter software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 06:44:43 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0206092244.3d442df1@posting.google.com>
Source record: 43477

Hi Mark,
simple bandpass filters on PCBs can be designed with software from
http://mujweb.cz/www/ok1sip/english/grebeh.htm
Sorry, I haven't tried it in practice yet.

73 de Ivan

315. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 07:44:25 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <92j8gusv88kcf0jncbusj8oppci15t8k8g@4ax.com>
Source record: 43478

On Wed, 29 May 2002 12:56:39 -0400, w_tom <w_tom1@usa.net> wrote:
> In each case cited, a non-destructive path to earth is
>established. The tower surge protector provides lightning
>with a path to earth ground that does not pass through the
>repeater. Low impedance devices not just create
>equipotential across the repeater. No such equipotential
>could exist if lightning did not have a path, not through
>repeater, to earth ground. The equipotetial exists because
>lightning has a better path around the repeater than through
>it.

Oh, lightning. Well, no one had mentioned lightning.
I thought we were talking about ordinary surges and spikes.
No matter, the issues remain the same.

When lightning strikes a tower, it already has a path to Earth,
through the tower, albeit the path may be high impedance.
When lightning strikes an aircraft, there is no direct connection
to Earth, and indeed the lightning may neither originate nor
terminate at the Earth. It may be cloud to cloud lightning.

Regardless of any ultimate sources or destinations, we don't want
the current to pass through the equipment on the way to wherever
it may be going. So we still have a situation where we want to shunt
the conductors leading to the protected equipment so that no large
potential difference can exist *between* those conductors, and hence
can't drive destructive currents through the equipment.

(The repeater itself is assumed to be in a metal box attached
to the tower, which forms a Faraday cage for its chassis. The
whole cage may elevate hundreds of thousands of volts with
respect to distant Earth, but we don't have to care about that.)

Earth may be 1,000 feet down the tower (or in the case of an
aircraft, many thousands of feet of air to Earth). Since lightning
is a relatively fast risetime pulse, it behaves as RF, so a long
path to Earth is not at all guaranteed to be low impedance.
Thus the notion of shunting to Earth doesn't necessarily have
any relevence to our immediate problem.

But we *can* make a low impedance across the equipment
we're trying to protect by placing a MOV or gas tube across
any and all connections to the equipment.

This is essentially Earth independent. We don't have
to care if the entire piece of equipment is elevated

hundreds of thousands of volts with respect to Earth
during a strike event. We only have to care that there
are not excess potential differences expressed
across the equipment where it can drive harmful
currents *through* the equipment.

The notion that suppressors won't work unless directly
connected to Earth is simply wrong. There's no such
thing as absolute potential, all potentials are relative,
and the only ones we have to care about are the
immediate ones which appear *across* equipment
we're trying to protect, and can drive destructive currents
through the equipment. As long as we stop that difference
from being large, we're golden.

In fact, if we can avoid a direct connection to Earth, we
minimize the possibility that heavy strike currents will
even flow near our equipment. That's because ground
strike lightning is going to take every available path to
Earth, and we'd ideally like for our equipment not to be
one of them.

Gary

316. GS35B

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 12:03:11 UTC
From: keven <keven@nospam.co>
Message-ID: <3d0494ac@news.nz.asiaonline.net>
Source record: 43479

Has anyone here built an amp. for Hf useing an Gs35b?

317. Re: GS35B

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 12:59:10 UTC
From: k9wkj <k9wkj@hotmail.com>
Message-ID: <Gm1N8.1721$eV4.70223@reggie.win.bright.net>
Source record: 43480

there are some plans on ebay
just do a search on the tube and follow the link

cul de k9wkj

looking at that tube myself

keven <keven@nospam.co> wrote in message
news:3d0494ac@news.nz.asiaonline.net...
> Has anyone here built an amp. for Hf useing an Gs35b?

318. Re: Hammarlund SP-600

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 13:49:19 UTC
From: wb3fup@webtv.net
Message-ID: <29212-3D04AE5F-29@storefull-2333.public.lawson.webtv.net>
Source record: 43484

Re: Hammarlund SP-600

Group: rec.radio.amateur.homebrew Date: Mon, Jun 3, 2002, 11:56pm (EDT+4) From: balbert@cnmnetwork.com (Bob)
And where does one get beeswax? Would something else work as well?

Buy a toliet seal at Home Depot - it will provide a large supply. It is also useful when applied to the tip of a screwdriver to hold a screw to the driver in those impossible to reach starting situations.

73 es cul

wb3fup
a salty bear

319. Re: GS35B

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 13:54:18 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <ag28XmCK+KB9EAUw@ifwtech.co.uk>
Source record: 43483

keven wrote:
>Has anyone here built an amp. for Hf useing an Gs35b?

Look on www.nd2x.net and follow the links into "QRO".

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
New e-mail: g3sek@ifwtech.co.uk
New website: http://www.ifwtech.co.uk/g3sek

320. FS: 1000's of TUBES, very low prices

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 13:57:03 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <Pe2N8.20568$L63.1223786@news1.west.cox.net>
Source record: 43481
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

Please email w6krc@arrl.net for updated list.

321. Re: I passed!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 14:01:36 UTC
From: Bill Turner <w7ti@dslextreme.com>
Message-ID: <e6c9guo13fe6inreo9a59nn9tegvud3coh@4ax.com>
Source record: 43482

On Mon, 10 Jun 2002 04:11:44 GMT, "Matt Patterson"
<mattpatt@1starnet.com> wrote:

>I've went from Tech to
>Extra in 2 months.

Congratulations - took me 30 years!

Now work on your grammar. It's "gone", not "went". <g>

73, Bill W7TI

322. Re: 6-160 wire antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 14:28:53 UTC
From: wb3fup@webtv.net
Message-ID: <29213-3D04B7A5-16@storefull-2333.public.lawson.webtv.net>
Source record: 43486

6-160 wire antenna?

Group: rec.radio.amateur.homebrew Date: Sat, Jun 8, 2002, 12:12pm (EDT+4) From: kc8ssg@qsl.net (KC8SSG)
I need to brew a 6-160 antenna but it cant be any longer than about 90 feet. I do have a tuner. Could you guys give me some ideas on afairly good performance dipole?Thanks alot fellas
--
KC8SSG
==========

Build a ladder line fed dipole. If your insallation requires coax from the tuner to "outsidr" a 50/450 balun will make the conversion.

73 es cul

wb3fup
a salty bear

323. Re: I passed!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 14:43:27 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <jW2N8.198559$Oa1.18461517@bin8.nnrp.aus1.giganews.com>
Source record: 43485

I think that in his state of excitement, "went" may be appropriate. We will have to check with Bill Safire, the word-policeman at the New York Times. (Just don't use "impact" as a transitive verb.)

"Bill Turner" <w7ti@dslextreme.com> wrote in message news:e6c9guo13fe6inreo9a59nn9tegvud3coh@4ax.com...
> On Mon, 10 Jun 2002 04:11:44 GMT, "Matt Patterson"
> <mattpatt@1starnet.com> wrote:
>
> >I've went from Tech to
> >Extra in 2 months.
>
> _____
>
> Congratulations - took me 30 years!
>
> Now work on your grammar. It's "gone", not "went". <g>
>
> 73, Bill W7TI

324. Re: I passed!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 15:42:37 UTC
From: Itsme <antwoord_mij@hotmail.com>
Message-ID: <3d04c8ea$0$8137$ba620e4c@news.skynet.be>
Source record: 43487

Congratulations !

on7jq

"Matt Patterson" <mattpatt@1starnet.com> schreef in bericht
news:4GVM8.178712$Kp.17247748@bin7.nnrp.aus1.giganews.com...
> Passed Element 4 today to upgrade to Extra! I'm excited! I couldn't hold
> it in any longer, I just had to tell someone. :-) I've went from Tech to
> Extra in 2 months.
>
>
> Matt
> KC5YTV / AE
>
>

325. Radar Detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 17:06:38 UTC
From: Doctor <doctorwho20012001@yahoo.com>
Message-ID: <ae2m4nntr1@news.cowan.edu.au>
Source record: 43488

Would any body know how to make a simple radar detector.

Thanks Craig

326. Re: Radar Detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 17:26:32 UTC
From: fred bartoli <toto@hotmail.toto>
Message-ID: <3d04e10c$0$228$626a54ce@news.free.fr>
Source record: 43489

Yes, very very easy :

Drive the fastest you can, every time...

Fred.

Doctor <doctorwho20012001@yahoo.com> a crit dans le message :
ae2m4nntr1@news.cowan.edu.au...
> Would any body know how to make a simple radar detector.
>
> Thanks Craig
>
>

327. Re: oscilloscope as monitor scope?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 17:40:02 UTC
From: George <gschwab@florida-knife.com>
Message-ID: <Sv5N8.6965$gs4.1265@nwrddc02.gnilink.net>
Source record: 43490

Thanks for the help
got it to do what I was trying to do.

"George" <gschwab@florida-knife.com> wrote in message
news:451250af.0206051301.167277ec@posting.google.com...
> Does anyone here know how I might use an oscilloscope as a monitor scope?
> I have a 15 Mhz scope and would like to "see" my transmitters output.
> Any help greatly appreciated!
> Thanks
> George

328. Heathkit sb 104 problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 17:44:56 UTC
From: George <gschwab@florida-knife.com>
Message-ID: <sA5N8.6997$gs4.4168@nwrddc02.gnilink.net>
Source record: 43491

I have and SB 104 that is working well...other than one small problem I
can't find reference to in the books. It is transmitting 400 Hz BELOW the
receive freq.
Receive seems ok as WWV is exactly at 15 Mhz. and I've made a few qso's by
manually tunig UP 400 to transmit and get good reports. Appears to be off
the same amount on all bands. Any suggestions before I go through a bunch of
stuff I really don't need to?
Thanks
George, AE4MH

329. FS: 6U5 NOS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 17:56:01 UTC
From: arnoldg@c2i.net
Message-ID: <3d04e798.6702042@news1.c2i.net>
Source record: 43492
Cross-posted to: rec.audio.marketplace,rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hi,

I have some 6U5 magic eye valves in stock. They are unused and in
original boxes. The label is Haltron, but I am pretty sure that they
are rebranded US manufacture. These can replace EM 34/35 if you just
change the socket and alter the resistors a bit.
The price is NOK 186.70 each - about US$ 23.65
Shipping to anywhere in the world!

Best regards,

Arnold Goksyr

DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://www.demostenes.no

Thousands of different valves in stock as well as
sockets,transformers,books,caps,resistors and
other components. Web site is updated every week.
You can order on-line.

330. Re: Need help installing isolation transformer in S-38C

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 18:23:10 UTC
From: k7itm@aol.com
Message-ID: <3200347.0206101023.2f528090@posting.google.com>
Source record: 43493
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.antiques.radio+phono

Roy Lewallen <w7el@eznec.com> wrote in message news:<3D015D88.9F9E7C53@eznec.com>...
> Tom Bruhns wrote:
> > . . . But you should be able to
> > _ground_ the chassis, also, to provide protection. (Expect the caps
> > would trip a GFCI...)
>
> I wouldn't do that! Those capacitors can carry quite a bit of current.
> My first receiver was an S-38D, which I once grounded. When I turned on
> the power, an arc formed at the power switch, and it continued until I
> raced downstairs and frantically threw all the house's circuit breakers.
> (The arc was between me and the plug.) This made a big impression on my
> parents, who never forgot it. I didn't either. And I'm sure you won't,
> either, if it happens to you.
>
> Use that isolation transformer!

Wow, that sounds like a product liability issue for Hallicrafters.
Guess that wasn't such a big issue back when we were growing up.
Perhaps it's a good thing you DID have the chassis grounded, so it
wasn't YOU that ended up completing the circuit back to earth. I'm
truly thankful for the contributions you've made to the ham community
since then, Roy. :-)

Fortunately, I never had such a problem with mine like that. Of
course, an isolation transformer won't necessarily protect against
such arcs, and it's also a good idea to have an appropriately rated
fuse (an amp or so?) in the circuit. So, for the OP...get an
isolation transformer that also has a fuse. The schematic I looked at
didn't show a fuse in the radio. I wonder what one of our product
safety engineers would say if he looked at an S-38 or similar radio
today!

Cheers,
Tom

331. Re: I passed!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 19:39:18 UTC
From: John Fletcher <johnfletch@2e1gmv.freeserve.co.uk>
Message-ID: <ae2v9b$pd9$1@news6.svr.pol.co.uk>
Source record: 43494

Congrats from G land!
"Itsme" <antwoord_mij@hotmail.com> wrote in message
news:3d04c8ea$0$8137$ba620e4c@news.skynet.be...
> Congratulations !
>
> on7jq
>
> "Matt Patterson" <mattpatt@1starnet.com> schreef in bericht
> news:4GVM8.178712$Kp.17247748@bin7.nnrp.aus1.giganews.com...
> > Passed Element 4 today to upgrade to Extra! I'm excited! I couldn't
hold
> > it in any longer, I just had to tell someone. :-) I've went from Tech
to
> > Extra in 2 months.
> >
> >
> > Matt
> > KC5YTV / AE
> >
> >
>
>

332. Re: Icom Power connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 21:01:35 UTC
From: George <gschwab@florida-knife.com>
Message-ID: <Ps8N8.8501$gs4.6076@nwrddc02.gnilink.net>
Source record: 43495

Try Digikey....here is a link to some molex stuff on the digikey site

http://www.digikey.com/scripts/us/dksus.dll?Selection

"Walt" <walt@REMOVETHISpobox.com> wrote in message
news:d94agu4nq32kn24bpc30nbkv4nljepadvm@4ax.com...
> I'm looking for a (cheap_hopefully) source of the six pin
> molex_looking connectors and pins used on Icom equip. power cables
> I need several of both the male and female connectors. Just need the
> connectors not the cable.
>
> Thanks;
> Walt
> walt@pobox.com

333. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 21:05:55 UTC
From: Marco <m.vliet9@planet.nl>
Message-ID: <ae346m$1tm$1@reader06.wxs.nl>
Source record: 43496
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

buy also a second antenna !!

"KC8SSG" <kc8ssg@qsl.net> schreef in bericht news:VXAL8.62$13.1028@news...
> I'm having a hard time getting my wife to get used to me buying radios and
> stuff. Any help or suggestions would be great!
>
> --
> KC8SSG
>
>
>

334. Re: oops forgot url

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 21:12:14 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <OC8N8.34034$UT.2364426@bgtnsc05-news.ops.worldnet.att.net>
Source record: 43397

This person had some pretty good ideas, but switching from 1N914s to PIN diodes in the mixer stage is not the way to go. A good choice for improved performance would be hot-carrier diodes, such as HP 1N5711s. PIN diodes are good for RF switching; they yield good IMD performance.
There were some pretty interesting approaches though. Definitely a website worth bookmarking!

Pete KE9OA

Henry Kolesnik <wd5jfr@oklahoma.net> wrote in message
news:ug71e7n1qf42f0@corp.supernews.com...
> http://www.pan-tex.net/usr/r/receivers/
> "Bruno Hach�'" <bruhac@NOSPAM.nbnet.nb.ca> wrote in message
> news:XrSL8.4359$f52.569053@news-nb00s0.nbnet.nb.ca...
> > Hi, I'm thinking of building a SW receiver..
> >
> > Where are the best places to buy parts (crystals,
capacitors,transistors,
> > etc) besides Radio Shack?
> >
> > Thanks,
> > Bruno Hach�
> >
> >
> >
>
>

335. Re: Radar Detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 21:57:56 UTC
From: la8ak.xnd@online.no
Message-ID: <3d051d70.15549811@news.online.no>
Source record: 43398

On Mon, 10 Jun 2002 19:26:32 +0200, "fred bartoli" <toto@hotmail.toto>
wrote:

>Yes, very very easy :
>
>Drive the fastest you can, every time...
>
works for the modern LASER 'radar', too?

JM
--
remove ,xnd to reply

336. AM radio circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 22:22:52 UTC
From: j_bot99@hotmail.com
Message-ID: <6a6e1be9.0206101422.6470c5c5@posting.google.com>
Source record: 43399

Hi all

I have quite an extensive search on the net but didnt find alot of
good results.
Could you guys please let me know of some simple AM radio circuits
just for a bit of listening normal broadcast radio nothing special.
I'd also like some comments about your experiences with these simple
type of circuits compared to the very elaborate ircuits. preferably I
would like to listen with ehadphones or connect to an amp as I dont
have a crystal earpiece at hand.
thanks
JD Bothma

337. Re: Hairpin filter software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 22:36:37 UTC
From: k7itm@aol.com
Message-ID: <3200347.0206101436.8ade7df@posting.google.com>
Source record: 43400

"Mark Mansfield" <mmans@aeneas.net> wrote in message
news:<pWwM8.481$Ko6.127046@news.uswest.net>...
> Does anyone know of software for designing hairpin filters on printed
> circuit boards that
> is within the reach of home hobbyist?
> I know there are some expensive software packages available but I can't
> afford it and was looking
> for something more reasonable that the homebrewer could use to design
> filters in the 500MHz to
> 5GHz range.
> Thanks!
> Mark

Have you tried Sonnet Lite? I think it _may_ be able to do what you
want, but I'm not at all sure. Price is right!
http://www.sonnetusa.com/products/lite/why.asp

I was recently searching for some reasonably-priced filter design
software for some 10-100MHz stuff I'm doing, and found a number of
things from freeware to rather expensive, and I recall seeing
something in that search that looked good for microstrip filter
design for hobby applications, but I can't remember what it was
exactly now. Have you tried some web searches? Try things like
"filter design software" and "microstrip filter software" in Google,
and you'll get lots of hits. Some offer free limited-time eval
versions, some are inexpensive, some are free.
Cheers,
Tom

338. Re: Need help installing isolation transformer in S-38C

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 23:13:07 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <7oaN8.55309$092.2216607@news1.east.cox.net>
Source record: 43401
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.antiques.radio+phono

And, just as important, the wax paper cap located between the hot chassis
and metal cabinet must be replaced with a UL approved line duty bypass
capacitor of .05 mfd or less.

Pete

"w9gb" <gregory.beat@attbi.com> wrote in message
news:WSMM8.224090$Po6.363881@rwcrnsc52.ops.asp.att.net...
> /hals38.htm#S-38%20Links
>
at > The AC power cord (on this particular unit under discussion) must be
changed
> to a polarized plug &
> fused as well as the rubber isolation mounts repaired/replaced. Then you
> will again have a SAFE chassis around children. A power switch, if
desired,
> could be mounted on the back chassis (or rework the receive/standby switch
> on front panel).
> >

339. LF GDM

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 23:28:57 UTC
From: Andreu <afreixas@terra.es>
Message-ID: <ZCaN8.263903$4Q.1970559@telenews.teleline.es>
Source record: 43403

How to build a grid-deep meter for LF ? I already have one for the 500 Khz 300 Mhz range, but culdn't find any info on how to build one for 30 khz 300 Khz. Any site have schs on how to build one of this ? Thanks. Andrew.

340. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 23:33:21 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <5HaN8.55337$092.2222932@news1.east.cox.net>
Source record: 43402
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

There is "current" through a cap -- during transmit the AC ripple
will increase, increasing the current flow in and out of the cap
as the cycle varies.

Pete

".Bill :-)" <TheRealExray@netscape.net> wrote in message
news:3CFFFC5D.8A7FD28A@netscape.net...
> Rob wrote:
> >
> > Oh yes I forgot to ask. Will a electroylic cap work for awhile then
start
> > acting up after more power is drawn from the power supply? The bias
voltage
> > is supplied when the T4XC is turned on but maybe the current increases
> > during transmit!
>
> Well, it can surely start to degrade after it heats up a bit. There's
> no current thru a cap, but transmitting will definitely raise the temp
> in the PS. Can you measure any voltage difference in the -55 line in
> the hum vs no hum condition? Often a bad cap will pull down the
> voltage.
> -Bill
>

341. Re: Freq counter advice needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 23:35:52 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <sJaN8.55340$092.2225077@news1.east.cox.net>
Source record: 43404

Parts will be hard to find, but if you can get it for under 40 bucks,
consider it to
be a throw-away if it becomes unrepairable. I have the 500 MHz version of
that counter, and I love it.

Pete

"P. Ermisch" <paul@ermisch.com> wrote in message
news:oWbL8.104545$352.5001@sccrnsc02...
> I've found a good deal on an HP counter but the specs state:
>
> channel A: 10hz to 200mhz, 1 megohm impedance
> channel B: 50mhz to 225mhz, 50 ohm impedance
>
> I'm a neophyte on homebrew and was hoping to use this for some HF work.
The
> 1M impedance on the counter makes me think I can't use it for HF work
> without an impedance match. Is this correct or am I confused?
>
> I'm reading specs at http://www.bellelect.com/products/agilent/5384a.htm
>
> Paul KB0LUR
>
>

342. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-10 23:37:33 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3D05383D.E17E4A1F@netscape.net>
Source record: 43405
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Uncle Peter wrote:
>
> There is "current" through a cap -- during transmit the AC ripple
> will increase, increasing the current flow in and out of the cap
> as the cycle varies.
>
> Pete

Not to belabour the point, but why does the ripple increase during xmt?

-Bill

343. Re: LF GDM

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 00:17:47 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <KkbN8.195041$%o.17795131@bin3.nnrp.aus1.giganews.com>
Source record: 43406

It would be identical except for the values of the tuning components.

Bob

344. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 01:14:38 UTC
From: w_tom <w_tom1@usa.net>
Message-ID: <3D054EFE.44512625@usa.net>
Source record: 43407

Lighting strikes to aircraft were clearly beyond the scope
of this discussion. However even aircraft have their versions
of earth ground.
http://lightning.pwr.eng.osaka-u.ac.jp/lrg/temp/plane.html
Incoming from the cloud on the nose. Outgoing to earth on the
tail. Even the aircraft had an earth ground during the
strike. Cloud to Ground lightning seeks earth ground - which
is fundamental to surge protection.

We have an aircraft isolated from earth by a best insulator
- air - and still the aircraft ends up with a connection to
earth ground.

Even aircraft are designed so that "a non-destructive path
to earth is
established." However the design is more complex for
aircraft. Earth ground point can vary with each strike - and
still damage must not result. Today, earth ground via the
tail. Tomorrow, the left wing. Same principals apply.
Divert the surge into a safe, non-destructive path.

We don't try to stop, block, or absorb lightning. Always
provide lightning - the most common and typical surge - with a
non-destructive path to that ground. This even applies to a
scenario completely irrelevant to the topic - the airplane.

Gary Coffman wrote:
> ...
> When lightning strikes an aircraft, there is no direct connection
> to Earth, and indeed the lightning may neither originate nor
> terminate at the Earth. It may be cloud to cloud lightning.

345. FAQs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 01:25:09 UTC
From: sampett456@yahoo.co.uk
Message-ID: <d8f8142b.0206101725.36c9352b@posting.google.com>
Source record: 43408

Where can I find the FAQs for this newsgroup ?

Thanks

346. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 01:40:34 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D055512.74695044@eznec.com>
Source record: 43409

So an aircraft has a path to "earth ground", or a "version of earth ground" even when it's struck by cloud-to-cloud lightning?

Roy Lewallen, W7EL

w_tom wrote:
>
> Lighting strikes to aircraft were clearly beyond the scope
> of this discussion. However even aircraft have their versions
> of earth ground.
> http://lightning.pwr.eng.osaka-u.ac.jp/lrg/temp/plane.html
> Incoming from the cloud on the nose. Outgoing to earth on the
> tail. Even the aircraft had an earth ground during the
> strike. Cloud to Ground lightning seeks earth ground - which
> is fundamental to surge protection.
>
> We have an aircraft isolated from earth by a best insulator
> - air - and still the aircraft ends up with a connection to
> earth ground.
>
> Even aircraft are designed so that "a non-destructive path
> to earth is
> established." However the design is more complex for
> aircraft. Earth ground point can vary with each strike - and
> still damage must not result. Today, earth ground via the
> tail. Tomorrow, the left wing. Same principals apply.
> Divert the surge into a safe, non-destructive path.
>
> We don't try to stop, block, or absorb lightning. Always
> provide lightning - the most common and typical surge - with a
> non-destructive path to that ground. This even applies to a
> scenario completely irrelevant to the topic - the airplane.
>
> Gary Coffman wrote:
> > ...
> > When lightning strikes an aircraft, there is no direct connection
> > to Earth, and indeed the lightning may neither originate nor
> > terminate at the Earth. It may be cloud to cloud lightning.

347. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 01:51:29 UTC
From: w_tom <w_tom1@usa.net>
Message-ID: <3D0557A1.D6E81522@usa.net>
Source record: 43410

There is no earth independence when discussing common mode surges. That lightning strike will obtain earth ground through the repeater IF there is no alternative path (shunt) around that repeater. IOW the tower itself may be the better path to earth around the repeater. If an MOV is placed across connections to the repeater, then the MOV provides a surge with a path around the repeater to earth ground. Of course, making that path to earth ground is not perfect. Therefore the surge may also attempt other paths to earth through other repeater connections. So we also install additional MOVs between connectors to make repeater inputs/ outputs equipotential.

Apparently that was not understood in the previous post. To reword it: A dual purposes for those MOVs. 1) To shunt a surge to earth because not all inputs will be perfectly equipotential. 2) To shunt the surge equipotential on all inputs because the connection to earth ground is not perfect. We do both - two different operations using the same MOVs - because neither method works good enough.

Of course, to be anal, we can go into greater and more complex analysis. However, the basic concept of Surge Protection 101 remains - shunt a surge to earth via non-destructive paths.

What is this magical absorption nature of earth? Destructive surges seek earth ground because, again to make it simple, the cloud is one side of the battery and earth some miles away is the other side of the battery. The battery must be discharged. The resulting surge goes from cloud, through tower, into earth, then through earth to where those other opposite charges are located. A surge electrical circuit defined. Principal of a CG lightning strike, also well demonstrated in many publications including, if I remember, a figure in Feynman's 3 volume set called 'Lectures in Physics'.

The destructive surge does not damage electronics if shunted, by safe paths, into earth. That is the concept of both surge protection and of air terminals (Franklin rods). They both do same - shunt the surge in a non-destructive path to earth ground.

Even TV and FM radio equipment atop the Empire State Building is not earth independent. This equipment suffers about 25 direct strikes every year without damage because,

again, the surge is shunted so that it does not obtain earth ground through transmitter equipment. Even 80+ stories up, lightning is shunted (diverted) to earth ground so as to not damage expensive broadcasting equipment.

Blocking a connection to earth ground is another technique to enhance protection. Some have described inductors in control lines to protect the controller equipment. The inductors alone are not effective surge protection. They only work if the surge is provided an alternative path to earth. Those inductors are only another part of the 'system'. Without that shunt path, a critical 'system' component, the inductors would easily be overwhelmed and ineffective.

Lightning cannot be stopped. It can be diverted. Nothing can be isolated from ground. Lightning came miles through air - a perfectly good insulator - to obtain earth ground. How is anything in the tower - or even that 747 in the other post - suppose to be isolated from earth ground? Cannot happen. Although something can be more isolated, nothing can be sufficiently isolated to avoid surge damage. Isolation is effective when in conjunction with some other shunt to earth. But again we return to the same point. Diverting the surge to its objective - earth ground.

Gary Coffman wrote:
>
> On Wed, 29 May 2002 12:56:39 -0400, w_tom <w_tom1@usa.net> wrote:
> > In each case cited, a non-destructive path to earth is
> >established. The tower surge protector provides lightning
> >with a path to earth ground that does not pass through the
> >repeater. Low impedance devices not just create
> >equipotential across the repeater. No such equipotential
> >could exist if lightning did not have a path, not through
> >repeater, to earth ground. The equipotetial exists because
> >lightning has a better path around the repeater than through
> >it.
>
> Oh, lightning. Well, no one had mentioned lightning.
> I thought we were talking about ordinary surges and spikes.
> No matter, the issues remain the same.
>
> When lightning strikes a tower, it already has a path to Earth,
> through the tower, albeit the path may be high impedance.
> When lightning strikes an aircraft, there is no direct connection
> to Earth, and indeed the lightning may neither originate nor
> terminate at the Earth. It may be cloud to cloud lightning.
>
> Regardless of any ultimate sources or destinations, we don't want
> the current to pass through the equipment on the way to wherever
> it may be going. So we still have a situation where we want to shunt

> the conductors leading to the protected equipment so that no large
> potential difference can exist *between* those conductors, and hence
> can't drive destructive currents through the equipment.
>
> (The repeater itself is assumed to be in a metal box attached
> to the tower, which forms a Faraday cage for its chassis. The
> whole cage may elevate hundreds of thousands of volts with
> respect to distant Earth, but we don't have to care about that.)
>
> Earth may be 1,000 feet down the tower (or in the case of an
> aircraft, many thousands of feet of air to Earth). Since lightning
> is a relatively fast risetime pulse, it behaves as RF, so a long
> path to Earth is not at all guaranteed to be low impedance.
> Thus the notion of shunting to Earth doesn't necessarily have
> any relevence to our immediate problem.
>
> But we *can* make a low impedance across the equipment
> we're trying to protect by placing a MOV or gas tube across
> any and all connections to the equipment.
>
> This is essentially Earth independent. We don't have
> to care if the entire piece of equipment is elevated
> hundreds of thousands of volts with respect to Earth
> during a strike event. We only have to care that there
> are not excess potential differences expressed
> *across* the equipment where it can drive harmful
> currents *through* the equipment.
>
> The notion that suppressors won't work unless directly
> connected to Earth is simply wrong. There's no such
> thing as absolute potential, all potentials are relative,
> and the only ones we have to care about are the
> immediate ones which appear *across* equipment
> we're trying to protect, and can drive destructive currents
> *through* the equipment. As long as we stop that difference
> from being large, we're golden.
>
> In fact, if we can avoid a direct connection to Earth, we
> minimize the possibility that heavy strike currents will
> even flow near our equipment. That's because ground
> strike lightning is going to take every available path to
> Earth, and we'd ideally like for our equipment not to be
> one of them.
>
> Gary

348. FS: Drake L7 RF deck parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 02:10:07 UTC
From: k9sqg@aol.com
Message-ID: <20020610221007.16120.00000613@mb-bd.aol.com>
Source record: 43411

Obtained an RF deck for the Drake L7. I'm going to remove the grid meter and possibly the on/off switch. The internals seem to be there with the exception of the tubes and one parasitic suppressor I believe. Doesn't seem like any mods and the insides seem to be complete and unmodified. The front panel is in bad shape but could be restored with a set of plastic inserts. The end caps are missing. At any rate, a lot of parts will remain and are for sale. In fact, the unit would be an excellent start for building a legal limit 3-500Z amplifier. Useful parts include the plate meter, input coils, pi-network output coils, tune capacitor, load capacitor, change-over relay, filament transformer, meter switches, fan, etc. etc. Let me know what you need and what you'd like to offer for it. Unfortunately, I cannot ship anything overseas.

Thanks for reading the posting.

73s,

Evan

349. Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 03:50:56 UTC
From: ddmga@yahoo.com
Message-ID: <296ea75a.0206101950.4f5b50ff@posting.google.com>
Source record: 43412
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

I am participating in the ratings panel for Arbitron
(www.arbitronpanel.com). They gave me this equipment which captures
and re-emits coded signals in radio and TV broadcasts. The signals
are supposedly inaudible to the human ear. Well, I'm interested in
finding out the frequency used by this equipment and on radio and TV
and if it can be monitored and decoded using a PC.

I haven't found any information or programs to do this on the net.

The patent numbers on the devices are:

5,764,763 Apparatus and methods for including codes in audio signals
and decoding

5,483,276 Compliance incentives for audience monitoring/recording
devices

5,450,490 Apparatus and methods for including codes in audio signals
and decoding

Any ideas or information is much appreciated!

350. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 03:54:50 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3D05748A.22848593@mfi.net>
Source record: 43413
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

```
".Bill :-)" wrote:
>
> Uncle Peter wrote:
> >
> > There is "current" through a cap -- during transmit the AC ripple
> > will increase, increasing the current flow in and out of the cap
> > as the cycle varies.
> >
> > Pete
>
> Not to belabour the point, but why does the ripple increase during xmt?
>
> -Bill

Because you're drawing more current through the power supply. The
higher the current, the higher the ripple, the higher the ripple, the
higher the AC through the cap.
```

351. Re: LF GDM

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 07:16:59 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <nxhN8.460$sC4.127371@news6-win.server.ntlworld.com>
Source record: 43414

> How to build a grid-deep meter for LF ? I already have one for the
> 500 Khz 300 Mhz range, but culdn't find any info on how to build one
> for 30 khz 300 Khz. Any site have schs on how to build one of this ?
> Thanks. Andrew.
=====
Your grid-dip meter probably has several plug-in inductors (coils).
You can 'extend' to the lower frequencies by making an additional plug-in
inductor with more windings.
Depending on the variable capacitor in your instrument,you might have to add
fixed capacitance inside the additional inductor.

Frank , gm0csz.kn6wh@ntlworld.com

352. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 11:32:18 UTC
From: rcnixon@mindspring.com
Message-ID: <3d05df02.1161034@news.mindspring.com>
Source record: 43415
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

ddmga@yahoo.com (David) wrote:

>I am participating in the ratings panel for Arbitron
>(www.arbitronpanel.com). They gave me this equipment which captures
>and re-emits coded signals in radio and TV broadcasts. The signals
>are supposedly inaudible to the human ear. Well, I'm interested in
>finding out the frequency used by this equipment and on radio and TV
>and if it can be monitored and decoded using a PC.
>
>I haven't found any information or programs to do this on the net.
>
>The patent numbers on the devices are:
>
>5,764,763 Apparatus and methods for including codes in audio signals
>and decoding
>
>5,483,276 Compliance incentives for audience monitoring/recording
>devices
>
>5,450,490 Apparatus and methods for including codes in audio signals
>and decoding
>
>Any ideas or information is much appreciated!

Probably done much like the 19kHz stereo latching signal in FM
broadcasts or the CTCSS tones used in 2-way communications. Does the
unit re-broadcast? If so, a frequency counter or a scanner can find
the freq. Can it be decoded? Yes, of course but in what time and at
what expense?

--
Russ
"Two-fifteen, no ambulance needed!" (G. J. Golden, ECPD)
Subtract all nines to reply

353. Re: Need Help with Drake C line!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 11:52:50 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3D05E492.E20F8A10@netscape.net>
Source record: 43416
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

```
"Michael A. Terrell" wrote:
>
> ".Bill :-)" wrote:
> >
> > Uncle Peter wrote:
> > >
> > > There is "current" through a cap -- during transmit the AC ripple
> > > will increase, increasing the current flow in and out of the cap
> > > as the cycle varies.
> > >
> > > Pete
> >
> > Not to belabour the point, but why does the ripple increase during xmt?
> >
> > -Bill
>
> Because you're drawing more current through the power supply. The
> higher the current, the higher the ripple, the higher the ripple, the
> higher the AC through the cap.

What is the difference in current on the -55 line between xmt and
receive?
-Bill
```

354. FA: 2 BOXES of NOS Tubes over 100

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 15:43:06 UTC
From: GaryH <garyh@bellsouth.net>
Message-ID: <YQoN8.3094$T05.218580@e3500-atl2.usenetserver.com>
Source record: 43417

Check these two autions. I am getting letting
my tube collection go.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1740248940

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1740247843

355. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 18:01:55 UTC
From: nordland37@hotmail.com
Message-ID: <3d062bbb.1225961@news.freeserve.net>
Source record: 43418
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

On 10 Jun 2002 20:50:56 -0700, ddmga@yahoo.com (David) wrote:

>I am participating in the ratings panel for Arbitron
>(www.arbitronpanel.com). They gave me this equipment which captures
>and re-emits coded signals in radio and TV broadcasts. The signals
>are supposedly inaudible to the human ear. Well, I'm interested in
>finding out the frequency used by this equipment and on radio and TV
>and if it can be monitored and decoded using a PC.

It is (presumably) on FM at any rate, on a sub-carrier of
the broadcast frequency. It's known as RDS (Radio Data System)
and carries things like time, station name, type of entertainment
provided etc.

On TV it's Teletext/Oracle, carried on spare lines of the
625-line system.

I'm sure Google will provide Websites which gives more
informed information.

--

_____
Posted by J.

356. Re: FS: Drake L7 RF deck parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 18:10:44 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3D063D24.9040907@charter.net>
Source record: 43419

Hi Evan

what are you looking for for the whole deck?
chris NI4L

>

--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

357. htx-400

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 18:17:27 UTC
From: Steve Bossert <kc2gog@amsat.org>
Message-ID: <39rN8.228$MW2.44061@news4.srv.hcvlny.cv.net>
Source record: 43420

i have a radioshack htx-400 that i use for a simplex repeater beacon for a GEOCACHING display. i would like other non hams to be able to use this, is their anyway i can mod it for FRS,it covers on recieve 420-470, it shouldnt be a problem, but i cant find a schematic to make it do what i want. the radio is under 500mw so i wont get in trouble for out of band type stuff

steve

358. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 19:38:55 UTC
From: Dave Liquorice <newspam@howhill.com>
Message-ID: <nyyfbegfubjuvyypbz.gxkhsv0.pminews@snail.howhill.network>
Source record: 43421
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

On Tue, 11 Jun 2002 18:01:55 GMT, J. wrote:

> It is (presumably) on FM at any rate, on a sub-carrier of
> the broadcast frequency. It's known as RDS (Radio Data System)

Well the OP is in the US AFAICT, Arbitron isn't the UK company doing ratings... I don't *think* the US have RDS on their FM services, could be wrong though.

I'm not sure which bit he wants to decode. The data on each TV/Radio station broadcast or the link from the Arbitron box to the personal meter. A neat arrangement if it is using ultrasonics so the meter only logs when the person is in the room, not the other side of a wall as would happen with an RF based system.

--
Cheers newspam@howhill.com
Dave. Remove "spam" for valid email.

359. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 20:34:29 UTC
From: Sylvan Butler <Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnagcnml.phm.Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 43422
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

On Tue, 11 Jun 2002 20:38:55 +0100 (BST), Dave Liquorice <newspam@howhill.com> wrote:
> ratings... I don't *think* the US have RDS on their FM services, could
> be wrong though.

Yup. We have RDS. At least it is approved, but only 1/20 (or less)
FM broadcast stations actually transmit it. And of those that do
transmit RDS, most only send their call sign. Sometimes they
transmit the time, but of the two stations I can receive that do,
the time is almost always far off.

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. ##### change ^ to @ ##### |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Fight terrorism, arm the population!

360. Re: AM radio circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 20:55:45 UTC
From: geoffrey brown <geoff@spontaflex.freeserve.co.uk>
Message-ID: <ae5o3a$l9k$1@newsg1.svr.pol.co.uk>
Source record: 43423

Try my webpage
loads of Sir Douglas Halls circuits
All good.
http://www.spontaflex.freeserve.co.uk/

Cheers
Geoff

JD UK <j_bot99@hotmail.com> wrote in message
news:6a6e1be9.0206101422.6470c5c5@posting.google.com...
> Hi all
>
> I have quite an extensive search on the net but didnt find alot of
> good results.
> Could you guys please let me know of some simple AM radio circuits
> just for a bit of listening normal broadcast radio nothing special.
> I'd also like some comments about your experiences with these simple
> type of circuits compared to the very elaborate ircuits. preferably I
> would like to listen with ehadphones or connect to an amp as I dont
> have a crystal earpiece at hand.
> thanks
> JD Bothma

361. Re: htx-400

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 20:56:25 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <jvtN8.5864$sC4.798197@news6-win.server.ntlworld.com>
Source record: 43424

> i have a radioshack htx-400 that i use for a simplex repeater beacon for a
> GEOCACHING display. i would like other non hams to be able to use this, is
> their anyway i can mod it for FRS,it covers on recieve 420-470, it
shouldnt
> be a problem, but i cant find a schematic to make it do what i want. the
> radio is under 500mw so i wont get in trouble for out of band type stuff
========
Steve , Like PMR446 (8 RF channels ,446.0025- 446.1025 MHz) in a number of
European countries , FRS involves type approved radios with a fixed antenna.
So homebrewing for these bands is prohibited.

Frank gm0csz.kn6wh@ntlworld.com

362. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 22:42:36 UTC
From: w_tom <w_tom1@usa.net>
Message-ID: <3D067CDC.B5482C8D@usa.net>
Source record: 43425

As noted previously, Marty's project was the perspective of this discussion. When simpler concepts of earth borne surge protection are understood, then maybe we are ready to discuss aircraft. The same principals apply to aircraft - only more complex. Forget nonsense about aircraft and lightning that only confuses with irrelevant information. However, that picture demonstrates that even flying aircraft must shunt a lightning strike to earth ground.

For those distracted by irrelevant posts, Marty asked about building a surge protector only using three MOVs. Marty learned that a surge protector is one component of a surge protection 'system'. But the most critical component in that 'system' - the most critical component in his schematic - is central earth ground. A surge protector located far from earth ground is all but disconnected from the rest of the 'system'. Surge protectors don't stop or absorb surges as promoted by urban myths.
A surge protector connects (shunts) a surge to earth ground - the most critical 'system' component. No earth ground means no effective surge protection. Earth ground was missing in Marty's original schematic.

Roy Lewallen wrote:
>
> So an aircraft has a path to "earth ground", or a "version of earth
> ground" even when it's struck by cloud-to-cloud lightning?
>
> Roy Lewallen, W7EL
>
> w_tom wrote:
> >
> > Lighting strikes to aircraft were clearly beyond the scope
> > of this discussion. However even aircraft have their versions
> > of earth ground.
> > http://lightning.pwr.eng.osaka-u.ac.jp/lrg/temp/plane.html
> > Incoming from the cloud on the nose. Outgoing to earth on the
> > tail. Even the aircraft had an earth ground during the
> > strike. Cloud to Ground lightning seeks earth ground - which
> > is fundamental to surge protection.
> >
> > We have an aircraft isolated from earth by a best insulator
> > - air - and still the aircraft ends up with a connection to
> > earth ground.
> >

> > Even aircraft are designed so that "a non-destructive path
> > to earth is
> > established." However the design is more complex for
> > aircraft. Earth ground point can vary with each strike - and
> > still damage must not result. Today, earth ground via the
> > tail. Tomorrow, the left wing. Same principals apply.
> > Divert the surge into a safe, non-destructive path.
> >
> > We don't try to stop, block, or absorb lightning. Always
> > provide lightning - the most common and typical surge - with a
> > non-destructive path to that ground. This even applies to a
> > scenario completely irrelevant to the topic - the airplane.
> >
> > Gary Coffman wrote:
> > > ...
> > > When lightning strikes an aircraft, there is no direct connection
> > > to Earth, and indeed the lightning may neither originate nor
> > > terminate at the Earth. It may be cloud to cloud lightning.

363. Paint Dots On Soldered Connections

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 23:05:08 UTC
From: donrm@soco.agilent.com
Message-ID: <1023836708.710699@cswreg.cos.agilent.com>
Source record: 43426

One of the best homebrewers I ever met was Ken Moore,
W6WIS (SK); he was a radio engineer for a major airlines
and I always admired his homebrew gear.

I never got around to asking him - he would put a little
dot of red paint on every point-to-point soldered connection -
has anyone ever seen this practice? Is it to indicate the
connection has been inspected?

Don K6LTS
donrm@soco.agilent.com

364. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 23:38:34 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D0689FA.3050300@eznec.com>
Source record: 43428

I take it then that the answer is "yes"?

Roy Lewallen, W7EL

w_tom wrote:
> As noted previously, Marty's project was the perspective of
> this discussion. When simpler concepts of earth borne surge
> protection are understood, then maybe we are ready to discuss
> aircraft. The same principals apply to aircraft - only more
> complex. Forget nonsense about aircraft and lightning that
> only confuses with irrelevant information. However, that
> picture demonstrates that even flying aircraft must shunt a
> lightning strike to earth ground.
>
> For those distracted by irrelevant posts, Marty asked about
> building a surge protector only using three MOVs. Marty
> learned that a surge protector is one component of a surge
> protection 'system'. But the most critical component in that
> 'system' - the most critical component in his schematic - is
> central earth ground. A surge protector located far from
> earth ground is all but disconnected from the rest of the
> 'system'. Surge protectors don't stop or absorb surges as
> promoted by urban myths.
> A surge protector connects (shunts) a surge to earth ground -
> the most critical 'system' component. No earth ground means
> no effective surge protection. Earth ground was missing in
> Marty's original schematic.
>
> Roy Lewallen wrote:
>
>>So an aircraft has a path to "earth ground", or a "version of earth
>>ground" even when it's struck by cloud-to-cloud lightning?
>>
>>Roy Lewallen, W7EL
>>
>>w_tom wrote:
>>
>>> Lighting strikes to aircraft were clearly beyond the scope
>>>of this discussion. However even aircraft have their versions
>>>of earth ground.
>>> http://lightning.pwr.eng.osaka-u.ac.jp/lrg/temp/plane.html
>>>Incoming from the cloud on the nose. Outgoing to earth on the
>>>tail. Even the aircraft had an earth ground during the
>>>strike. Cloud to Ground lightning seeks earth ground - which
>>>is fundamental to surge protection.

>>>
>>> We have an aircraft isolated from earth by a best insulator
>>>- air - and still the aircraft ends up with a connection to
>>>earth ground.
>>>
>>> Even aircraft are designed so that "a non-destructive path
>>>to earth is
>>>established." However the design is more complex for
>>>aircraft. Earth ground point can vary with each strike - and
>>>still damage must not result. Today, earth ground via the
>>>tail. Tomorrow, the left wing. Same principals apply.
>>>Divert the surge into a safe, non-destructive path.
>>>
>>> We don't try to stop, block, or absorb lightning. Always
>>>provide lightning - the most common and typical surge - with a
>>>non-destructive path to that ground. This even applies to a
>>>scenario completely irrelevant to the topic - the airplane.
>>>
>>>Gary Coffman wrote:
>>>
>>>>...
>>>>When lightning strikes an aircraft, there is no direct connection
>>>>to Earth, and indeed the lightning may neither originate nor
>>>>terminate at the Earth. It may be cloud to cloud lightning.
>>>

365. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 23:46:36 UTC
From: JD <dyson@jdyson.com>
Message-ID: <QKvN8.226$yK6.52564@news1.iquest.net>
Source record: 43427
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

"Sylvan Butler" <Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid> wrote in message
news:slrnagcnml.phm.Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid...
> On Tue, 11 Jun 2002 20:38:55 +0100 (BST), Dave Liquorice <newspam@howhill.com> wrote:
> > ratings... I don't *think* the US have RDS on their FM services, could
> > be wrong though.
>
> Yup. We have RDS. At least it is approved, but only 1/20 (or less)
> FM broadcast stations actually transmit it. And of those that do
> transmit RDS, most only send their call sign. Sometimes they
> transmit the time, but of the two stations I can receive that do,
> the time is almost always far off.
>
My car radio has RDS, and at least one of the local stations (in Indy),
provides information such as music title, etc. I really don't
see RDS as being all that big a deal, but certainly helps with
the identification of music.

John

366. Icom IC-2000H part and schematic info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 23:47:31 UTC
From: Randy & Cara randall <crrandal@earthlink.net>
Message-ID: <3D068CB1.4090601@earthlink.net>
Source record: 43429
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.misc

Hello. I need to ID a SMD part on my IC-2000H. It is on the front panel PCB, front side close to the power button 1/2" directly above the DS3 lamp. It is also slightly under the edge of the LCD panel. There are two sets of SMD pads one with a 1K (102) resistor on the left side and the other with the pads of the missing part. It is the same size as the 1K resistor and could be either a chip resistor or cap. Anyone have the service manual, schematic or have one they could look at and get me the info as to what part goes there? The radio received an impact and the little part fell off and is long gone. Also there is no part ID on the board at all. (i.e. R101, C201 etc.) I also need the pin out of the mic. connector.

Thank you,
Randy KB8ASO

367. Re: Paint Dots On Soldered Connections

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-11 23:48:50 UTC
From: Randy & Cara randall <crrandal@earthlink.net>
Message-ID: <3D068D16.2050602@earthlink.net>
Source record: 43430

Or tampered with!

Randy KB8ASO

donrm@soco.agilent.com wrote:

> Is it to indicate the
> connection has been inspected?
>
> Don K6LTS
> donrm@soco.agilent.com
>

368. Re: Paint Dots On Soldered Connections

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 00:02:33 UTC
From: Arthur Blumenfeld <ezrider@bestweb.net>
Message-ID: <3D068F99.A4BA3687@bestweb.net>
Source record: 43431

I think so. About 50 years ago I worked for University Loudspeakers and
we put a drop of Glyptol on every connection. Let's see what other
people have to say.

donrm@soco.agilent.com wrote:

> One of the best homebrewers I ever met was Ken Moore,
> W6WIS (SK); he was a radio engineer for a major airlines
> and I always admired his homebrew gear.
>
> I never got around to asking him - he would put a little
> dot of red paint on every point-to-point soldered connection -
> has anyone ever seen this practice? Is it to indicate the
> connection has been inspected?
>
> Don K6LTS
> donrm@soco.agilent.com

369. Re: Radar Detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 01:29:56 UTC
From: Sjouk/Bas <dbx@planet.nl>
Message-ID: <ae67sc$9ue$1@reader05.wxs.nl>
Source record: 43432

I can remember a simple circuit, with a double opamp in DIL type 14?? at
MiniCircuit on the Internet, do not know the addres but a Seach machine
will do the rest.
Greetings Bas.

"Doctor" <doctorwho20012001@yahoo.com> schreef in bericht
news:ae2m4nntr1@news.cowan.edu.au...
> Would any body know how to make a simple radar detector.
>
> Thanks Craig
>
>

370. Re: Paint Dots On Soldered Connections

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 01:39:06 UTC
From: Bill Turner <w7ti@dslextreme.com>
Message-ID: <h89dgu83luktk5re9pch675vsr7153qia7@4ax.com>
Source record: 43433

On Tue, 11 Jun 2002 23:05:08 +0000 (UTC), donrm@soco.agilent.com wrote:

>One of the best homebrewers I ever met was Ken Moore,
>W6WIS (SK); he was a radio engineer for a major airlines
>and I always admired his homebrew gear.
>
>I never got around to asking him - he would put a little
>dot of red paint on every point-to-point soldered connection -
>has anyone ever seen this practice? Is it to indicate the
>connection has been inspected?
>
>Don K6LTS
>donrm@soco.agilent.com

It was common practice with WW2 gear. Look at an ARC-5 or similar rig
and you'll see the glyptal dots all over. Presumably it was to indicate
inspection, although I've never had this confirmed by someone who
actually worked on the production lines.

With your friend however, painting his own solder joints seems rather
pointless except for the nostalgia, perhaps.

Bill, W7TI

371. Radio, Electronics Parts, and Accessories!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 03:56:31 UTC
From: Eugene <AEONS2C@concentric.net>
Message-ID: <ae6gpf$ab9@dispatch.concentric.net>
Source record: 43434

Update!

Radio, long forgotten sense the advent of the TV, and now the computer
was the original source of entertainment for Americans for almost 75 years;
besides the morning traffic report, the radio is an obsolete means of
communication, and the science of radio a dead language... Years wasted out
the window.

Hi

At the present time, I'm offer a look into the inner workings of an
integrated circuit... FREE. And that's not all, for just $2.98 you can
download the specifications of a 1MHz wide-band Radio Receiver.

You can even add-on a directional antenna.

--
Sincerely
Mr Ronald E Paul
www.aeonsciltd.net

372. Re: Radio, Electronics Parts, and Accessories!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 05:21:19 UTC
From: ".Bill :-)" <TheRealExray@netscape.net>
Message-ID: <3D06DA4F.130F44A6@netscape.net>
Source record: 43435

Eugene wrote:
>>
> At the present time, I'm offer a look into the inner workings of an
> integrated circuit... FREE. And that's not all, for just $2.98 you can
> download the specifications of a 1MHz wide-band Radio Receiver.
>
> You can even add-on a directional antenna.

Sounds like the specs for a cheapo AM-BC radio. You can buy a whole
radio for $2.95 instead of just the specs.
-:-(

373. Re: Paint Dots On Soldered Connections

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 06:04:25 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <JvBN8.137485$4i.12966041@bin2.nnrp.aus1.giganews.com>
Source record: 43436

When did Ken die? He was a friendly acquaintance. The last time I spoke with him he was around 90 or more.

I recall him recognizing me on the Queen Mary when I wanted to go into the radio room. It was off limits to the public but he invited me right in, very nice man. I don't know anyone who didn't like Ken. AAR9YV in Army MARS.

73, Bob K6DDX
ex- AAT9IM

374. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 07:06:46 UTC
From: "William A. Wetzel" <n6rky@circuitsandparts.com>
Message-ID: <aqCN8.1331$bf7.351@newsread1.prod.itd.earthlink.net>
Source record: 43437

I agree with Mark...

A kit such as that would (in fact) be very popular!

Best Wishes,
William A. Wetzel
http://www.circuitsandparts.com

Mark Hall <mark.hall34@verizon.net> wrote in message
news:3D034347.5FD70AAD@verizon.net...
> The VIA plots the SWR response of an antenna over Freq on the built in
LCD. The
> computer hook up is "After the Fact" for documenting the response. It
also
> measures complex impedance including sign. Probably could be built with
$45
> worth of parts, and the kit sold for ~$125 to $150. If properly designed,
> accurate, stable, Calculator sized, and didn't eat batteries, it would put
the
> MFJ 259B/269, Autek RF-1 and AEA Via out of business. If you need someone
to
> design the digital part (PIC programmer Expert here) I'll volunteer! I'm
not
> much good with RF design or complex impedance stuff, but from the A/D
converter
> back, I'm darned good.
>
> '73 KI4Z
>
> Pete Gianakopoulos wrote:
>
> > Hi folks,
> > I've been feeling creative lately, and have been thinking
about
> > developing a series of high performance kits, including receivers,
> > preselectors, etc. Let me know what any of you would like to see, and
maybe
> > I could develop your idea along. The approach that I am thinking of
taking
> > is to make the printed circuit board and the parts available, and leave
it
> > up to the builder for packaging in the enclosure. Interested parties can
> > e-mail me directly.
> > Thanks!
> >

> > Pete Gianakopoulos KE9OA
> > Chicago, Il.
>
>

375. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 08:06:21 UTC
From: David Entwistle <david@d-entwistle.fsnet.co.uk>
Message-ID: <S3rqWLA9DwB9Ewkv@d-entwistle.fsnet.co.uk>
Source record: 43438
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

In article <296ea75a.0206101950.4f5b50ff@posting.google.com>, David
<ddmga@yahoo.com> writes
>
>Any ideas or information is much appreciated!

http://www.arbitron.com/portable_people_meters/home.htm

follow the link to 'Papers and Presentations'.

--
David Entwistle

376. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 08:19:47 UTC
From: Dave Liquorice <newspam@howhill.com>
Message-ID: <nyyfbegfubjuvyypbz.gxlh0z0.pminews@snail.howhill.network>
Source record: 43350
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

On Tue, 11 Jun 2002 18:46:36 -0500, JD wrote:

> My car radio has RDS, and at least one of the local stations (in
> Indy), provides information such as music title, etc. I really
> don't see RDS as being all that big a deal, but certainly helps with
> the identification of music.

Apart from station name the other main use over here is Traffic News.
Listen to one station (from the same EON group) or listen to CD/Tape
and have any traffic news cut in when transmitted. Moderately useful,
the reliabilty of the actual information can be dubious and some
stations are notorious from "forgetting" to cancel the TA flag at the
end of the bulletin or keep it up untill the following advert
(unrelated in anyway even sponsership of the traffic news) has
finished.

I guess the EON only really works where you have many stations all
covering the same area and cooperating. Like the BBC with 4 national
FM Networks and many local stations.

--
Cheers newspam@howhill.com
Dave. Remove "spam" for valid email.

377. Re: Paint Dots On Soldered Connections

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 09:58:15 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <xbFN8.1128$69.47680@newsfep1-win.server.ntli.net>
Source record: 43439

> I never got around to asking him - he would put a little
> dot of red paint on every point-to-point soldered connection -
> has anyone ever seen this practice? Is it to indicate the
> connection has been inspected?
=======
Yes I have seen 'inspection paint markings' on some military equipment and
also on Collins Aircraft HF Automatic Tuners ,the latter sold in the mid 90s
by a UK surplus equipment trader.
These tuners had excellent components incl a 1000pF -3000V Jennings vacuum
cap (motorised) , a motorised roller inductor and a Jennings vacuum switch
,besides some other components.
At the time they were sold for equiv US $ 80.-

Frank gm0csz.kn6wh@ntlworld.com

378. Re: Radio, Electronics Parts, and Accessories!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 10:54:39 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <PLFN8.33324$LC3.2523231@bgtnsc04-news.ops.worldnet.att.net>
Source record: 43440

I am providing information, including circuit board layouts schematics, theory of operation, etc, for high performance receivers, noise sources, preselectors, and whatever else comes to mind free of charge. Why would you be charging the folks on a homebrew newsgroup for this?
On another note.....that bank in Nigeria scam has surfaced again. Yesterday, I received an e-mail about some fellow with 30 millions dollars who had died, having no next of kin. The originator of this e-mail told me that all I have to do is give him all of my bank account information, and that 5 million dollars would be transferred to my account. Be careful with this one!

Pete KE9OA

.Bill :-) <TheRealExray@netscape.net> wrote in message news:3D06DA4F.130F44A6@netscape.net...
> Eugene wrote:
> >>
> > At the present time, I'm offer a look into the inner workings of an
> > integrated circuit... FREE. And that's not all, for just $2.98 you can
> > download the specifications of a 1MHz wide-band Radio Receiver.
> >
> > You can even add-on a directional antenna.
>
> Sounds like the specs for a cheapo AM-BC radio. You can buy a whole
> radio for $2.95 instead of just the specs.
> -:-(
>

379. Homebrew RC equipment on ham bands?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 12:37:03 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0206120437.6ecb6bc4@posting.google.com>
Source record: 43441

I'm talking about controling model airplanes.

I haven't done RC in 20 years and my equipment is out of date.

The FCC regs, as far as I can see, does not restrict RC to any particular band. All they say is 1 w max output and (I assume) bandwidth restrictions.

Two of my units are on 6 meters, but I think this is just a voluntary band plan started back in the days when anything above 53.999 MHz required black magic.

What I am wondering is if anyone was homebrewing RC equipment for any higher bands, such as 430 MHz, 902 MHz or 1.2 GHz, or even higher? With PICs and all the neat RF components I think it would be relatively easy, compared to 40 or 50 years ago (when 6 Mtrs use started). What bands would you recommend, and what modulation mode? Some type of digital encoded PM?

Ok, if I was restriced to 6 Mtrs, any ideas on upgrading my 20 year old equipment to meet todays specs? Transmitter upgrade would be easy, compared to the receiver, but for my 100 inch sailplane there is plenty of room for a small homebrew receiver. What I have is a Heathkit 5 channel PWM analog, and a 2 channel Cannon (same format).

Jim
N8EE

380. ** FLEA at MIT ** Sunday June 16th Cambridge MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 13:39:16 UTC
From: w1gsl@mit.edu
Message-ID: <3d074f04$0$3944$b45e6eb0@senator-bedfellow.mit.edu>
Source record: 43442
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.info,sci.electronics.misc,ne.forsale,ne.general,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

This coming Sunday....

!! ** More Buyers PARKING available ** for details see
http://web.mit.edu/w1gsl/Public/flyer

*** !!!! In our Traditional GARAGE and lot !!!! ****
so come rain or shine or super heat the Flea is on !!!

********* $1 buyers discount with hardcopy of this notice ********

COMPUTERS - ELECTRONICS - HAM RADIO - COMPUTERS - ELECTRONICS - HAM RADIO

FLEA all SUMMER at MIT
Sunday June 16th 2002
9AM-2PM

Come to the city for a great flea - plenty of free parking.

MIT's electronics and ham radio flea will take
place on the third Sunday of each month this summer,
April thru October.

There is tailgate space for over 600 sellers and
free, off-street parking for >2000 cars!

Buyers admission is $5 (you get $1 off if
you're lucky enough to have a copy of our ad)
and sellers spaces are $20 for the first and
$15 for each additional at the gate.

The flea will be held at the corner of Albany and
Main streets in Cambridge; right in the Kendall
Square area from 9AM to 2PM, with sellers set-up
time starting at 7AM.

*** Attention Sellers ***
Prepaid vendors.. Season Pass or monthly,
will be admitted FIRST.
Separate lines will form prior to gate opening
for prepaid and nonprepaid vendors

!! RAIN or SHINE !! Have no fear of rain, a covered
well illuminated tailgate area is available for all
sellers (6'8" clearance).

Talk-in: 145.23- (PL 88.5) W1BOS/R and
W1XM/R-449.725/444.725 (PL 114.8/2A).

Sponsors: MIT Electronics Research Society
MIT UHF Repeater Association (W1XM)
MIT Radio Society (W1MX)
Harvard Wireless Club (W1AF)

For more info / advanced reservations 617 253 3776

********** $1 buyers discount with hard copy of this notice ***********

<<<<<<<<<<<<<<<<<<<<<<< cut here >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Mail the coupon below by the 5th of the month to be a Prepaid Vendor.

FLEA at MIT 2002 Rates

SELLERS

This year each vendor must have a Cambridge Vendor License.
We will do all the paperwork to get the one day Cambridge licenses.
To keep the spaces affordable we are discounting your first space.
To use your spaces the named vendor MUST be present.
Rates include one admission per space.

Season Pass $99 First Space - includes $70 for Cambridge Vendor Licenses
$70 additional spaces

Advance $17 First space - includes $10 Cambridge Vendor License
$12 Additional Spaces
Must be received by the 5th of the month.

Gate Admission $20 First Space - includes $10 Cambridge Vendor License
$15 Additional Spaces
Admission is after the prepaid vendors

Early Bird Buyer -Admission after the prepaid vendor line is admitted. ~ 7:15AM
** You may not sell. **
$15 per person at the gate.
$70 Season Early Bird Buyer

**************************** cut here ******************************

FLEA at MIT 2002 Advance Space Application

_____ 1st Season Pass @ $99 _____ Additional Season Spaces @ $70

____April ____May ____June ____ July ____Aug ___Sept ____Oct
@ $17 for the first each month + $12 each additional

_____ Season Early Bird Buyer @ $70 ** NB You may not sell. **

Name _____ Call _____ $ Included_____

Address _____ Phone _____ Make Check to
The MIT Radio Society

City _____ State _____ Zip _____ PO Box 397082
Cambridge MA 02139
E-mail _____

****
Steve Finberg W1GSL w1gsl@mit.edu
PO Box 82 MIT Br Cambridge MA 02139-7082 617 258 3754
****

381. Re: Paint Dots On Soldered Connections

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 14:32:27 UTC
From: Larry Gauthier - K8UT <larryg5099@chartermi.net>
Message-ID: <ugems46vmhfje7@corp.supernews.com>
Source record: 43443

Don,

Back in my Ham service days at Heath we used to drop glyptol into gear to prevent settings from changing due to vibration (on coil slugs and pots), and also on re-repairs where we were certain the equipment met specs when it left the shop, but would come back three weeks later... all out of alignment. If the gear came back a third time and the glyptol seals were broken, we would advise the tinkering ham that we would be happy to re-align his equipment for a fee, but the work would not be covered as a warranty repair. ;-)

-larry
K8UT

<donrm@soco.agilent.com> wrote in message
news:1023836708.710699@cswreg.cos.agilent.com...
> One of the best homebrewers I ever met was Ken Moore,
> W6WIS (SK); he was a radio engineer for a major airlines
> and I always admired his homebrew gear.
>
> I never got around to asking him - he would put a little
> dot of red paint on every point-to-point soldered connection -
> has anyone ever seen this practice? Is it to indicate the
> connection has been inspected?
>
> Don K6LTS
> donrm@soco.agilent.com

382. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 14:34:08 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <kdWKm4Igv1B9EwxZ@fslife.co.uk>
Source record: 43444

Pete,

Consider also making it cover the AM broadcast band!

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

383. 419 scam (was Re: Radio, Electronics Parts, and Accessories!)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 15:53:55 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D076E93.466CC72B@clifto.com>
Source record: 43446

Pete Gianakopoulos wrote:
> On another note.................that bank in Nigeria scam has surfaced
> again. Yesterday, I received an e-mail about some fellow with 30 millions
> dollars who had died, having no next of kin. The originator of this e-mail
> told me that all I have to do is give him all of my bank account
> information, and that 5 million dollars would be transferred to my account.
> Be careful with this one!

Be VERY careful. The eventual goal seems to be to lure you to Nigeria (or
other foreign country), and kill you after getting enough information to
take over all your assets. People HAVE been killed.

http://www.ustreas.gov/usss/alert419.htm
http://groups.google.com/groups?selm=sr15nt0gqaim887kqjqdb2kitajps8f688%404ax.com

--
If spammers weren't stupid, they'd be the idle rich instead of spammers.
- Morely Dotes

384. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 15:59:55 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D076FFB.31CF0288@clifto.com>
Source record: 43445

Tom Bruhns wrote:
> Like Roy, says, avoid Plexiglass -- that's acrylic: "polymethyl
> methacrylate" in most cases, I think. If that's right, its
> dissipation factor at 1MHz is around 0.014, compared with about .00007
> for pure polystyrene. Polycarbonate is only a little better than the
> acrylic.

Hm. Why polycarbonate capacitors, then? Perhaps high dielectric constant
for low-frequency use?

--
If spammers weren't stupid, they'd be the idle rich instead of spammers.
- Morely Dotes

385. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 16:43:07 UTC
From: nordland37@hotmail.com
Message-ID: <3d077213.3608118@news.freeserve.net>
Source record: 43347
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

On Tue, 11 Jun 2002 14:34:29 -0600, Sylvan Butler
<Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid> wrote:

>On Tue, 11 Jun 2002 20:38:55 +0100 (BST), Dave Liquorice <newspam@howhill.com> wrote:
>> ratings... I don't *think* the US have RDS on their FM services, could
>> be wrong though.
>
>Yup. We have RDS. At least it is approved, but only 1/20 (or less)
>FM broadcast stations actually transmit it. And of those that do
>transmit RDS, most only send their call sign. Sometimes they
>transmit the time, but of the two stations I can receive that do,
>the time is almost always far off.

Par for the course. America always different to everyone
else in the world.

I expect that, in the land of unregulated capitalism, it doesn't
make a profit, so there's no interest in it.

--

_____
Posted by J.

386. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 16:43:07 UTC
From: nordland37@hotmail.com
Message-ID: <3d0770ab.3248208@news.freeserve.net>
Source record: 43348
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

On Tue, 11 Jun 2002 18:46:36 -0500, "JD" <dyson@jdyson.com> wrote:

>
>"Sylvan Butler" <Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid> wrote in message
>news:slrnagcnml.phm.Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid...
>> On Tue, 11 Jun 2002 20:38:55 +0100 (BST), Dave Liquorice <newspam@howhill.com> wrote:
>> > ratings... I don't *think* the US have RDS on their FM services, could
>> > be wrong though.
>>
>> Yup. We have RDS. At least it is approved, but only 1/20 (or less)
>> FM broadcast stations actually transmit it. And of those that do
>> transmit RDS, most only send their call sign. Sometimes they
>> transmit the time, but of the two stations I can receive that do,
>> the time is almost always far off.
>>
>My car radio has RDS, and at least one of the local stations (in Indy),
>provides information such as music title, etc. I really don't
>see RDS as being all that big a deal, but certainly helps with
>the identification of music.

It does a lot more than that. Most modern car radios will search
for the best signal with the same ID. Some can search for stations
of a particular type, or find stations broadcasting traffic
information. Not to mention carrying the time which, (in Vauxhall
vehicles at least) keeps the clock to within about 1 second
of the UK primary standard.

--

____
Posted by J.

387. Re: Paint Dots On Soldered Connections

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 16:57:41 UTC
From: w4pqwhs@aol.com
Message-ID: <20020612125741.22194.00000449@mb-ci.aol.com>
Source record: 43349

>Subject: Paint Dots On Soldered Connections
>From: donrm@soco.agilent.com
...In the old days we always put a dot of paint on solder connections. it was to show that the connection had been inspected and to show if the connection had ever been disturbed ..and it looked professional..Harold W4PQW

388. Re: Old Q dope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 19:13:20 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D079D50.3060603@eznec.com>
Source record: 43351

High frequency Q isn't important for a lot of capacitor applications. More important in some appications are such things as temperature coefficient, reliability, physical size, self-healing properties, and nonlinear properties like "soak" (dielectric absorption) and "hook". Various dielectrics are better than others at one or more of these things, which is why they come in such a variety.

Polycarbonate has low dissipation factor (i.e., relatively high Q), low dielectric absorption, high insulation resistance (relatively small physical size), and a very low temperature coefficient.

Polystyrene, incidentally, is one of the options. But it melts at 90 degrees C, so can't be metallized, which requires temperatures higher than this.

Roy Lewallen, W7EL

Clifton T. Sharp Jr. wrote:
> Tom Bruhns wrote:
>
>>Like Roy, says, avoid Plexiglass -- that's acrylic: "polymethyl
>>methacrylate" in most cases, I think. If that's right, its
>>dissipation factor at 1MHz is around 0.014, compared with about .00007
>>for pure polystyrene. Polycarbonate is only a little better than the
>>acrylic.
>
>
> Hm. Why polycarbonate capacitors, then? Perhaps high dielectric constant
> for low-frequency use?
>

389. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 19:58:09 UTC
From: Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <ae894h$m90$1@woodrow.ucdavis.edu>
Source record: 43362
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

Bbbbbuuuuuzzzzzzzzzzzzzz.....!!!!!!!! (the error buzzer sounds)

You don't qualify your statement... A well done 4cx250 amplifier easily
meets FCC requirements. It's all about how you design and build it...

A little home work is always required....

skipp
http://sonic.ucdavis.edu

: In rec.radio.amateur.homebrew Uncle Peter
: <radioconnectionNO@cox.netspam> wrote:
: 4CX250 tubes aren't the best for IMD performance -- but, they are cheap
: and available.
: Pete

: "Skipp" <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
: news:adm4omoip9@woodrow.ucdavis.edu...
:>
:> In reference to another thread where someone asked questions about
:> converting an amplifier from 6LQ6 "sweep tubes" over to 4CX250B "ceramic"
:> tubes...
:>
:> Here's a web link to a few photos of a Dentron GLA-1000B which was
:> converted over to a pair of 4CX250's by an Italian Amateur Radio Operator.
:> I also have pictures of the same amplifier with some of the newer Russian
:> GU7 series tubes on board, but that's off topic. Anyway have a look if
:> your interested.
:>
:> cheers
:> skipp@pilotNOSPAMPLEASE.ucdavis.edu
:>
:> http://sonic.ucdavis.edu/dentron
:>
:>
:> The main page for the sonic server..
:>
:> http://sonic.ucdavis.edu
:> chow for now
:> skipp

390. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 20:00:03 UTC
From: la8ak.xnd@online.no
Message-ID: <3d07a741.135700128@news.online.no>
Source record: 43352
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

On Wed, 12 Jun 2002 16:43:07 GMT, nordland37@hotmail.com (J.) wrote:

>>My car radio has RDS, and at least one of the local stations (in Indy),
>>provides information such as music title, etc. I really don't
>>see RDS as being all that big a deal, but certainly helps with
>>the identification of music.
>
>It does a lot more than that. Most modern car radios will search
>for the best signal with the same ID. Some can search for stations
>of a particular type, or find stations broadcasting traffic
>information. Not to mention carrying the time which, (in Vauxhall
>vehicles at least) keeps the clock to within about 1 second
>of the UK primary standard.
>
and I believed the main reason for introducing RDS is to broadcast
important information about traffic jam and accidents, and
particularly warn when somebody drives the wrong way on a motorway.
It is a lot of such warnings in Germany. Receiving such messages will
interrupt playing cassettes or CD's

JM
--
remove ,xnd to reply

391. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-12 21:48:03 UTC
From: "John S. Dyson" <dyson@iquest.net>
Message-ID: <kgPN8.254$yK6.57657@news1.iquest.net>
Source record: 43353
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

"J." <nordland37@hotmail.com> wrote in message
news:3d0770ab.3248208@news.freeserve.net...
> On Tue, 11 Jun 2002 18:46:36 -0500, "JD" <dyson@jdyson.com> wrote:
>
> >
> >"Sylvan Butler" <Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid> wrote in
message
> >news:slrnagcnml.phm.Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid...
> >> On Tue, 11 Jun 2002 20:38:55 +0100 (BST), Dave Liquorice
<newspam@howhill.com> wrote:
> >> > ratings... I don't *think* the US have RDS on their FM services, could
> >> > be wrong though.
> >>
> >> Yup. We have RDS. At least it is approved, but only 1/20 (or less)
> >> FM broadcast stations actually transmit it. And of those that do
> >> transmit RDS, most only send their call sign. Sometimes they
> >> transmit the time, but of the two stations I can receive that do,
> >> the time is almost always far off.
> >>
> >My car radio has RDS, and at least one of the local stations (in Indy),
> >provides information such as music title, etc. I really don't
> >see RDS as being all that big a deal, but certainly helps with
> >the identification of music.
>
> It does a lot more than that. Most modern car radios will search
> for the best signal with the same ID.
>
In the US, there are few cases where multiple stations use the same
'ID.' For traffic jams, etc, cell/PDA based schemes are better.

OTA radio in the US is not a growth market :-).

John

392. Maxon HCB-10C mod?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 01:07:09 UTC
From: Matt Patterson <mattpatt@1starnet.com>
Message-ID: <1fSN8.148115$4i.13528925@bin2.nnrp.aus1.giganews.com>
Source record: 43354

Hi all,

I'm thinking about homebrewing a 10 meter beacon. I have a Maxon HCB-10C handheld cb that I'd like to try and modify for 10 meter and use it as my transmitter. I've looked on the internet and can't find any mods related to this radio. I was wondering if someone might could point me in the right direction.

Thanks
Matt
KC5YTV / AE

393. Bowick RF Circuit Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 05:09:14 UTC
From: Mike <mikethemartian@mindspring.com>
Message-ID: <3D0828FA.9070401@mindspring.com>
Source record: 43355

I am currently reading Mr. Bowick's text RF Circuit Design. Although I agree with the general consensus that it is a fine text, I am getting some different results than some of his example calculations. Does anyone know of any possible errors in the text?

Mike

394. Re: Bowick RF Circuit Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 05:38:12 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <ae9b43kbg2@paris.btinternet.com>
Source record: 43356

"Mike" <mikethemartian@mindspring.com> wrote in message
news:3D0828FA.9070401@mindspring.com...
> I am currently reading Mr. Bowick's text RF Circuit Design. Although I
> agree with the general consensus that it is a fine text, I am getting
> some different results than some of his example calculations. Does
> anyone know of any possible errors in the text?
>

Which calculations?

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.com
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

395. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 06:12:11 UTC
From: w9wi@linux1.localdomain
Message-ID: <slrnaggejo.nl2.w9wi@linux1.localdomain>
Source record: 43357
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

>>It does a lot more than that. Most modern car radios will search
>>for the best signal with the same ID. Some can search for stations
>>of a particular type, or find stations broadcasting traffic
>>information. Not to mention carrying the time which, (in Vauxhall
>>vehicles at least) keeps the clock to within about 1 second
>>of the UK primary standard.

Here in the USA a lot of that would be considered "poison" by station management.

A USA broadcasting license conveys authority for only one transmitter. Additional medium- and high-powered transmitters can be licensed, but are legally considered separate stations. They must compete with other applicants for the same frequency. Also, until very recently, a given company could not own multiple transmitters with overlapping coverage. Low-power (less than 250w ERP) transmitters are easier to license, but until recently they were limited to 10w, and still must compete for frequencies.

The result is that USA stations generally run as much power as possible at a single transmitter, rather than using multiple lower-powered transmitters.

So the ability to search for the best signal is usually useless, there is only one frequency for a given program.

Searching for a particular type of programming also probably wouldn't be very popular with management. There are three country-music FM stations here in Nashville, owned by three different companies. Others at the fringe of the city (where motorists would be going when the local transmitters fade out) are owned by several more companies.

Gaylord Entertainment sure doesn't want a radio tuned to 95.5 to suddenly jump to Clear Channel's 97.9 when the car goes around the wrong side of a hill.

Similarly, Clear Channel doesn't want one of their 97.9 listeners dragged to 103.3 when Cromwell's station decides to do a traffic report. (especially given the cited problems with European stations being slow to turn off the traffic flag. USA stations have been known to pull similar tricks with an emergency-alerting system called "EAS".)

==========

All that said, there *is* a lot to be said for EAS. I think radiotext may be the killer application here in the USA. In Canada there *are* large multifrequency networks (especially run by the CBC) which *could* take advantage of alternate-frequency information. And even in the States,

the use of multiple frequencies is growing.

Clear Channel, the largest station owner in the USA, has recently installed RDS equipment on their stations in one market as an experiment. If it succeeds one might expect major growth in RDS use in America.

==========

Unfortunately the other problem is getting parts. A few of us looked into building homemade RDS decoders. The standard chips are only available (in the U.S.) in minimum order of 50 - far more than interested hobbyists in America would ever use. Likewise for the crystals. Ended up being cheaper & easier to import some Conrad units from Germany. (unfortunately the PTY codes are different in America, we use a conversion chart...)
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

396. Calling For Simple Circuits For Student Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 08:20:20 UTC
From: "William A. Wetzel" <n6rky@circuitsandparts.com>
Message-ID: <8BYN8.3$TE.0@newsread1.prod.itd.earthlink.net>
Source record: 43358

For all the experimenters at large:

I am an electronics distributor during the day, and a part-time college instructor at night. Most electronics stores do not serve students and/or electronics enthusiasts very well in my area. I am setting out to change that (at least in a small way) over the summer.

I am looking for nice simple projects for students to build, especially those which are Amateur Radio related. Besides drawing some from the ARRL publications, I'm hoping to incorporate many from the "traditional tinkerers" at large. If you have a special project that you are especially proud of, which you want to live on... I would be most happy to hear from you.

Best Wishes,
& 73 de N6RKY
--
William A. Wetzel
http://www.circuitsandparts.com

397. LMX2305 PLL and AD9835 DDS prototyping adaptor PCBs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 09:23:43 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <ae9oau$k6m$1@helle.btinternet.com>
Source record: 43359

I've designed a simple prototyping adaptor (about 1" by .75") for the Nat. Semi. LMX2305 PLL chip (0.65 mm lead spacing),that can, with care, be made at home. The leads are brought out to a 20-pin 0.6" DIL pattern, and there are pads for two sets of 0805 decoupling capacitors. Double-ended pins may be inserted to produce a module that can used in an easy to make home-made PC. I'm in the process of building a PLL synthesiser with this module covering
about 50 MHz to 80 MHz using 'ugly' construction on a small piece of PCB material. For initial testing it will be programmed via the PC printer port.

I've also done a similar one for the ADI AD9835 DDS chip.

Details for both PCBs, including artwork files that can be printed on a LaserJet printer are here:

http://www.geocities.com/leon_heller/adaptors.html

I can get some (proper) PCBs made, if there is enough interest. Please email me for details.

73, Leon
--
Leon Heller, G1HSM leon_heller@hotmail.com
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

398. Re: Calling For Simple Circuits For Student Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 09:47:30 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <ae9pni$523gm$1@ID-61331.news.dfncis.de>
Source record: 43360

You might like some of my stuff, follow the URL below for my page

---
Hans Summers, G0UPL
http://www.HansSummers.Com

"William A. Wetzel" <n6rky@circuitsandparts.com> wrote in message
news:8BYN8.3$TE.0@newsread1.prod.itd.earthlink.net...
> For all the experimenters at large:
>
> I am an electronics distributor during the day, and a part-time college
> instructor at night. Most electronics stores do not serve students and/or
> electronics enthusiasts very well in my area. I am setting out to change
> that (at least in a small way) over the summer.
>
> I am looking for nice simple projects for students to build, especially
> those which are Amateur Radio related. Besides drawing some from the ARRL
> publications, I'm hoping to incorporate many from the "traditional
> tinkerers" at large. If you have a special project that you are especially
> proud of, which you want to live on... I would be most happy to hear from
> you.
>
> Best Wishes,
> & 73 de N6RKY
> --
> William A. Wetzel
> http://www.circuitsandparts.com
>
>
>

399. ARRL/Miracle whip

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 09:50:35 UTC
From: Guy Austin <guy.austin@unn.ac.uk>
Message-ID: <ae9pr1$sd7$1@dax.unn.ac.uk>
Source record: 43361

I would like to download
http://www.arrl.org/members-only/tis/info/pdf/0107032.pdf
a description of how to build the miracle whip.
But this is on the ARRL members only section of the web site,
If someone has a copy of this file, will they please send me a copy.

Cheers Guy

400. Re: Calling For Simple Circuits For Student Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 13:45:28 UTC
From: wb3fup@webtv.net
Message-ID: <16356-3D08A1F8-105@storefull-2335.public.lawson.webtv.net>
Source record: 43364

Go to Radio Shack, they carry books called "Engineer's Mini Notebooks"
that are full of what you are looking for. They used to be limited to a
single subject (555 timers, for example) but now two and three of the
phamplets have been combined into one larger book.

73 es cul

wb3fup
a salty bear
==========

Calling For Simple Circuits For Student Projects

Group: rec.radio.amateur.homebrew Date: Thu, Jun 13, 2002, 8:20am
(EDT+4) From: n6rky@circuitsandparts.com (William A. Wetzel)
For all the experimenters at large:
I am an electronics distributor during the day, and a part-time college
instructor at night. Most electronics stores do not serve students
and/or electronics enthusiasts very well in my area. I am setting out to
change that (at least in a small way) over the summer.
I am looking for nice simple projects for students to build, especially
those which are Amateur Radio related. Besides drawing some from the
ARRL publications, I'm hoping to incorporate many from the "traditional
tinkerers" at large. If you have a special project that you are
especially proud of, which you want to live on... I would be most happy
to hear from you.
Best Wishes,
& 73 de N6RKY
--
William A. Wetzel
http://www.circuitsandparts.com

401. Re: Question about large variable capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 13:49:54 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3C4ECD5E.DAA03340@att.net>
Source record: 43363

Myron A Calhoun wrote:

> >>>Hey, I got this very large variable cap out of a ham transmitter, I've
> >>>never actually seen one this big in person, it was out of a 10 meter ham
> >>>transmitter....
>
> >>I find it VERY hard to believe that a variable capacitor from a
> >>TEN meter (28 MHz) transmitter would (could?) be very big at all!
>
> >It has two 833a tubes connected with it, if you don't believe me, I posted
> >to find help for this not to try to be discredited, Barker and Williamson
> >was no help, and they even manufactured it.
>
> I had no intention of discrediting you. I thought you asked for help in
> identifying a "very large" variable capacitor, and I just tried to indicate
> (apparently poorly) that a capacitor used in a 10-meter xmtr might not be
> all that large.
>
> Now that you've given the additional information that the xmtr has two
> 833A's, a tube manual shows that their maximum frequency for full rated
> is 30 MHz, so 10 meters is at least a possibility. The manual also shows
> typical plate voltages of 2000 (telegraphy) and 2500 (telephony), so
> capacitor spacing would need to be considerable (maybe a quarter-inch
> between a pair of adjacent stator plates?). But capacitances of 50-100 pf
> fall right in the center of what might be used at 28 MHz, and variable
> capacitors of that size and spacing are not what I'd consider to be
> "very large". (There's always the chance, however, that what **I**
> think of as "very large" and what you think of as "very large" are
> entirely different beasts!-)
>
> So no "put down" was intended.

Evidently "large" means different things to you and the original poster. He means physical size. I have a couple "large" ones, too, but small in capicity value.
Dick

402. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 15:12:47 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3C4EE0CA.7A97334B@att.net>
Source record: 43365

w_tom wrote:

> To say an MOV absorbs surge energy is to say wire protects
> by absorbing a surge.

Any "short circuit" absorbs energy. If enough energy transfers, the circuit itself goes up in smoke.

> In a properly sized surge protector,
> many times more energy is diverted through a shunt mode surge
> protector than is absorbed.

Indeed, and in so doing, by acting essentially as a short circuit across the voltage input terminals of the device being protected, it prevents the voltage energy being shunted from raising the input voltage on the protected device to destructive levels. What is it about this fact that makes it impossible for you to understand?

No one questions that a surge protector shunts to -or toward- ground the destructive energy involved. But to advise people to NOT use MOV surge suppressors is to advise them to just skip a very important level of protection. They DO work. Many times I've had the experience of being glad I had one installed when I had to replace it because *it* was destroyed instead of the protected device, after it did its job.

Dick

403. Getting Pops on T/R

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 15:53:38 UTC
From: w.harbourjr@worldnet.att.net
Message-ID: <deafe3d9.0206130753.55de7959@posting.google.com>
Source record: 43366

I've built a simple superhet xcvr that uses a MPF102 audio mute and a t/r switching scheme like the one on the SW+ series of radios. I'm getting a very annoying pop everytime the rig is keyed. I've upped the value of the cap at the gate of the MPF102 to .22uF (instead of the customary .1uF) and it helped a little.

I'm thinking that the choke to the final preamp might be the culprit (it's keyed with a PNP transistor). I've heard of putting a zener at the choke to prevent the collapsing magnetic field from causing a back voltage. Could that collapsing field cause the pop??

Does anyone have an idea where to look to solve the popping?

Tnx,

Bill
KD4PWB

404. Re: Getting Pops on T/R

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 16:11:22 UTC
From: Bill Turner <w7ti@dslextreme.com>
Message-ID: <8jghgug3lnlcd6gr9t76noe4fkps3a3v1q@4ax.com>
Source record: 43367

On 13 Jun 2002 08:53:38 -0700, w.harbourjr@worldnet.att.net (Bill Harbour) wrote:

>I've built a simple superhet xcvr that uses a MPF102 audio mute and a
>t/r switching scheme like the one on the SW+ series of radios. I'm
>getting a very annoying pop everytime the rig is keyed. I've upped
>the value of the cap at the gate of the MPF102 to .22uF (instead of
>the customary .1uF) and it helped a little.
>
>I'm thinking that the choke to the final preamp might be the culprit
>(it's keyed with a PNP transistor). I've heard of putting a zener at
>the choke to prevent the collapsing magnetic field from causing a back
>voltage. Could that collapsing field cause the pop??
>
>Does anyone have an idea where to look to solve the popping?

Is this a short, high frequency "pop" or a lower frequency "thump"?

Without seeing the circuit diagram I'm only guessing, but if it's a "thump" you may have too much low frequency response in the receiver. Try reducing the value of one or more coupling capacitors between stages or between the final stage and the speaker/headphones.

Poor power supply regulation can cause this problem. If possible, try running the receiver section from a separate supply and see if the problem goes away. If it does, you may want to install a separate regulator IC, either for the receiver alone or for both TX and RX.

Bill, W7TI

Bill, W7TI

405. FS: Electronic Universal Vade-Mecum

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 16:20:59 UTC
From: arnoldg@c2i.net
Message-ID: <3d08c544.40206982@news1.c2i.net>
Source record: 43368
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Hello,

This great valve databook is still in stock, but it will now been soon
out of print and difficult to obtain. 660 pages with comprehensive
data on nearly 6000 types - European, Russian and American
manufacture. A lot of curves and operation conditions on each types.
This is a very large book of 29 x 21cm and the weight is 2.5kg
You can find more information and pictures of it at my web site
www.demostenes.no

Regards,

Arnold Goks�yr
DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://www.demostenes.no

Thousands of different valves in stock as well as
sockets,transformers,books,caps,resistors and
other components. Web site is updated every week.
You can order on-line.

406. Re: 419 scam (was Re: Radio, Electronics Parts, and Accessories!)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 20:13:01 UTC
From: Mike Monett <mrmonett@CutHERE.yahoo.com>
Message-ID: <3D08FCCD.3520@CutHERE.yahoo.com>
Source record: 43369

Clifton T. Sharp Jr. wrote:

[...]

> Be VERY careful. The eventual goal seems to be to lure you to Nigeria (or
> other foreign country), and kill you after getting enough information to
> take over all your assets. People HAVE been killed.
>
> http://www.ustreas.gov/usss/alert419.htm
> http://groups.google.com/groups?selm=sr15nt0gqaim887kqjqdb2kitajps8f688%404ax.com

The caution note is well deserved. However, there are a few amusing cases where the tables were turned and the scammers got scammed:

http://www.scamorama.com/threebucks.html
http://www.scamorama.com/smurf.html

Cheers, Mike

407. FS: (12)-Millen Ceramic 2-position screw Terminal strips(?) @$12 ppd!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 20:46:30 UTC
From: rlucch2098@aol.com
Message-ID: <20020613164630.08349.00001309@mb-cd.aol.com>
Source record: 43370

Hi Fellas;
I have for SALE:
12 NOS Millen 2-position ceramic terminal strips, like those used on the back
of receivers for speakers, ants. etc!
Price is $12.00ppd
See pic>>
http://www.myradioroom.com/millenfeedthru.jpg
Thanks es 73....Rich WA2RQY (1961)
RLUCCH2098@aol.com
"Keep those heaters on"

408. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 21:28:43 UTC
From: nordland37@hotmail.com
Message-ID: <3d090427.996773@news.freeserve.net>
Source record: 43371
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

On Wed, 12 Jun 2002 20:00:03 GMT, la8ak.xnd@online.no (J M Noeding) wrote:

>On Wed, 12 Jun 2002 16:43:07 GMT, nordland37@hotmail.com (J.) wrote:
>
>
>>>My car radio has RDS, and at least one of the local stations (in Indy),
>>>provides information such as music title, etc. I really don't
>>>see RDS as being all that big a deal, but certainly helps with
>>>the identification of music.
>>
>>It does a lot more than that. Most modern car radios will search
>>for the best signal with the same ID. Some can search for stations
>>of a particular type, or find stations broadcasting traffic
>>information. Not to mention carrying the time which, (in Vauxhall
>>vehicles at least) keeps the clock to within about 1 second
>>of the UK primary standard.
>>
>and I believed the main reason for introducing RDS is to broadcast
>important information about traffic jam and accidents, and
>particularly warn when somebody drives the wrong way on a motorway.
>It is a lot of such warnings in Germany. Receiving such messages will
>interrupt playing cassettes or CD's

Are you confusing RDS with Trafficmaster (Oracle)?

The 'TA' (Traffic Announcement) system on RDS works something like:

Participating stations set a flag on their RDS when (and only when)
they have a traffic announcement to make.

RDS scans all the stations it can hear for this flag.

When it finds one, it switches to the station with the TA flag
from whatever one may be listening to.

The flag is reset after the traffic broadcast and the RDS re-tunes
to the original station/tape/CD etc.

You can activate it or deactivate it as desired.

--

_____
Posted by J.

409. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 21:28:44 UTC
From: nordland37@hotmail.com
Message-ID: <3d090563.1312897@news.freeserve.net>
Source record: 43372
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

On Thu, 13 Jun 2002 06:12:11 GMT, w9wi@linux1.localdomain (Doug Smith)
wrote:

>>>It does a lot more than that. Most modern car radios will search
>>>for the best signal with the same ID. Some can search for stations
>>>of a particular type, or find stations broadcasting traffic
>>>information. Not to mention carrying the time which, (in Vauxhall
>>>vehicles at least) keeps the clock to within about 1 second
>>>of the UK primary standard.
>
>Here in the USA a lot of that would be considered "poison" by station
>management.
>
>A USA broadcasting license conveys authority for only one transmitter.
>Additional medium- and high-powered transmitters can be licensed, but are
>legally considered separate stations. They must compete with other
>applicants for the same frequency. Also, until very recently, a given
>company could not own multiple transmitters with overlapping coverage.
>Low-power (less than 250w ERP) transmitters are easier to license, but until
>recently they were limited to 10w, and still must compete for frequencies.

There's only one transmitter involved in RDS. It's impressed on the
single FM signal - only one transmitter needed.

>The result is that USA stations generally run as much power as possible at a
>single transmitter, rather than using multiple lower-powered transmitters.
>
>So the ability to search for the best signal is usually useless, there is
>only one frequency for a given program.

I see what you are getting at. Here we have 4 national, advert-free,
licence-fee financed programmes. This requires many FM transmitters
throughout the country carrying the same programming. So the system
works well.

>Searching for a particular type of programming also probably wouldn't be
>very popular with management. There are three country-music FM stations
>here in Nashville, owned by three different companies. Others at the fringe
>of the city (where motorists would be going when the local transmitters fade
>out) are owned by several more companies.
>
>Gaylord Entertainment sure doesn't want a radio tuned to 95.5 to suddenly
>jump to Clear Channel's 97.9 when the car goes around the wrong side of a
>hill.
>

>Similarly, Clear Channel doesn't want one of their 97.9 listeners dragged to
>103.3 when Cromwell's station decides to do a traffic report. (especially
>given the cited problems with European stations being slow to turn off the
>traffic flag.

Yes, but you only have to push the 'TA' button to clear it or push
the button of the station you were listening to if you don't want the
information, or if they keep the flag on too long. With steering-wheel
mounted radio controls, it's easily done.

>USA stations have been known to pull similar tricks with an
>emergency-alerting system called "EAS".)

This is what happens when you have nothing but commercial
stations. Horrible!

--

_____
Posted by J.

410. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 22:59:15 UTC
From: Ian Robert Walker <Ian@newbrain.demon.co.uk>
Message-ID: <2BK6iWDDPSC9Ewat@newbrain.demon.co.uk>
Source record: 43373
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

In article <3d090427.996773@news.freeserve.net>, J.
<nordland37@hotmail.com> writes
>On Wed, 12 Jun 2002 20:00:03 GMT, la8ak.xnd@online.no (J M Noeding) wrote:
>
>>On Wed, 12 Jun 2002 16:43:07 GMT, nordland37@hotmail.com (J.) wrote:
>>
>>
>>>>My car radio has RDS, and at least one of the local stations (in Indy),
>>>>provides information such as music title, etc. I really don't
>>>>see RDS as being all that big a deal, but certainly helps with
>>>>the identification of music.
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>>>It does a lot more than that. Most modern car radios will search
>>>for the best signal with the same ID. Some can search for stations
>>>of a particular type, or find stations broadcasting traffic
>>>information. Not to mention carrying the time which, (in Vauxhall
>>>vehicles at least) keeps the clock to within about 1 second
>>>of the UK primary standard.
>>>
>>and I believed the main reason for introducing RDS is to broadcast
>>important information about traffic jam and accidents, and
>>particularly warn when somebody drives the wrong way on a motorway.
>>It is a lot of such warnings in Germany. Receiving such messages will
>>interrupt playing cassettes or CD's
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>Are you confusing RDS with Trafficmaster (Oracle)?
>
>The 'TA' (Traffic Announcement) system on RDS works something like:
>
> Participating stations set a flag on their RDS when (and only when)
> they have a traffic announcement to make.
>
> RDS scans all the stations it can hear for this flag.
>
> When it finds one, it switches to the station with the TA flag
> from whatever one may be listening to.
>
> The flag is reset after the traffic broadcast and the RDS re-tunes
> to the original station/tape/CD etc.

Should be reset, not is reset.

--
Ian Robert Walker

411. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 23:02:30 UTC
From: Ian Robert Walker <Ian@newbrain.demon.co.uk>
Message-ID: <iRL$2yDGSSC9Ew5m@newbrain.demon.co.uk>
Source record: 43378
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

In article <3d090563.1312897@news.freeserve.net>, J.
<nordland37@hotmail.com> writes
>On Thu, 13 Jun 2002 06:12:11 GMT, w9wi@linux1.localdomain (Doug Smith)
>wrote:
>
>>>>It does a lot more than that. Most modern car radios will search
>>>>for the best signal with the same ID. Some can search for stations
>>>>of a particular type, or find stations broadcasting traffic
>>>>information. Not to mention carrying the time which, (in Vauxhall
>>>>vehicles at least) keeps the clock to within about 1 second
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>>company could not own multiple transmitters with overlapping coverage.
>>Low-power (less than 250w ERP) transmitters are easier to license, but until
>>recently they were limited to 10w, and still must compete for frequencies.
>
>There's only one transmitter involved in RDS. It's impressed on the
>single FM signal - only one transmitter needed.

Untrue, there will be many transmitters broadcasting RDS.

--
Ian Robert Walker

412. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 23:33:31 UTC
From: Dave Liquorice <newspam@howhill.com>
Message-ID: <nyyfbegfubjuvyypbz.gxohzv0.pminews@snail.howhill.network>
Source record: 43374
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

On Thu, 13 Jun 2002 06:12:11 GMT, Doug Smith wrote:

> Clear Channel, the largest station owner in the USA, has recently
> installed RDS equipment on their stations in one market as an
> experiment.

So Clear Channel can keep people tuned to (different) Clear Channel stations as they move about, not randomly wander off to possibly (shock horror) a competitors station. This already happens over here with in the commercial stations owned by a group. Tune to a GWR group station and as you move out of range you'll be tuned to the next GWR group station, if there is one.

--
Cheers newspam@howhill.com
Dave. Remove "spam" for valid email.

413. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-13 23:43:49 UTC
From: Dave Liquorice <newspam@howhill.com>
Message-ID: <nyyfbegfubjuvyypbz.gxoih11.pminews@snail.howhill.network>
Source record: 43375
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

On Thu, 13 Jun 2002 21:28:43 GMT, J. wrote:

> Are you confusing RDS with Trafficmaster (Oracle)?

Trafficmaster is completely seperate and up to the minute (well few minutes) accurate. Radio travel bulletins can be as much use as a chocolate teapot. Which is why I gave up on RDS TAs and got a TrafficMaster YQ unit...

> The 'TA' (Traffic Announcement) system on RDS works something like:

There are really two systems, the basic and the EON (Enhanced Other Network).

On the basic system you can listen to a single radio station and only get TAs from that station. These will interupt the tape/CD you are listening to or raise the radio volume from zero to a preset level. The station simply raises it's TA flag at the appropiate time.

EON the station signals a central point that it is making a TA and this is the signaled back to all other stations on the Other Network. So you can listen to any (in the case of the UK. national) station[*] and get all TAs from many other (local) stations within range.

[*] Or listen to a tape/CD with the radio part tuned to a national station.

--
Cheers newspam@howhill.com
Dave. Remove "spam" for valid email.

414. radio repairer wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 01:09:44 UTC
From: vshah101@aol.com
Message-ID: <20020613210944.13970.00001348@mb-df.aol.com>
Source record: 43376

I have several handheld radios that need repairing. I can take these home for repair. I need to know within 3 weeks (but probably 2 weeks), or the job will be given to someone else. Also,you must be in Massachusetts.
Ironically, since I brought it up, now they want the repairs sooner. So, the sooner I can
find some help, the better.

Anyone with knowledge of radio electronics willing to do radio repairs? If you have the experience, but are not willing to do the repairs, please contact me as well. I would be able to compensate you for a 1 day appearance. Please email me if you want more details about this. Also, anyone that is just interested in working with these radios is welcome as well.

If you, or if you know someone that may be interested, please email me. My email address is vshah101@aol.com in case you are interested.

415. Re: radio repairer wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 02:45:42 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3D0958D6.DEAA7C92@mfi.net>
Source record: 43377

Vshah101 wrote:
>
> I have several handheld radios that need repairing. I can take these
> home for repair. I need to know within 3 weeks (but probably 2
> weeks), or the job will be given to someone else. Also,you must be in
> Massachusetts.
> Ironically, since I brought it up, now they want the repairs sooner. So, the
> sooner I can
> find some help, the better.
>
> Anyone with knowledge of radio electronics willing to do radio
> repairs? If you have the experience, but are not willing to do the
> repairs, please contact me as well. I would be able to compensate you
> for a 1 day appearance. Please email me if you want more details
> about this. Also, anyone that is just interested in working with
> these radios is welcome as well.
>
> If you, or if you know someone that may be interested, please email
> me. My email address is vshah101@aol.com in case you are interested.

It would help if you posted the brand and model numbers.

416. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 06:00:07 UTC
From: w_tom <w_tom1@usa.net>
Message-ID: <3D098667.7C0573E8@usa.net>
Source record: 43379

The only short circuit that absorbs energy is one that really is not a short circuit. Ideal short circuits absorb no energy. Where did you take your EE training? Imperfect short circuits only absorb a minor percentage of energy. If the purpose of short circuits were to absorb energy, then the purpose of all electric company wires is also to absorb energy. Obviously not. Ideal short circuits absorb no energy. Better, real world short circuits absorb all but no energy.

To say the purpose of a short circuit is to absorb energy is to not understand basic EE principals and therefore to not understand how surge protection works.

Like the imperfect short circuit, the MOV does absorb a minor percentage of energy. But absorbing energy is not its purpose. The purpose of MOVs and other shunt mode surge protectors is to shunt - transfer energy elsewhere.

If an MOV shunts a common mode surge across wires to an appliance, then the adjacent MOV has only provided that common mode surge with more paths to earth destructively through an appliance.

> What is it about this fact that makes it impossible
> for you to understand?
Again you are describing a differential mode surge. Why to you also have a problem with this basic EE concept? Why do you confuse normal mode vs longitudinal mode transients as if they were same?

Put all MOVs across all the AC inputs to an appliance - and the common mode surge will simply fly past them on its way to earth ground through the appliance. Even better, short all the AC wires together with wire. Still the common mode surge will pass by on its way, destructively, through appliance to earth ground. Somehow you keep thinking that a common mode transient is just like a differential mode transient.

If that MOV worked across AC inputs to appliances, then why do appliance manufacturers not install them? Answer to that question is essential for your claims of protection to have any credibility. Those MOVs are not installed inside appliances because they are not effective when too close to transistors and too far from earth ground. Even your own example demonstrate no effective surge protection. All that

was proven is a grossly undersized surge protectors was
damaged by a surge too small to even damage the appliance.

If your surge protector across AC inputs worked, then in
engineering terms, where did the surge go? What was the
incoming path and what was the outgoing path? A 100 amp
common mode surge approaches the appliance. What does that
MOV across the AC inputs do? This is basic engineering. To
say that a surge protector worked demands that you can say
why? What was the incoming and outgoing path of that surge?

Dick Carroll wrote:
>
> w_tom wrote:
>
> > To say an MOV absorbs surge energy is to say wire protects
> > by absorbing a surge.
>
> Any "short circuit" absorbs energy. If enough energy transfers, the
> circuit itself goes up in smoke.
>
> > In a properly sized surge protector,
> > many times more energy is diverted through a shunt mode surge
> > protector than is absorbed.
>
> Indeed, and in so doing, by acting essentially as a short circuit
> across the voltage input terminals of the device being protected, it
> prevents the voltage energy being shunted from raising the input
> voltage on the protected device to destructive levels. What is it
> about this fact that makes it impossible for you to understand?
>
> No one questions that a surge protector shunts to -or toward- ground
> the destructive energy involved. But to advise people to NOT use MOV
> surge suppressors is to advise them to just skip a very important
> level of protection. They DO work. Many times I've had the experience
> of being glad I had one installed when I had to replace it because
> *it* was destroyed instead of the protected device, after it did its
> job.
>
> Dick

417. Re: Bowick RF Circuit Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 06:23:19 UTC
From: Mike <mikethemartian@mindspring.com>
Message-ID: <3D098BD7.6080703@mindspring.com>
Source record: 43380

Leon Heller wrote:
> "Mike" <mikethemartian@mindspring.com> wrote in message
> news:3D0828FA.9070401@mindspring.com...
>
>>I am currently reading Mr. Bowick's text RF Circuit Design. Although I
>>agree with the general consensus that it is a fine text, I am getting
>>some different results than some of his example calculations. Does
>>anyone know of any possible errors in the text?
>>
>
>
> Which calculations?
>
> Leon
> --
> Leon Heller, G1HSM leon_heller@hotmail.com
> http://www.geocities.com/leon_heller
> Low-cost Altera Flex design kit: http://www.leonheller.com
>
>
>

Maybe you can explain to me what I am doing incorrectly.

On pages 36 and 37. Under the topic of Insertion Loss. Figure 2-16. Rs = 1000 ohms, RL = 1000 ohms, L = 0.05 uH, QL = 10, C = 25 pf, Qc = infinite. So Q = QL. Resonance occurs when omega^2 = 1/(L*C). So omega^2 = 1/(((0.05)(10^-6))*((25)(10^-12))), or omega = 894,427,191 rad/s. Rp = Q*Xp. Xp = L*omega (or 1/(C*omega)), so Xp = (0.05)(10^-6)*(894,427,191) or Xp = 44.72. So Rp = 10 * 44.72 = 447.2, or roughly 450 ohms. Mr. Bowick states a result of 4,500 ohms. So I am off by a factor of ten. Can you tell me what I am doing wrong?

Thanks

Mike

418. Re: Radar Detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 07:14:17 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0206132314.3fd0f1c4@posting.google.com>
Source record: 43381

Try http://www.uslink.net/~cybercir/cir2.htm

Ivan

"Doctor" <doctorwho20012001@yahoo.com> wrote in message
news:<ae2m4nntr1@news.cowan.edu.au>...
> Would any body know how to make a simple radar detector.
>
> Thanks Craig

419. Re: ARRL/Miracle whip

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 08:35:33 UTC
From: Guy Austin <guy.austin@unn.ac.uk>
Message-ID: <aec9qj$7kv$1@dax.unn.ac.uk>
Source record: 43382

"Guy Austin" <guy.austin@unn.ac.uk> wrote in message
news:ae9pr1$sd7$1@dax.unn.ac.uk...
> I would like to download
> http://www.arrl.org/members-only/tis/info/pdf/0107032.pdf
> a description of how to build the miracle whip.
> But this is on the ARRL members only section of the web site,
> If someone has a copy of this file, will they please send me a copy.
>
> Cheers Guy
>
Recieved in good order, Thanks very much, excellent service from the
American hams.

73 de M5GUY

420. FA: 2 large boxes of tubes over 100

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 10:09:54 UTC
From: GaryH <webpub@fastmail.ca>
Message-ID: <A6jO8.4944$x21.477036@e3500-atl1.usenetserver.com>
Source record: 43383

Check out these new tube.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1740247843

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1740248940

421. HP141T

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 10:32:11 UTC
From: UnTale <io@io.it>
Message-ID: <LCjO8.13631$j65.309014@twister1.libero.it>
Source record: 43384

Hi,
can anybody help me?
I'm looking for following manual/schematics:

HP141T Mainframe
HP 8553B RF Section
HP 8552B IF Section

Thanks
--
73 de iz7ath, Talino

Homebrew, RF projects and digital tecniques on
http://www.qsl.net/iz7ath
IZ7ATH Talino +39 338 5029196

422. Re: Getting Pops on T/R

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 11:48:02 UTC
From: w.harbourjr@worldnet.att.net
Message-ID: <deafe3d9.0206140348.705b697d@posting.google.com>
Source record: 43385

Bill Turner <w7ti@dslextreme.com> wrote in message
news:<8jghgug3lnlcd6gr9t76noe4fkps3a3v1q@4ax.com>...
> On 13 Jun 2002 08:53:38 -0700, w.harbourjr@worldnet.att.net (Bill
> Harbour) wrote:
>
> >I've built a simple superhet xcvr that uses a MPF102 audio mute and a
> >t/r switching scheme like the one on the SW+ series of radios. I'm
> >getting a very annoying pop everytime the rig is keyed. I've upped
> >the value of the cap at the gate of the MPF102 to .22uF (instead of
> >the customary .1uF) and it helped a little.
> >
> >I'm thinking that the choke to the final preamp might be the culprit
> >(it's keyed with a PNP transistor). I've heard of putting a zener at
> >the choke to prevent the collapsing magnetic field from causing a back
> >voltage. Could that collapsing field cause the pop??
> >
> >Does anyone have an idea where to look to solve the popping?
>
> ____
>
> Is this a short, high frequency "pop" or a lower frequency "thump"?
>
> Without seeing the circuit diagram I'm only guessing, but if it's a
> "thump" you may have too much low frequency response in the receiver.
> Try reducing the value of one or more coupling capacitors between stages
> or between the final stage and the speaker/headphones.
>
> Poor power supply regulation can cause this problem. If possible, try
> running the receiver section from a separate supply and see if the
> problem goes away. If it does, you may want to install a separate
> regulator IC, either for the receiver alone or for both TX and RX.
>
> Bill, W7TI
>
> Bill, W7TI

It's definitely a high frequency pop...not a thump. And it happens on
key down..not key up. It'll take me a couple of days to draw up the
schem but I can send to you if that'll help. Increasing the cap at
the gate of the MPF102 only helped a little. I'm wondering if one of
the T/R diodes is bad and letting too much RF through?? Not sure
what's going on but ur regulation suggestion is worth looking into.

Tnx,

Bill

423. Re: HP141T

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 15:30:05 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3D0A0BFD.67E0B5CA@ix.netcom.com>
Source record: 43386

Talino,
I could possibly make you a CD ROM with .pdf files of these service manuals. Maybe we could do a deal or exchange with something from Italy?
73 Dan
ac6ao g3ncr

UnTale wrote:

> Hi,
> can anybody help me?
> I'm looking for following manual/schematics:
>
> HP141T Mainframe
> HP 8553B RF Section
> HP 8552B IF Section
>
> Thanks
> --
> 73 de iz7ath, Talino
>
> Homebrew, RF projects and digital tecniques on
> http://www.qsl.net/iz7ath
> IZ7ATH Talino +39 338 5029196

424. Re: Paint Dots On Soldered Connections

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 16:43:46 UTC
From: Tazanator <tazanator1@hotmail.com>
Message-ID: <63pO8.193467$cQ3.6180@sccrnsc01>
Source record: 43387

well could it possable help protect the soldered joint longer?
<donrm@soco.agilent.com> wrote in message
news:1023836708.710699@cswreg.cos.agilent.com...
> One of the best homebrewers I ever met was Ken Moore,
> W6WIS (SK); he was a radio engineer for a major airlines
> and I always admired his homebrew gear.
>
> I never got around to asking him - he would put a little
> dot of red paint on every point-to-point soldered connection -
> has anyone ever seen this practice? Is it to indicate the
> connection has been inspected?
>
> Don K6LTS
> donrm@soco.agilent.com

425. Re: HP141T

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 17:44:55 UTC
From: UnTale <io@io.it>
Message-ID: <rYpO8.15413$j65.342082@twister1.libero.it>
Source record: 43388

> Talino,
> I could possibly make you a CD ROM with .pdf files of these service
> manuals. Maybe we could do a deal or exchange with something from
> Italy?
> 73 Dan
> ac6ao g3ncr

That's great!
ok I'm sending send you a private mail!

--

73 de iz7ath, Talino

Homebrew, RF projects and digital tecniques on
http://www.qsl.net/iz7ath
IZ7ATH Talino +39 338 5029196

426. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 18:53:33 UTC
From: nordland37@hotmail.com
Message-ID: <3d0a3408.4811971@news.freeserve.net>
Source record: 43389
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

On Fri, 14 Jun 2002 00:02:30 +0100, Ian Robert Walker
<Ian@newbrain.demon.co.uk> wrote:

>In article <3d090563.1312897@news.freeserve.net>, J.
><nordland37@hotmail.com> writes
>>On Thu, 13 Jun 2002 06:12:11 GMT, w9wi@linux1.localdomain (Doug Smith)
>>wrote:
>>
>>>>>>It does a lot more than that. Most modern car radios will search
>>>>>for the best signal with the same ID. Some can search for stations
>>>>>of a particular type, or find stations broadcasting traffic
>>>>>information. Not to mention carrying the time which, (in Vauxhall
>>>>>vehicles at least) keeps the clock to within about 1 second
>>>>>of the UK primary standard.
>>>
>>>Here in the USA a lot of that would be considered "poison" by station
>>>management.
>>>
>>>A USA broadcasting license conveys authority for only one transmitter.
>>>Additional medium- and high-powered transmitters can be licensed, but are
>>>legally considered separate stations. They must compete with other
>>>applicants for the same frequency. Also, until very recently, a given
>>>company could not own multiple transmitters with overlapping coverage.
>>>Low-power (less than 250w ERP) transmitters are easier to license, but until
>>>recently they were limited to 10w, and still must compete for frequencies.
>>
>>There's only one transmitter involved in RDS. It's impressed on the
>>single FM signal - only one transmitter needed.
>
>Untrue, there will be many transmitters broadcasting RDS.

For any particular station only one transmitter is needed
I meant. In any case I misunderstood what he was getting at.

--

_____
Posted by J.

427. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 18:53:34 UTC
From: nordland37@hotmail.com
Message-ID: <3d0a346c.4912541@news.freeserve.net>
Source record: 43390
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

On Thu, 13 Jun 2002 23:59:15 +0100, Ian Robert Walker
<Ian@newbrain.demon.co.uk> wrote:

>In article <3d090427.996773@news.freeserve.net>, J.
><nordland37@hotmail.com> writes
>>On Wed, 12 Jun 2002 20:00:03 GMT, la8ak.xnd@online.no (J M Noeding) wrote:
>>
>>>On Wed, 12 Jun 2002 16:43:07 GMT, nordland37@hotmail.com (J.) wrote:
>>>
>>>
>>>>>My car radio has RDS, and at least one of the local stations (in Indy),
>>>>>provides information such as music title, etc. I really don't
>>>>>see RDS as being all that big a deal, but certainly helps with
>>>>>the identification of music.
>>>>
>>>>It does a lot more than that. Most modern car radios will search
>>>>for the best signal with the same ID. Some can search for stations
>>>>of a particular type, or find stations broadcasting traffic
>>>>information. Not to mention carrying the time which, (in Vauxhall
>>>>vehicles at least) keeps the clock to within about 1 second
>>>>of the UK primary standard.
>>>>
>>>and I believed the main reason for introducing RDS is to broadcast
>>>important information about traffic jam and accidents, and
>>>particularly warn when somebody drives the wrong way on a motorway.
>>>It is a lot of such warnings in Germany. Receiving such messages will
>>>interrupt playing cassettes or CD's
>>
>>Are you confusing RDS with Trafficmaster (Oracle)?
>>
>>The 'TA' (Traffic Announcement) system on RDS works something like:
>>
>> Participating stations set a flag on their RDS when (and only when)
>> they have a traffic announcement to make.
>>
>> RDS scans all the stations it can hear for this flag.
>>
>> When it finds one, it switches to the station with the TA flag
>> from whatever one may be listening to.
>>
>> The flag is reset after the traffic broadcast and the RDS re-tunes
>> to the original station/tape/CD etc.
>

>Should be reset, not is reset.

He he. Yes. I understand some leave the flag set to boost their audiences.

I don't use the system as I have Trafficmaster, which is more specific to the road I am on.

--

_____
Posted by J.

428. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 18:53:35 UTC
From: nordland37@hotmail.com
Message-ID: <3d0a34fe.5058557@news.freeserve.net>
Source record: 43391
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

On Fri, 14 Jun 2002 00:43:49 +0100 (BST), "Dave Liquorice"
<newspam@howhill.com> wrote:

>On Thu, 13 Jun 2002 21:28:43 GMT, J. wrote:
>
>> Are you confusing RDS with Trafficmaster (Oracle)?
>
>Trafficmaster is completely seperate and up to the minute (well few
>minutes) accurate. Radio travel bulletins can be as much use as a
>chocolate teapot. Which is why I gave up on RDS TAs and got a
>TrafficMaster YQ unit...
>
>> The 'TA' (Traffic Announcement) system on RDS works something like:
>
>There are really two systems, the basic and the EON (Enhanced Other
>Network).
>
>On the basic system you can listen to a single radio station and only
>get TAs from that station. These will interupt the tape/CD you are
>listening to or raise the radio volume from zero to a preset level.
>The station simply raises it's TA flag at the appropiate time.
>
>EON the station signals a central point that it is making a TA and
>this is the signaled back to all other stations on the Other Network.
>So you can listen to any (in the case of the UK. national) station[*]
>and get all TAs from many other (local) stations within range.
>
>[*] Or listen to a tape/CD with the radio part tuned to a national
>station.

My Vectra had EON (and Trafficmaster). New car doesn't state whether
EON or not. RDS doesn't set the clock either, as the Vauxhall did.

--

_____
Posted by J.

429. 38Khz crystal,

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 18:56:37 UTC
From: Kev <parker.kREMOVE@btinternet.com>
Message-ID: <aede95$sv9$1@paris.btinternet.com>
Source record: 43392

I know I posted this a while ago but after various emails to companys I am still having difficulty locating a 38Khz crystal, preferably the cylinder type.

Thank you for your support

K Parker

430. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 19:33:00 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <MxrO8.26098$Hn4.752411@news1.east.cox.net>
Source record: 43393
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

Skippy,

Where did I say it didn't "meet FCC requirements"? There are
thousands of linear designs (albiet mostly UHF/VHF that use
4CX250s). I only pointed out
that as far as IMD performance, there are much better ceramic
tubes available than the 4CX250.

Enlighten us.

73

Pete

"Skipp" <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
news:ae894h$m90$1@woodrow.ucdavis.edu...
> Bbbbbuuuuuzzzzzzzzzzzzzz.....!!!!!!!! (the error buzzer sounds)
>
> You don't qualify your statement... A well done 4cx250 amplifier easily
> meets FCC requirements. It's all about how you design and build it...
>
> A little home work is always required....
>
> skipp
> http://sonic.ucdavis.edu
>
> : In rec.radio.amateur.homebrew Uncle Peter
> : <radioconnectionNO@cox.netspam> wrote:
> : 4CX250 tubes aren't the best for IMD performance -- but, they are cheap
> : and available.
> : Pete
>
> : "Skipp" <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
> : news:adm4omoip9@woodrow.ucdavis.edu...
> :>
> :> In reference to another thread where someone asked questions about
> :> converting an amplifier from 6LQ6 "sweep tubes" over to 4CX250B
"ceramic"
> :> tubes...
> :>
> :> Here's a web link to a few photos of a Dentron GLA-1000B which was
> :> converted over to a pair of 4CX250's by an Italian Amateur Radio
Operator.
> :> I also have pictures of the same amplifier with some of the newer
Russian

> :> GU7 series tubes on board, but that's off topic. Anyway have a look if
> :> your interested.
> :>
> :> cheers
> :> skipp@pilotNOSPAMPLEASE.ucdavis.edu
> :>
> :> http://sonic.ucdavis.edu/dentron
> :>
> :>
> :> The main page for the sonic server..
> :>
> :> http://sonic.ucdavis.edu
> :> chow for now
> :> skipp
>
>

431. Re: 38Khz crystal,

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 19:50:10 UTC
From: George <gschwab@florida-knife.com>
Message-ID: <SNrO8.2186$ks6.352@nwrddc02.gnilink.net>
Source record: 43394

Digi-Key catalog lists part number
SE3314-ND as a 38Khz Cylinder type Quartz Crystal.
Don't know if the specs on are what U need tho.
Page 412 in Catalog #TO13
or 1-800-344-4539
George

"Kev" <parker.kREMOVE@btinternet.com> wrote in message
news:aede95$sv9$1@paris.btinternet.com...
> I know I posted this a while ago but after various emails to companys I am
> still having difficulty locating a 38Khz crystal, preferably the
cylinder
> type.
>
> Thank you for your support
>
> K Parker
>
>
>

432. Need help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 20:44:47 UTC
From: N G <vze26gh4@verizon.net>
Message-ID: <3BsO8.440$Ss3.65@nwrddc04.gnilink.net>
Source record: 43395

Looking for old articles: Available anywhere? Thanks in advance

L. Studebaker, "Simple, Low-Cost Computer Control for the ICOM IC-720," QST, July 84, p. 34.

R. Bisbey, "Computer Control of ICOM R-71, 271, 471 and 751 Radios," Ham Radio, April 86, p. 47.

C. Bahr, "Simple ICOM IC-735 to C-64 Interface," Ham Radio, March 87, p. 39.

433. Yaesu FTL-2001 - Programming HELP ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 20:59:10 UTC
From: LEX-Lutor <lex-lutor@post.hinet.hr>
Message-ID: <aedlas$8o50$1@as201.hinet.hr>
Source record: 43396
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I have lot of Yaesu prog.soft but there is not FTL-2001 model. Is there any other model or software compatibile with this radio ???

PS: What pins are used for programming ???

434. Re: Paint Dots On Soldered Connections

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 21:19:02 UTC
From: Arthur Blumenfeld <ezrider@bestweb.net>
Message-ID: <3D0A5DC5.8BFDE351@bestweb.net>
Source record: 43297

Tazanator wrote:

> well could it possable help protect the soldered joint longer?

I don't think so. We did have a process for varnishing the entire chassis for use in the south pacific (high humidity) but just coating the joints would not due much if the joint was well made to start with.

435. Re: Coded Signals In Radio & TV Broadcasts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 21:46:18 UTC
From: Ian Robert Walker <Ian@newbrain.demon.co.uk>
Message-ID: <HIQ2LsBqQmC9Ew+i@newbrain.demon.co.uk>
Source record: 43298
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

In article <3d0a346c.4912541@news.freeserve.net>, J.
<nordland37@hotmail.com> writes

[I said]
>>Should be reset, not is reset.
>
>He he. Yes. I understand some leave the flag set to boost their
>audiences.
>
>I don't use the system as I have Trafficmaster, which is more specific
>to the road I am on.

What ever happened to "carfax"? I remember listening to that on the low
end of medium wave in the late 70s.
--
Ian Robert Walker

436. Re: HP141T

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-14 23:19:53 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3D0A7A19.CE6C3B71@ieee.org>
Source record: 43299

Dan Rae wrote:

> Talino,
> I could possibly make you a CD ROM with .pdf files of these service
> manuals. Maybe we could do a deal or exchange with something from
> Italy?
> 73 Dan
> ac6ao g3ncr
>

Probably find that a lot of people would want copies of that CD. I could
use
a copy, as I don't have any manual for mine.

Bill K7NOM

>
> UnTale wrote:
>
> > Hi,
> > can anybody help me?
> > I'm looking for following manual/schematics:
> >
> > HP141T Mainframe
> > HP 8553B RF Section
> > HP 8552B IF Section
> >
> > Thanks
> > --
> > 73 de iz7ath, Talino
> >
> > Homebrew, RF projects and digital tecniques on
> > http://www.qsl.net/iz7ath
> > IZ7ATH Talino +39 338 5029196

437. New site Advertisement

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-15 02:45:11 UTC
From: res0y601 <res0y601@verizon.net>
Message-ID: <XSxO8.5373$uX3.3113@nwrddc01.gnilink.net>
Source record: 43300
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,uk.radio.amateur

```
New site www.qslonline.net
QSL Card via email
Many extras

Keith B Wilkinson
```

438. 10-meter amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-15 04:07:07 UTC
From: ogrowup@webtv.net
Message-ID: <27249-3D0ABD6B-134@storefull-2238.public.lawson.webtv.net>
Source record: 43301

Anyone know any website(s) with shematics/plans for a 10-meter linear capable of boosting 25W to 200 or so? There are times my HTX-10 @25W doesn'tquite 'cut the mustard'!

Patrick, N1NCJ

"Eagles may soar but weasels aren't sucked into jets."

439. FA: A pair of Wavetek 3002 signal generators on eBay

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-15 05:27:26 UTC
From: Terry Perdue <k8tp@home.com>
Message-ID: <2fAO8.75700$pw3.3593@sccrnsc03>
Source record: 43302

A pair of clean, working, recently calibrated synthesized signal generators, covering 1 kHz to 520 MHz in 1 kHz steps, with vernier adjustment. Output level -140 to +10 dBm, internal/external AM/FM. With Operation/Service manual.

They're item #1740431328 titled 'Pair of Wavetek 3002 signal generators'. Dumb me - by making it plural, a search for 'signal generator' won't find it :-(

440. FS: Electronic Universal Vade-Mecum

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-15 06:59:33 UTC
From: arnoldg@c2i.net
Message-ID: <3d0ae5be.655368@news1.c2i.net>
Source record: 43303
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Hello,

This great valve databook is still in stock, but it will now be soon
out of print and difficult to obtain. 660 pages with comprehensive
data on nearly 6000 types - European, Russian and American
manufacture. A lot of curves and operation conditions on each type.
This is a very large book of 29 x 21cm and the weight is 2.5kg
You can find more information and pictures of it at my web site
www.demostenes.no

Regards,

Arnold Goks�yr
DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://www.demostenes.no

Thousands of different valves in stock as well as
sockets,transformers,books,caps,resistors and
other components. Web site is updated every week.
You can order on-line.

441. Re: A pair of Wavetek 3002 signal generators on eBay

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-15 09:03:55 UTC
From: Hugh Colborn <don'tspamstockden@tiscali.co.uk>
Message-ID: <3d0b02ce_2@mk-nntp-1.news.uk.worldonline.com>
Source record: 43304

Hi Terry,

I have one of these things (but badged to Motorola). The maunal suggests that it should stabilize in "a few seconds" but mine takes about 15 minutes until the synth locks. Is that about right or should it be locking more quickly?

Hugh

"Terry Perdue" <k8tp@home.com> wrote in message news:2fAO8.75700$pw3.3593@sccrnsc03...
> A pair of clean, working, recently calibrated synthesized signal generators,
> covering 1 kHz to 520 MHz in 1 kHz steps, with vernier adjustment. Output
> level -140 to +10 dBm, internal/external AM/FM. With Operation/Service
> manual.
>
> They're item #1740431328 titled 'Pair of Wavetek 3002 signal generators'.
> Dumb me - by making it plural, a search for 'signal generator' won't find it
> :-(
>
>

442. Re: Cool Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-15 09:40:17 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <5YDO8.38046$LC3.2872558@bgtnsc04-news.ops.worldnet.att.net>
Source record: 43305

Hi Philip,
Actually, I do have MW only version of this unit. I may be
writing a couple of articles; one of them will be for the general converage
version, while the other will be for the MW only version. The nice thing
about both of these designs is that the MW only version requires only one
adjustment, while the general coverage version requires only two.
I just need to get the final ok from my employer for release of the
articles. The first release will be using an Analog Devices AD9851 DDS for
LO injection; the next generation will use a hybrid version, incorperating a
DDS as a variable reference in a PLL circuit, using that circuit as a
tracking filter. I expect to have that design done sometime around
September of this year.

Pete KE9OA

Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk> wrote in message
news:kdWKm4Igv1B9EwxZ@fslife.co.uk...
> Pete,
>
> Consider also making it cover the AM broadcast band!
>
> (((73)))
> --
> Philip de Cadenet G4ZOW
> Transmitters 'R' Us
> http://www.transmittersrus.com

443. Re: A pair of Wavetek 3002 signal generators on eBay

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-15 09:58:43 UTC
From: la8ak.xnd@online.no
Message-ID: <3d0b0aee.149321813@news.online.no>
Source record: 43306

Yes, it is a good idea to have two. They won't drop out out lock and
go to UNLEVELLED simultaneously, so it is a good chance that one will
work while the other makes a nuissance
Mine are model 3001, but they are all the same rubbish, believe they
cover the range 1-560 MHz in 1 kHz steps with considerable residual FM

73
Jan-Martin
LA8AK
On Sat, 15 Jun 2002 10:03:55 +0100, "Hugh Colborn"
<don'tspamstockden@tiscali.co.uk> wrote:

>Hi Terry,
>
>I have one of these things (but badged to Motorola). The maunal suggests
>that it should stabilize in "a few seconds" but mine takes about 15 minutes
>until the synth locks. Is that about right or should it be locking more
>quickly?
>
>Hugh
>
>> A pair of clean, working, recently calibrated synthesized signal
>generators,
>> covering 1 kHz to 520 MHz in 1 kHz steps, with vernier adjustment. Output
>> level -140 to +10 dBm, internal/external AM/FM. With Operation/Service
>> manual.
>>

--
remove ,xnd to reply

444. Re: A pair of Wavetek 3002 signal generators on eBay

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-15 13:36:19 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <npHO8.33152$Hn4.1037668@news1.east.cox.net>
Source record: 43307

HHaaaaaaaa haaa!! I have two 3001 dogs as well. Complete garbage.
They should lock in under 5 seconds, BTW. As Jan-Martin notes:considerable
residual FM, and a horrific noise floor--not much good for blocking or
IMD measurements. You need two to keep one running. I've rebuilt
several of the modules, am continually replacing shorted tantalums, and
find
owning the units is a good excuse to buy a 2-GHz counter and a spectrum
analyzer just to troubleshoot and align the beasts.

Pete k1zjh

"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3d0b0aee.149321813@news.online.no...
> Yes, it is a good idea to have two. They won't drop out out lock and
> go to UNLEVELLED simultaneously, so it is a good chance that one will
> work while the other makes a nuissance
> Mine are model 3001, but they are all the same rubbish, believe they
> cover the range 1-560 MHz in 1 kHz steps with considerable residual FM
>
> 73
> Jan-Martin
> LA8AK
> On Sat, 15 Jun 2002 10:03:55 +0100, "Hugh Colborn"
> <don'tspamstockden@tiscali.co.uk> wrote:
>
> >Hi Terry,
> >
> >I have one of these things (but badged to Motorola). The maunal suggests
> >that it should stabilize in "a few seconds" but mine takes about 15
minutes
> >until the synth locks. Is that about right or should it be locking more
> >quickly?
> >
> >Hugh
> >
> >> A pair of clean, working, recently calibrated synthesized signal
> >generators,
> >> covering 1 kHz to 520 MHz in 1 kHz steps, with vernier adjustment.
Output
> >> level -140 to +10 dBm, internal/external AM/FM. With Operation/Service
> >> manual.
> >>
>
> --
> remove ,xnd to reply

445. Re: A pair of Wavetek 3002 signal generators on eBay

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-15 13:40:38 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <qtHO8.33165$Hn4.1037402@news1.east.cox.net>
Source record: 43308

I think those start at 1 MHz, not 1 kHz..

"Terry Perdue" <k8tp@home.com> wrote in message
news:2fAO8.75700$pw3.3593@sccrnsc03...
> A pair of clean, working, recently calibrated synthesized signal
generators,
> covering 1 kHz to 520 MHz in 1 kHz steps, with vernier adjustment. Output
> level -140 to +10 dBm, internal/external AM/FM. With Operation/Service
> manual.
>
> They're item #1740431328 titled 'Pair of Wavetek 3002 signal generators'.
> Dumb me - by making it plural, a search for 'signal generator' won't find
it
> :-(
>
>

446. Re: A pair of Wavetek 3002 signal generators on eBay

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-15 15:13:35 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <aeflmm$1hc$1@slb6.atl.mindspring.net>
Source record: 43316

I have a Wavetek 3001 that also took about 15 minutes to stabilize...

When it finally broke the rest of the way I took it apart and found an electrolytic capacitor failed. It appears that it was leaky and it had to be warmed up to work which caused the 15 minute delay.

I went through and replaced the electrolytics. After that, it does indeed lock up in just a few seconds.

Jim Pennell
N6BIU

447. Re: Heathkit sb 104 problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-15 15:40:43 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <%dJO8.33677$Hn4.1070786@news1.east.cox.net>
Source record: 43309

Could be some sort of RIT alignment issue.

Pete

"George" <gschwab@florida-knife.com> wrote in message
news:sA5N8.6997$gs4.4168@nwrddc02.gnilink.net...
> I have and SB 104 that is working well...other than one small problem I
> can't find reference to in the books. It is transmitting 400 Hz BELOW the
> receive freq.
> Receive seems ok as WWV is exactly at 15 Mhz. and I've made a few qso's by
> manually tunig UP 400 to transmit and get good reports. Appears to be off
> the same amount on all bands. Any suggestions before I go through a bunch
of
> stuff I really don't need to?
> Thanks
> George, AE4MH
>
>

448. Re: oscilloscope as monitor scope?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-15 15:43:02 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <agJO8.33697$Hn4.1071628@news1.east.cox.net>
Source record: 43310

A 15 MHz scope should have a usable response above that frequency,
with loss of vertical calibration--not a serious matter for your
application.

Pete

"George" <gschwab@florida-knife.com> wrote in message
news:451250af.0206051301.167277ec@posting.google.com...
> Does anyone here know how I might use an oscilloscope as a monitor scope?
> I have a 15 Mhz scope and would like to "see" my transmitters output.
> Any help greatly appreciated!
> Thanks
> George

449. Re: FA: A pair of Wavetek 3002 signal generators on eBay

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-15 16:01:50 UTC
From: Bruce Lane <usenet1.5.spamvac@spamgourmet.com>
Message-ID: <MPG.177504c557204539898e5@news.drizzle.com>
Source record: 43311

In article <2fAO8.75700$pw3.3593@sccrnsc03>, k8tp@home.com says...

> A pair of clean, working, recently calibrated synthesized signal generators,
> covering 1 kHz to 520 MHz in 1 kHz steps, with vernier adjustment. Output
> level -140 to +10 dBm, internal/external AM/FM. With Operation/Service
> manual.

<snip>

Good luck. I've had past experience (pretty much all bad) with
Wavetek gear. I'm surprised it goes for the prices I see on E-pay.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

450. Re: A pair of Wavetek 3002 signal generators on eBay

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-15 16:40:20 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3D0B6DF4.43DFE89B@mfi.net>
Source record: 43312

Uncle Peter wrote:
>
> HHaaaaaaaa haaa!! I have two 3001 dogs as well. Complete garbage.
> They should lock in under 5 seconds, BTW. As Jan-Martin notes:considerable
> residual FM, and a horrific noise floor--not much good for blocking or
> IMD measurements. You need two to keep one running. I've rebuilt
> several of the modules, am continually replacing shorted tantalums, and
> find
> owning the units is a good excuse to buy a 2-GHz counter and a spectrum
> analyzer just to troubleshoot and align the beasts.
>
> Pete k1zjh
>
> "J M Noeding" <la8ak.xnd@online.no> wrote in message
> news:3d0b0aee.149321813@news.online.no...
> > Yes, it is a good idea to have two. They won't drop out out lock and
> > go to UNLEVELLED simultaneously, so it is a good chance that one will
> > work while the other makes a nuissance
> > Mine are model 3001, but they are all the same rubbish, believe they
> > cover the range 1-560 MHz in 1 kHz steps with considerable residual FM
> >
> > 73
> > Jan-Martin
> > LA8AK
> > On Sat, 15 Jun 2002 10:03:55 +0100, "Hugh Colborn"
> > <don'tspamstockden@tiscali.co.uk> wrote:
> >
> > >Hi Terry,
> > >
> > >I have one of these things (but badged to Motorola). The maunal suggests
> > >that it should stabilize in "a few seconds" but mine takes about 15
> minutes
> > >until the synth locks. Is that about right or should it be locking more
> > >quickly?
> > >
> > >Hugh
> > >
> > >> A pair of clean, working, recently calibrated synthesized signal
> > >generators,
> > >> covering 1 kHz to 520 MHz in 1 kHz steps, with vernier adjustment.
> Output
> > >> level -140 to +10 dBm, internal/external AM/FM. With Operation/Service
> > >> manual.
> > >>

> >
> > --
> > remove ,xnd to reply

I refused to use any Wavetek equipment at my last job, and the old man in the Cal Lab didn't want to repair the crap when it died. The only thing they made that I liked was a couple of their dual concentric shaft stepped 10 Db / 1 Db attenuators.

451. Re: FA: A pair of Wavetek 3002 signal generators on eBay

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-15 16:44:08 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3D0B6ED8.BD6E97FA@mfi.net>
Source record: 43313

Bruce Lane wrote:
>
> In article <2fAO8.75700$pw3.3593@sccrnsc03>, k8tp@home.com says...
>
> > A pair of clean, working, recently calibrated synthesized signal generators,
> > covering 1 kHz to 520 MHz in 1 kHz steps, with vernier adjustment. Output
> > level -140 to +10 dBm, internal/external AM/FM. With Operation/Service
> > manual.
>
> <snip>
>
> Good luck. I've had past experience (pretty much all bad) with
> Wavetek gear. I'm surprised it goes for the prices I see on E-pay.
>
> --
> Bruce Lane, Owner and Head Hardware Heavy,
> Blue Feather Technologies -- http://www.bluefeathertech.com
> Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
> kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
> "I'll get a life when someone demonstrates to me it would be superior to
> what I have now..." (Taki Kogoma)

That's because the buyers haven't used Wavetek before! Even worse
was the garbage they made for CATV work. A so called scope with a 12
inch monochrome green screen monitor tube to align amps and converters.
Several of their crappy sweep generators were sold for that as well, but
were 50 ohm, and all the equipment in CATV distribution is 75 ohms.

452. Re: FA: A pair of Wavetek 3002 signal generators on eBay

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-15 16:58:48 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <cnKO8.34231$Hn4.1092546@news1.east.cox.net>
Source record: 43314

Especially with HP and Boonton generators going at fire-sale prices.
I probably paid too much for my 102-F, but it has never required service
either...

Pete

"Bruce Lane" <usenet1.5.spamvac@spamgourmet.com> wrote in message
news:MPG.177504c557204539898e5@news.drizzle.com...
> In article <2fAO8.75700$pw3.3593@sccrnsc03>, k8tp@home.com says...
>
> <snip>
>
> Good luck. I've had past experience (pretty much all bad) with
> Wavetek gear. I'm surprised it goes for the prices I see on E-pay.
>
>
>

453. Re: 10-meter amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-15 19:41:22 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <CLMO8.85412$pw3.3803@sccrnsc03>
Source record: 43315

For solid state designs (the best way to go) Start with the Motorola
Application Notes ...so you know what you are doing and why.

http://www.communication-concepts.com/

Other sources for parts
http://www.rfparts.com/

http://users.aol.com/rfelectron/rfelect.htm

w9gb
<ogrowup@webtv.net> wrote in message
news:27249-3D0ABD6B-134@storefull-2238.public.lawson.webtv.net...
> Anyone know any website(s) with shematics/plans for a 10-meter linear
> capable of boosting 25W to 200 or so? There are times my HTX-10 @25W
> doesn'tquite 'cut the mustard'!
>
> Patrick, N1NCJ
>
> "Eagles may soar but weasels aren't sucked into jets."
>

454. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-15 21:00:02 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D0BAB44.C72040DC@bellatlantic.net>
Source record: 43317

w_tom wrote:
>
> The only short circuit that absorbs energy is one that
> really is not a short circuit.

Bullshit - you do not understand what a short circuit is.

> Ideal short circuits absorb no
> energy.

He did not mention "Ideal short circuits".

> Where did you take your EE training?

You don't even understand ohm's law and you're attempting
to discredit him with a snide question?

> Imperfect
> short circuits only absorb a minor percentage of energy.

Bullshit. Drop a #20 bare wire across an energized
20 amp household circuit. What vaporizes? What absorbed
the energy?

> If
> the purpose of short circuits were to absorb energy, then the
> purpose of all electric company wires is also to absorb
> energy. Obviously not. Ideal short circuits absorb no
> energy. Better, real world short circuits absorb all but no
> energy.

How can anyone have a rational discussion of anything
related to electrical issues with thinking like that?

>
> To say the purpose of a short circuit is to absorb energy is
> to not understand basic EE principals and therefore to not
> understand how surge protection works.
>
> Like the imperfect short circuit, the MOV does absorb a
> minor percentage of energy.

Which is a reversal of your earlier position that MOV's
absorb NO energy. An MOV clamping a voltage at 330 and
conducting a 100 ampere surge absorbs 100*330 or 33,000
watts. Whether or not that is a minor percentage of the
energy is not key. What is key is that the equipment
the MOV protects "sees" only 330 volts, as long as the

MOV continues to work during the surge. Where the surge
energy goes doesn't matter to the equipment, as long as
it doesn't "see" the damaging high voltage. You never
mention this.

? But absorbing energy is not its
> purpose. The purpose of MOVs and other shunt mode surge
> protectors is to shunt - transfer energy elsewhere.
>
> If an MOV shunts a common mode surge across wires to an
> appliance, then the adjacent MOV has only provided that common
> mode surge with more paths to earth destructively through an
> appliance.
>

Bullshit. You earlier specified that in your view
a common mode surge can enter the house service panel on
a single hot wire. The MOV connected from neutral to hot
in a point of use protector protecting your refrigerator,
clamps the voltage across line and neutral to 330 volts.
Where are the destructive paths through the 'fridge?

You always misuse the term common mode. If you want to
make yourself clear, describe what you have in mind
when you use the term. Give us the voltages between
each point in the circuit that you envision so we know
what you are talking about.

> > What is it about this fact that makes it impossible
> > for you to understand?

It is not a fact; you misuse "common mode" so no one can
understand you; you ignore the protection afforded when
the MOV clamps the voltage across hot and neutral to
~330 volts.

> Again you are describing a differential mode surge.

Yes he did. And you completely ignore it.

> Why to
> you also have a problem with this basic EE concept?

He understands it - you do not.

> Why do
> you confuse normal mode vs longitudinal mode transients as if
> they were same?

He did not confuse them - he specified the surge he was
talking about. It is you who confused his description
of a differential mode surge. Lord only knows what *you*
think a normal mode transient is, but if you use the terms
properly normal mode = differential mode, and common mode

= longitudinal mode.

> Put all MOVs across all the AC inputs to an appliance - and
> the common mode surge will simply fly past them on its way to
> earth ground through the appliance.

Bullshit. The common mode surge elevates both the neutral
and the hot wires. But the neutral wire is elevated far
less, because it is connected to the grounding electrode
via the grounding electrode conductor and main bonding
jumper. Therefore, the hot wire is elevated far higher
than the neutral wire. That means that there is a differential
mode surge that could be "seen" by the appliance.
The MOV's will clamp the voltage that the 'fridge "sees"
to ~330 volts. The case of the fridge is connected to
the same place in the service panel as the neutral, via
the equipment grounding conductor. Unless there is a defect
in the 'fridge, there is no internal path for current to
flow to the case of the 'fridge. In addition, an external
point of use MOV connected hot to ground clamps the hot
to case potential to ~ 330 volts if a surge causes it to
switch from very high resistance to low resistance.

> Even better, short all
> the AC wires together with wire. Still the common mode surge
> will pass by on its way, destructively, through appliance to
> earth ground.

Show us the path. We've got the neutral, hot and egc
shorted together at the receptacle into which the
refrigerator is plugged. A common mode surge occurs
and enters your service panel. What is the destructive path
through the fridge to ground?

> Somehow you keep thinking that a common mode
> transient is just like a differential mode transient.

He has made only one post in this thread, so any observation
by you that he "keep(s) thinking" something is not supported.
But that is not the problem. He SPECIFIED a particular
surge, and you insist on trying to twist it to something else.

And aside from that, you do not understand a common mode
surge to begin with. You seem to think that any surge
that "seeks ground" automatically precludes a differential
mode - hot to neutral - surge. In fact, any common mode
surge entering your service panel will be a differential
mode surge on the hot and neutral branch circuit wiring
in a grounded service.

>
> If that MOV worked across AC inputs to appliances, then why
> do appliance manufacturers not install them? Answer to that

> question is essential for your claims of protection to have
> any credibility.

Absolute fucking bullshit. 1) MOV's are included in some
equipment, so your premise is FALSE. 2) Whether or not
an appliance manufacturer includes a particular component
or not has nothing to do with whether or not that component
can provide a particular function that is not essential
to the appliance's operation or acceptability for market.
Your logic is totally bizarre.

> Those MOVs are not installed inside
> appliances

False premise. They are in some appliances.

> because they are not effective when too close to
> transistors and too far from earth ground.

False. You ignore differential surges; you assume
transistors.

> Even your own
> example demonstrate no effective surge protection. All that
> was proven is a grossly undersized surge protectors was
> damaged by a surge too small to even damage the appliance.

Howinthehell do you know the surge was too small to damage
the appliance? Like the rest of your unsupported statements,
your thinking boggles the mind.

>
> If your surge protector across AC inputs worked, then in
> engineering terms, where did the surge go?

How many eff-ing times will you post this drivel? The
protector absorbed enough energy to destroy it. You
earlier admitted he was talking about a differential
mode surge, and now twist it to common mode. Ok,
lets use your common mode surge, specified at 100
amps, which "approaches the appliance", and his destroyed
supressors, since you insist it had to be common mode.
There, it encounters two MOVs, one from neutral to ground
and one from hot to ground. Each clamps the voltage
to 330 volts. We don't know the individual currents,
all we know is that there is a path that causes 100
amps to be drawn. But we do know the total amperage
across them is 100 amps and the voltage across them is 330
volts. Therefore, at the instant in time where 100 amps
is flowing in the circuit and the MOVs are clamping the
voltage to 330, the combined wattage is 33,000 watts.
If you want to make the math just a bit messier, consider
the protected appliance. He did not specify - I will.

It is a 60 watt TV with rabbit ears. The path for
the common mode surge is "the outside world" into the
service entry panel. From there, it follows the
grounding electrode conductor to the grounding electrode
system. Some of the energy is dissipated in the grounding
electrode conductor, some is dissipated in the ground and
some in the electrode system. So far, all of that energy found
its path from the neutral wire feeding your house -
none of it from the hot wire, since the hot wire is
not connected to the ground system. The result is a voltage
drop across the neutral wire feeding into your house,
without a corresponding voltage drop in the hot wire.
This creates a DIFFERENTIAL surge at the service panel.
In your specification, there is at least enough energy
"left over" to allow a 100 amp current flow towards the
appliance. It does so across the neutral and the hot wires,
as a differential mode surge. The TV at the end of the
circuit is connected to only those two points - there
is no other available path, aside from the MOV point of use
protector. Considering the part of the surge you mentioned,
the 100 amps that approaches the appliance - the path
is simple: from panel via hot wire to mov to panel via
neutral wire. And, as mentioned earlier, from panel neutral
to ground via the grounding system. In the path, energy
passing through the MOV is absorbed in accordance with
ohm's law. It is also absorbed in the hot wire and the
neutral wire and the ground system - all in accordance
with ohm's law. You have never grasped this concept. You
seem to think diverted energy does nothing but somehow
"flow into" ground. You seem to think that all of the
energy in a surge must be "returned to ground" as
an electrical charge. Not so. In addition to "charging
ground" (i.e. raising the local ground potential),
electrical surge energy can be, and is, converted into
heat in the wires, the MOV and ground itself.

Your continued erroneous postings on the technical aspects
of this destroy any good points you want to make.

What was the
> incoming path and what was the outgoing path? A 100 amp
> common mode surge approaches the appliance. What does that
> MOV across the AC inputs do? This is basic engineering. To
> say that a surge protector worked demands that you can say
> why? What was the incoming and outgoing path of that surge?
>
> Dick Carroll wrote:
> >
> > w_tom wrote:
> >
> > > To say an MOV absorbs surge energy is to say wire protects

> > > by absorbing a surge.
> >
> > Any "short circuit" absorbs energy. If enough energy transfers, the
> > circuit itself goes up in smoke.
> >
> > > In a properly sized surge protector,
> > > many times more energy is diverted through a shunt mode surge
> > > protector than is absorbed.
> >
> > Indeed, and in so doing, by acting essentially as a short circuit
> > across the voltage input terminals of the device being protected, it
> > prevents the voltage energy being shunted from raising the input
> > voltage on the protected device to destructive levels. What is it
> > about this fact that makes it impossible for you to understand?
> >
> > No one questions that a surge protector shunts to -or toward- ground
> > the destructive energy involved. But to advise people to NOT use MOV
> > surge suppressors is to advise them to just skip a very important
> > level of protection. They DO work. Many times I've had the experience
> > of being glad I had one installed when I had to replace it because
> > *it* was destroyed instead of the protected device, after it did its
> > job.
> >
> > Dick

455. Re: 10-meter amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-15 21:48:02 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ugndhkjl71t1e4@corp.supernews.com>
Source record: 43318

Not quite the same as a website, but Amazon has a book by Gottlieb called "RF Power Design Techniques" that's not too bad.

w9gb mentioned RF Parts for parts. They are about the only place around to get RF power transistors, but their prices are pretty unpleasant. Still, if you need something as simple as a 2SC1969 or a dipped silver mica cap, I'm not sure where else you could go.

However, some designs rely on more mundane parts. A lot of amp designs use power MOSFETS and I noticed recently that B.G. Micro has some pretty impressive parts for very good prices. MOSFETS are relatively easy to toast but at a buck a piece you can afford to sacrifice a few to the cause. Bipolars are a little easier to deal with but their low input impedance makes it tough to get a lot of power gain.

In either case, keep in mind that 200 watts translates into quite a pile of 12 volts. I assume this is for SSB (25 watts on 10 meter CW is more than adequate) then you are probably talking about at least 30-40 amps for a class A amplifier. Not insurmountable, but certainly a few sheckels.

..

<ogrowup@webtv.net> wrote in message
news:27249-3D0ABD6B-134@storefull-2238.public.lawson.webtv.net...
> Anyone know any website(s) with shematics/plans for a 10-meter linear
> capable of boosting 25W to 200 or so? There are times my HTX-10 @25W
> doesn'tquite 'cut the mustard'!
>
> Patrick, N1NCJ
>
> "Eagles may soar but weasels aren't sucked into jets."
>

456. Rf Transistor Source

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 00:01:13 UTC
From: Zimbobwa <zaire@msm.com>
Message-ID: <dzQO8.192552$4i.15772867@bin2.nnrp.aus1.giganews.com>
Source record: 43319

Try WestGate Labs in Edison NJ

they carry many parts as well as tubes, ic's, transisitors, relays, teflon wire, resistors, broadband transformers etc etc...

457. Re: A pair of Wavetek 3002 signal generators on eBay

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 00:32:51 UTC
From: la8ak.xnd@online.no
Message-ID: <3d0bd693.201462682@news.online.no>
Source record: 43320

On Sat, 15 Jun 2002 13:36:19 GMT, " Uncle Peter"
<radioconnectionNO@cox.netSPAM> wrote:

>HHaaaaaaaa haaa!! I have two 3001 dogs as well. Complete garbage.
>They should lock in under 5 seconds, BTW. As Jan-Martin notes:considerable
>residual FM, and a horrific noise floor--not much good for blocking or
>IMD measurements. You need two to keep one running. I've rebuilt
>several of the modules, am continually replacing shorted tantalums, and
>find
>owning the units is a good excuse to buy a 2-GHz counter and a spectrum
>analyzer just to troubleshoot and align the beasts.
>
>Pete k1zjh
>
Haaaa..... it just reminds me of the old Maccaroni generator which
drifted 1-2MHz per hour on 144MHz for the first day, but if you needed
it in the week-end you could switch it on some days in advance

73
Jan-Martin
LA8AK
http://www.laud.no/la6nca/la8ak/
--
remove ,xnd to reply

458. 100mW transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 02:44:31 UTC
From: tele.elias@freemail.absa.co.za
Message-ID: <3d0bfb9b$0$18850@hades.is.co.za>
Source record: 43321

Hi, Has anyone ever done or designed a 100mW, 418MHz analog(voice)
transmitter.
I need to design one and would appreciate any kind of help.

Thank you,

Regards,
Elias

459. Re: A pair of Wavetek 3002 signal generators on eBay

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 05:20:53 UTC
From: Hugh Colborn <don'tspamstockden@tiscali.co.uk>
Message-ID: <3d0c2007_2@mk-nntp-1.news.uk.worldonline.com>
Source record: 43322

Thanks for that tip, I'll start replacing capacitors . I hadn't expected quite the level of abuse that these generators seem to deserve, it's just as well I only paid peanuts for it!

Hugh

"Jim Pennell" <NoSpam@killspam.com> wrote in message news:aeflmm$1hc$1@slb6.atl.mindspring.net...
> I have a Wavetek 3001 that also took about 15 minutes to stabilize...
>
> When it finally broke the rest of the way I took it apart and found an
> electrolytic capacitor failed. It appears that it was leaky and it had to
> be warmed up to work which caused the 15 minute delay.
>
> I went through and replaced the electrolytics. After that, it does
> indeed lock up in just a few seconds.
>
>
> Jim Pennell
> N6BIU
>
>
>

460. Re: 10-meter amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 06:24:05 UTC
From: john graesser <graesser@tca.net>
Message-ID: <ugoblkqd9ulfb3@corp.supernews.com>
Source record: 43323

<ogrowup@webtv.net> wrote in message
news:27249-3D0ABD6B-134@storefull-2238.public.lawson.webtv.net...
> Anyone know any website(s) with shematics/plans for a 10-meter linear
> capable of boosting 25W to 200 or so? There are times my HTX-10 @25W
> doesn'tquite 'cut the mustard'!
>
> Patrick, N1NCJ
>
> "Eagles may soar but weasels aren't sucked into jets."
>

I would guess that you have already been told by someone who knows better that when 10 is dead a million watts won't get the message thru, and when it is hot 5 watts will do?

Working from my car (apt doesn't allow antennas) my htx10 (and my htx100 before it) have worked the w1oj repeater from Texas, worked as far east as the Ukraine, and as far west as Japan. 25 watts will go further than the receiver in the htx10 can listen (not nearly as good as the 100).

If you are using it from a fixed location, you are better off putting your money into a good 4 element quad antenna., I worked a fellow in Hawaii who also was using an htx10, he was using a quad from his house, and I had the whip on the back of my car, and this was back when the 10 was first released, before 10 meters peaked.
thanks, John.
KC5DWD

461. Re: 100mW transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 08:49:01 UTC
From: whagen6@cs.com
Message-ID: <20020616044901.27305.00000678@mb-fg.news.cs.com>
Source record: 43324

how about modifying an frs?

462. Re: A pair of Wavetek 3002 signal generators on eBay

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 11:37:27 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <aeht9m$19l$1@paris.btinternet.com>
Source record: 43325

"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3d0bd693.201462682@news.online.no...
> On Sat, 15 Jun 2002 13:36:19 GMT, " Uncle Peter"
> <radioconnectionNO@cox.netSPAM> wrote:
> Haaaa..... it just reminds me of the old Maccaroni generator which
> drifted 1-2MHz per hour on 144MHz for the first day, but if you needed
> it in the week-end you could switch it on some days in advance

I've got two Marconi 2019A sig. gens. They are very good (they used them at Racal where I used to work) if a bit heavy, especially as I got one for a fraction of the usual price at a radio rally because the seller thought it was faulty. I thought it might do for spares. It was just set up for external ref. input, which generated a fault condition when it didn't get it. He had another one with the same 'fault', I would have bought that as well if I hadn't checked the one I bought until the next day. 8-(

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.com
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

463. Re: Ferrite cores in Netherlands??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 11:55:56 UTC
From: Eim Mulder <e.mulder@compaqnet.nl>
Message-ID: <aehud7$580$1@reader12.wxs.nl>
Source record: 43326

Hi,

A good and cheap adress is to find onto the next wbpage of Barend Hendrisen:
http://www.xs4all.nl/~barendh/Indexned.htm
There you are able to find almost everthing for Ham-Radio and/or HF.

Greetings from.................Eim.................PA3CMD

"Eike Lantzsch, ZP6CGE" <eikelan@gmx.net> schreef in bericht
news:slrnafipc7.30b.eikelan@ID-77364.user.dfncis.de...
> J M Noeding wrote:
> > On Sun, 02 Jun 2002 23:09:20 GMT, mike@corn2.freeserve.co.uk (Mike W)
> > wrote:
> >
> > >On Sun, 2 Jun 2002 23:31:18 +0300, "VITEL" <vitel@eunet.yu> wrote:
> > >
> > >>Where in Netherlands I can find ferrite corres for buy?? (For ex. FT
37-43,
> > >>FT 37-61 etc)
> > >>
> > >try this URL
> > >
> > >http://www.xs4all.nl/~barendh/Indexeng.htm
> > >
> > >I'm getting a frame with 'page not found' on the site tonight, but
> > >they have an excellent range of RF bits and bobs if you download their
> > >catalog.
> > >hth MIke W, G8NXD qthr
> >
> > Believe they are also available at low price from G-QRP club, and at
> > very high price in Germany (hi)
> > --
> > remove ,xnd to reply
>
> You might want to have a look here
>
> http://www.kent-electronics.nl/ under "voorraad ferriet"
>
> Regards, Ike

464. Experience wanted for the Unichip.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 12:41:19 UTC
From: Eim Mulder <e.mulder@compaqnet.nl>
Message-ID: <aei127$7ca$1@reader12.wxs.nl>
Source record: 43327

Hi,

I am busy of remaking a design of the Unichip tranceiver from G3MY. Some yeares ago has PA0WDW wrote about this simple TRX into the club-magazine of THE BQC Benelux QRP magazine.

In this design there is used the CA3046 (CA3086) and a handfull of other components.

PA0WDW have made sevral changes and know its a very good working rig.

There is only one dispite and that it is only to be used for CW.
On this moment I am busy to modificate it so it can also work with DSB, and that only achanging the mixer and adding some capacistors and inductors. The basic is still the use of one chip for the basic design 100mW and with adding one RF trasistor a 2N2219A booting it to about 1 Watt.

The layout for it is almost ready and will be made onto a short term.

I would like to know if there are other Hams who have made this simple rig and if he had made also some modifications to it.

If there are also other ones who also want to build it with all modifications of PA0WDW and those of mine to work onto phone (DSB), please let me know as we can share the results and or next modifications to get a even better design.

These design will also be placed onto my wbsite, a link to these site is to found onto www.qsl.net/pa3cmd

Basically the rig is only to be used for 80m, so I am also busy to make a kind of adapter to that it also will work onto onther. The Idea is to make several Adapters for all those band what I personal find interesting as 10, 15, 6 metres.
And that all with a max power of 100mWatt (1 Watt)

Eim.....PA3CMD

465. Re: MC145027 Motorola Chip - needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 13:14:31 UTC
From: Peter Hofmann <peter.hofmann@teleweb.at>
Message-ID: <Xa0P8.259295$305.3672185@news.chello.at>
Source record: 43328

Looking for MC145027 abt 20-30 pieces ... info ?

466. Re: 10-meter amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 14:10:39 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ugp74gbl478f74@corp.supernews.com>
Source record: 43329

Patrick

John kind of echoed some thoughts I had this morning.

If you are talking SSB, and if you are talking paths of, say, over 500 miles, then going from 25 watts to 200 watts isn't going to help much on 10. In fact, I'd be surprised if you could see any difference at all.

On 80 and 40, atmospheric noise and absorption mean that power can be used to overcome the path loss. On 20 phone, the noise is from a lot of strong stations, so power can help overcome that deficit. But on 10, propagation is dominated by sporadic E, which is very low loss, and F skip, which is limited by E layer absorption, which on 10 is virtually nonexistent. The band isn't crowded enough that you are really competing with the kilowatts.

If you aren't having a lot of success at 25 watts, then I would look elsewhere in your system for the solution. The one or two S units you will gain from going to 200 watts isn't going to be worth the trouble. On 10 CW, a couple of watts is more than adequate, and on SSB, 5 or 10 will generally do the trick. FM is a little more power hungry, so more power may be a LITTLE help, but it's not going to be huge.

Now if you are talking about much shorter paths, then maybe power can help. For paths <100 miles, a little more antenna height will help a lot more than power. Again, tho, if you are looking for relatively local FM contacts, then maybe the power is the answer. But if you are looking for contacts in that 100-500 mile range, then power can be a big deal. There, tho, I would be looking for a full gallon, and lots of antenna gain. Even so, contacts will be few and far between.

As John also alluded to, openings on 10 are fairly rare. Es openings are going to occur when the flux is fairly high and you are about 400 miles from a thunderstorm, which makes it a late spring/early summer phenomenon mostly. F openings will occur when the flux is very high and generally in the middle of the day at the path midpoint, so European openings are going to tend to be in the morning. On top of the 11 year cycle the sun has a rotation that is approximately monthly. You will see a similar cycle in openings, but there is a lot of randomness in both the flux and the openings.

If you make a habit of checking http://www.qrz.com/solar.html every day, after a while it will become obvious to you what sorts of propagation to expect. Keep an eye on the flux, which will give you an idea of where the MUF is likely to be, and the A and K indices. When the flux starts to get up around 200, 10 meter F openings are going to be frequent. At 150 or so, Es openings are likely if you have a well-positioned thunderstorm. If A and K start to get very high, noise may become an issue but that is pretty rare

on 10. Indeed, high A index numbers could be a harbinger of interesting 10 meter propagation, while on the lower bands, they mean it's time to watch TV instead. The warnings of space storms are interesting because although they often cause HF blackouts, the time before and after they hit often involve unusual propagation, and the HF blackouts are rarely severe enough to affect 10, so there could be some real DX opportunities around those times.

Hope this helps...

..

"john graesser" <graesser@tca.net> wrote in message
news:ugoblkqd9ulfb3@corp.supernews.com...
>
> I would guess that you have already been told by someone who knows better
> that when 10 is dead a million watts won't get the message thru, and when
it
> is hot 5 watts will do?

467. TOKO Inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 14:44:27 UTC
From: SB <susantv69_uk@btinternet.com>
Message-ID: <aei88aecf1@helle.btinternet.com>
Source record: 43330

Having just returned to homebrewing again, I am finding it difficult to source TOKO inductors here in the UK, Maplin's have now discontinued them. Can anyone advise of a source for these please.

Simon G7CPN.

468. Re: 10-meter amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 15:30:58 UTC
From: ogrowup@webtv.net
Message-ID: <411-3D0CAF32-27@storefull-2236.public.lawson.webtv.net>
Source record: 43331

Many thanks to all of you. I've been licensed for 10 years now (just renewed, in fact) as a tech +, and (obviously) have been operating under a few misconceptions. The desire for more power grew out of a sense of frustration when, one evening, I stumbled across a FP0 station. He was S9+++, so I joined the fray. It was soon apparent there were about 200 W6's between me & him with kilowatts & beams...
Anyway, again my thanks. Maybe I'll concentrate on operating skills instead of trying to overpower everything :). Brute force has it's place but so does finesse
See you all on Field Day(Listen for our club station, AD1T)!

Patrick O'Connor,N1NCJ

"Eagles may soar but weasels aren't sucked into jets."

469. Re: TOKO Inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 15:38:02 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <rhgg3XCaDLD9EAy6@ifwtech.co.uk>
Source record: 43334

SB wrote:
>Having just returned to homebrewing again, I am finding it difficult to
>source TOKO inductors here in the UK, Maplin's have now discontinued them.
>Can anyone advise of a source for these please.
>

www.bec.co.uk

BEC are the UK importers for TOKO, and the whole catalogue is on-line.
BEC hold stocks of some items while others (very similar) are on 6-week
delivery from Japan, so you'll need to phone to check availability and
maybe think about substitutions. BEC are happy to accept
credit/debit-card orders from private individuals.

I try to keep up-to-date details of all UK component suppliers on the
'In Practice' web site at www.ifwtech.co.uk/g3sek/in-prac/components.htm
Please let me know if you discover anything new.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
New e-mail: g3sek@ifwtech.co.uk
New website: http://www.ifwtech.co.uk/g3sek

470. Re: TOKO Inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 15:53:23 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <aeic9i$2h7$1@paris.btinternet.com>
Source record: 43332

"SB" <susantv69_uk@btinternet.com> wrote in message
news:aei88aecf1@helle.btinternet.com...
> Having just returned to homebrewing again, I am finding it difficult to
> source TOKO inductors here in the UK, Maplin's have now discontinued them.
> Can anyone advise of a source for these please.
>
> Simon G7CPN.
>
>

Try Bonex (BEC). They are the main Toko distributor in the UK.
http://217.34.228.137/startpages/framed/home.htm

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.com
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

471. How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 17:55:53 UTC
From: dankal@email.com
Message-ID: <32a72a54.0206160955.78fccaca@posting.google.com>
Source record: 43333

Hello everyone,
I need advice on how to put together a mobile antenna for 10 meters.
Should i use a cb whip and cut it to the poroper length?(around 8FT)
Or is there a better material to use?

Dan KB3IBT

472. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 18:54:50 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3D0CDEFA.B861E30B@ay.com.au>
Source record: 43335

Dan Kalczuk wrote:

> I need advice on how to put together a mobile antenna for 10 meters.
> Should i use a cb whip and cut it to the poroper length?(around 8FT)
> Or is there a better material to use?

Yes, but you won't cover the whole 28-29.7 band with one whip.

The Q of such an antenna is very high, and could also pose problems with power, at high RF input power they act like tesla coils and will corona like hell, or melt and catch fire from the circulating currents.

If you can add a plate to top-load the whip you can drop its Q you can prevent this. Best to start with a chunky whip, braided windings to handle the power and a thick former for lower Q and broader bandwidth.

Those ones with adjustable tips can tune the whole band if you take off turns from the top and reconnect them to the tip holder.

--
Alan Yates
http://www.vk2zay.net/

473. Re: A pair of Wavetek 3002 signal generators on eBay

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 20:14:29 UTC
From: la8ak.xnd@online.no
Message-ID: <3d0cd8ff.267629127@news.online.no>
Source record: 43336

On Sun, 16 Jun 2002 11:37:27 +0000 (UTC), "Leon Heller"
<leon_heller@hotmail.com> wrote:

>> Haaaa..... it just reminds me of the old Maccaroni generator which
>> drifted 1-2MHz per hour ..

>I've got two Marconi 2019A sig. gens. They are very good ..

Leon

I'm sure MI makes some good instruments, but I wouldn't believe you
are old enough to have purchased the sort I am referring to as brand
new. Believe they were had one triode as oscillator and piston type
attenuator(?
If you went to an electronics broker in London 20-30 years ago, you
might have found the type. But we has some of the sort at the PO IMTR
Res.3 Labs at Bearly, S-O-A

73,
LA8AK (ex G5BFV)
--
remove ,xnd to reply

474. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 20:44:55 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <bN6P8.279022$Kp.22480228@bin7.nnrp.aus1.giganews.com>
Source record: 43337

That hasn't been my experience. A whip of around 8 feet length is an almost perfect antenna, and ceertainly very cheap.

I have never had corona problems and the bandwidth is excellent. No, it doesn't cover the entire band with low SWR but very few people want to cover the whole band. Typically, you get one third of the band, which is more than enough for ordinary operations.

28.0-283. CW
28.3-28.4 Casual conversation
28.4-28.6 More interesting stuff, like DX and more profound things
28.9-29.1 AM operation
29.5-29.7 FM, repeaters

I adjust mine to cover from 28.0 to 28.6 and a simple whip does an excellent job.

If you decide to operate outside the limits of the antenna, there are a few solutions. One is a tuner. Another is a clip lead to add some length (if adding is what you want).

73, Bob K6DDX

475. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 21:17:41 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3D0D0075.451A662A@ay.com.au>
Source record: 43338

Sorry, I mis-read the original poster, re the 8-feet, figured he was talking about short-helicals. On my stainless whip I get about 600-800 kHz 2:1 bandwidth, with fat helicals getting 300-400 kHz if they are lucky.

Bob wrote:
>
> That hasn't been my experience. A whip of around 8 feet length is an almost
> perfect antenna, and ceertainly very cheap.
>
> I have never had corona problems and the bandwidth is excellent. No, it
> doesn't cover the entire band with low SWR but very few people want to cover
> the whole band. Typically, you get one third of the band, which is more
> than enough for ordinary operations.
>
> 28.0-283. CW
> 28.3-28.4 Casual conversation
> 28.4-28.6 More interesting stuff, like DX and more profound things
> 28.9-29.1 AM operation
> 29.5-29.7 FM, repeaters
>
> I adjust mine to cover from 28.0 to 28.6 and a simple whip does an excellent
> job.
>
> If you decide to operate outside the limits of the antenna, there are a few
> solutions. One is a tuner. Another is a clip lead to add some length (if
> adding is what you want).
>
> 73, Bob K6DDX

--
Alan Yates
http://www.vk2zay.net/

476. Re: 10-meter amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 21:30:50 UTC
From: 2w8ji@contesting.com
Message-ID: <3d0d00e5.74742095@news.akorn.net>
Source record: 43339

On Sun, 16 Jun 2002 11:30:58 -0400 (EDT), ogrowup@webtv.net wrote:

>Many thanks to all of you. I've been licensed for 10 years now (just
>renewed, in fact) as a tech +, and (obviously) have been operating under
>a few misconceptions. The desire for more power grew out of a sense of
>frustration when, one evening, I stumbled across a FP0 station. He was
>S9+++, so I joined the fray. It was soon apparent there were about 200
>W6's between me & him with kilowatts & beams...
>Anyway, again my thanks. Maybe I'll concentrate on operating skills
>instead of trying to overpower everything :). Brute force has it's
>place but so does finesse
>See you all on Field Day(Listen for our club station, AD1T)!

Pat,

The case you are talking about is totally different than the
circumstances alluded to by others.

They are talking about contacts when propagation is good, noise levels
are low, and there is no QRM.

You are describing a case where power and antenna is very important.

In the case where propagation is poor (that happens on ten meters,
even though some of us pretend that it is like a switch that is either
"on" or "off"), noise levels are high, or other staions are calling
even the slightest amount of power increase can make a profound
difference in results.

So while there is some truth in the idea that small or poor antennas
and low power will work well on ten meters, that general statement
only applies when propagation is good and the receive station has no
noise or QRM.

In a case where you are about even with noise or QRM, even as little
as 1dB can make a noticable improvement in readability. On the other
hand 10dB improvement would be unnoticable if you are already 20 dB
out of the noise or QRM.

73 Tom

477. Slug-tuned coil forms

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 21:34:15 UTC
From: 2w8ji@contesting.com
Message-ID: <3d0d02d6.75238595@news.akorn.net>
Source record: 43343

Does anyone still manufacture nice high-quality powdered iron core
slug-tuned coil forms, like the old ceramic forms from years ago?

If not, what do people do for modest power high-stability inductors
that must have a reasonably large but stable adjustment range??

Thanks,

Tom

478. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 21:34:36 UTC
From: john graesser <graesser@tca.net>
Message-ID: <ugq10p9p8eot91@corp.supernews.com>
Source record: 43340

"Bob" <balbert@cnmnetwork.com> wrote in message
news:bN6P8.279022$Kp.22480228@bin7.nnrp.aus1.giganews.com...
> That hasn't been my experience. A whip of around 8 feet length is an
almost
> perfect antenna, and ceertainly very cheap.
>
> I have never had corona problems and the bandwidth is excellent. No, it
> doesn't cover the entire band with low SWR but very few people want to
cover
> the whole band. Typically, you get one third of the band, which is more
> than enough for ordinary operations.
>
> 28.0-283. CW
> 28.3-28.4 Casual conversation
> 28.4-28.6 More interesting stuff, like DX and more profound things
> 28.9-29.1 AM operation
> 29.5-29.7 FM, repeaters
>
> I adjust mine to cover from 28.0 to 28.6 and a simple whip does an
excellent
> job.
>
> If you decide to operate outside the limits of the antenna, there are a
few
> solutions. One is a tuner. Another is a clip lead to add some length (if
> adding is what you want).

I went the tuner route when I changed from an htx100 to an htx10 in the car,
but one other option has always interested me.

Has anyone tried putting one antenna in the back of the car cut to cover
28.1-.5 and another antenna cut to cover 29.5-.7 in the front of the car.
Using an antenna switch if you pick the rear antenna, the front antenna will
somewhat act as a director, if using the front antenna, the rear antenna
will act as a reflector. Point the car in the direction you are trying to
communicate (preferably not while going down the highway) and it becomes a 2
element antenna. You may lose more in the antenna switch than you gain with
the second element, but I have always wanted to try this.
thanks, John.
KC5DWD

479. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 21:52:00 UTC
From: jgboyles@aol.com
Message-ID: <20020616175200.11003.00000628@mb-fr.aol.com>
Source record: 43341

>> I need advice on how to put together a mobile antenna for 10 meters.
>> Should i use a cb whip and cut it to the poroper length?(around 8FT)
>> Or is there a better material to use?

The 8 foot whip would be the best overall. On 10m it is a full quarter wavelength, so your efficiency would be quite high. That's the problem on the lower bands where mobile antennas are much less than quarter wave. Low efficiency.
>Yes, but you won't cover the whole 28-29.7 band with one whip.

He would cover a large portion, which should make any mobile ham happy. My homebrew 40m mobile covers 40khz and I am quite happy, after all I am mobile. 1/4 whip on 10m- 300-400khz?
>The Q of such an antenna is very high, and could also pose problems
>with power, at high RF input power they act like tesla coils and will
>corona like hell, or melt and catch fire from the circulating currents

Good grief, how much power do you run on 10m. When the band is open, 25 watts is plenty. If the band is not open, then most hams go to one that is, or turn their radio off. The only people that run enough power mobile to cause corona problems are cb'ers trying to run 10,000 watts into a 1/4 whip on 27 mhz. A Tesla coil is a 1/4 wave antenna, and a 1/4 wave whip on 10m is a Tesla coil. A 1/4 wave vertical is current fed at the base, where the voltage developed is minimum. At 90 degrees or 1/4 wave the voltage is at a maximum which is coincidently the Tesla coil principle. The big difference is the frequency that the two operate. T coils run around 200-600 khz depending on how big a coil you got. These are solenoid coils, but still 1/4 wave resonant. An 8 foot whip on 10 is 1/4 wave resonant.
>If you can add a plate to top-load the whip you can drop its Q you can
>prevent this. Best to start with a chunky whip, braided windings to
>handle the power and a thick former for lower Q and broader bandwidth.

I have no idea why you would want to do all that. A 1/4 wave whip for mobile on 10m sould be about a good as it gets. Easy to mount, easy to tune, works good, and wide bandwidth. BTW this question should have been posted on the RRAA antennas group. Probably get many replies and lots of interesting discussion.
73 Gary N4AST

480. Re: Calling For Simple Circuits For Student Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 21:58:37 UTC
From: "William A. Wetzel" <n6rky@circuitsandparts.com>
Message-ID: <hS7P8.2121$6a.45@newsread1.prod.itd.earthlink.net>
Source record: 43342

Dear Hans,

I want to thank you and everyone who had responded to this call for papers.
The information will be of great help to me in class and on my web site.

Best Wishes,
William A. Wetzel
http://www.circuitsandparts.com

Hans Summers <Hans.Summers@Tudor.Com> wrote in message
news:ae9pni$523gm$1@ID-61331.news.dfncis.de...
>
> You might like some of my stuff, follow the URL below for my page
>
> ------------------
> Hans Summers, G0UPL
> http://www.HansSummers.Com
>
>
>
>
> "William A. Wetzel" <n6rky@circuitsandparts.com> wrote in message
> news:8BYN8.3$TE.0@newsread1.prod.itd.earthlink.net...
> > For all the experimenters at large:
> >
> > I am an electronics distributor during the day, and a part-time college
> > instructor at night. Most electronics stores do not serve students
and/or
> > electronics enthusiasts very well in my area. I am setting out to change
> > that (at least in a small way) over the summer.
> >
> > I am looking for nice simple projects for students to build, especially
> > those which are Amateur Radio related. Besides drawing some from the
ARRL
> > publications, I'm hoping to incorporate many from the "traditional
> > tinkerers" at large. If you have a special project that you are
especially
> > proud of, which you want to live on... I would be most happy to hear
from
> > you.
> >
> > Best Wishes,
> > & 73 de N6RKY
> > --
> > William A. Wetzel

> > http://www.circuitsandparts.com
> >
> >
> >
>
>
>

481. Re: Calling For Simple Circuits For Student Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 22:04:06 UTC
From: "William A. Wetzel" <n6rky@circuitsandparts.com>
Message-ID: <qX7P8.2132$6a.907@newsread1.prod.itd.earthlink.net>
Source record: 43344

Dear Mike,

Yes... I have been using some of the Radio Shack books already. They have been a great asset in class for our projects. I hope they keep publishing them :)

Best Wishes,
William A. Wetzel
http://www.circuitsandparts.com

Mike Hall <wb3fup@webtv.net> wrote in message news:16356-3D08A1F8-105@storefull-2335.public.lawson.webtv.net...
Go to Radio Shack, they carry books called "Engineer's Mini Notebooks" that are full of what you are looking for. They used to be limited to a single subject (555 timers, for example) but now two and three of the phamplets have been combined into one larger book.

73 es cul

wb3fup
a salty bear
==========

Calling For Simple Circuits For Student Projects

Group: rec.radio.amateur.homebrew Date: Thu, Jun 13, 2002, 8:20am (EDT+4) From: n6rky@circuitsandparts.com (William A. Wetzel)
For all the experimenters at large:
I am an electronics distributor during the day, and a part-time college instructor at night. Most electronics stores do not serve students and/or electronics enthusiasts very well in my area. I am setting out to change that (at least in a small way) over the summer.
I am looking for nice simple projects for students to build, especially those which are Amateur Radio related. Besides drawing some from the ARRL publications, I'm hoping to incorporate many from the "traditional tinkerers" at large. If you have a special project that you are especially proud of, which you want to live on... I would be most happy to hear from you.
Best Wishes,
& 73 de N6RKY
--
William A. Wetzel
http://www.circuitsandparts.com

482. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 22:28:19 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aej3e2$i8c$1@paris.btinternet.com>
Source record: 43345

> Yes, but you won't cover the whole 28-29.7 band with one whip.
>
> The Q of such an antenna is very high, and could also pose problems
> with power, at high RF input power they act like tesla coils and will
> corona like hell, or melt and catch fire from the circulating currents.
==========

Rubbish ! Piffle !

The Q of a 1/4-wave whip at 29 MHz is quite low, around 8, 3dB bandwidth roughly 29 / 8 = 2.5 MHz.

Prune it to resonate at about 28.8 MHz and away you go. But you won't get a 1:1 SWR without a simple L+C tuner at the bottom.

Or if you are pernickerty, just get a vertical of some sort, prune it to be 1/4-wave resonant roughly around 29.4 MHz, and when you want to work between 28 and 29 MHz just use a crocodile clip to add on a few more inches. Extending sideways is quite OK.

Or use a thick copper wire at the top which will stay in position when bent.

Or to do a nice job, put the top few inches on a hinge which will increase overall height when out straight and decrease overall height when the top few inches are hinged back near to the main rod or whip.

Again, if you are very pernickerty, a tuner will be needed for exact 1:1 SWR. But if you are interested only with the 10 meter band a tuner should not be necessary.

Most transmitters will work fine with an SWR not greater than 1.5:1 Perhaps more.

You should be able to do the job in less time than it takes to make enquiries on this newsgroup. ;o)

Enjoy your experimenting.

==========
Regards from Reg G4FGQ
Free Radio Modelling Software
Go to http://www.g4fgq.com
==========

483. 1N5397 Replacement

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 23:33:21 UTC
From: No PC here <RAJohnGM@worldnet.att.net>
Message-ID: <5f9P8.45064$UT.3089550@bgtnsc05-news.ops.worldnet.att.net>
Source record: 43346

Is a 1N5397 a general purpose diode. What is a replacement?
Tnx. Bob

484. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 23:50:30 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3D0D2445.D1F13E4B@ay.com.au>
Source record: 43247

JGBOYLES wrote:

> A Tesla coil is a 1/4 wave antenna, and a 1/4 wave whip on 10m is a Tesla
> coil. A 1/4 wave vertical is current fed at the base, where the voltage
> developed is minimum. At 90 degrees or 1/4 wave the voltage is at a maximum
> which is coincidently the Tesla coil principle. The big difference is the
> frequency that the two operate. T coils run around 200-600 khz depending on
> how big a coil you got. These are solenoid coils, but still 1/4 wave resonant.
> An 8 foot whip on 10 is 1/4 wave resonant.

I missed the 8-ft bit in the original post, hence I figured he was talking about fibreglass helicals, which suffer the tesla coil problem even with only modest power. Your average $10 one is wound with pathetic wire as far as efficiency and power handling go.

I've never had an issue with corona on full-height verticals, only cheap and nasty CB whips run with stupid power levels. As you say, it is mainly a problem for the chook bander with a massive amplifer in the boot.

I have had bandwidth problems though, and a top hat helped.

There is no reason to limit Tesla coils to LF/MF, you can happly make them work at any frequency, with some engineering advantages for flash over as you go higher, but increased losses as well.

--
Alan Yates
http://www.vk2zay.net/

485. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-16 23:58:44 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3D0D2634.B347011A@ay.com.au>
Source record: 43248

Reg Edwards wrote:
>
> > Yes, but you won't cover the whole 28-29.7 band with one whip.
> >
> > The Q of such an antenna is very high, and could also pose problems
> > with power, at high RF input power they act like tesla coils and will
> > corona like hell, or melt and catch fire from the circulating currents.
> ============================
>
> Rubbish ! Piffle !

Yeah, yeah. I was obviously talking about helicals.

> The Q of a 1/4-wave whip at 29 MHz is quite low, around 8, 3dB bandwidth
> roughly 29 / 8 = 2.5 MHz.

I haven't got the antenna book on me right now, what formular do you
use to get that?

--
Alan Yates
http://www.vk2zay.net/

486. Re: A pair of Wavetek 3002 signal generators on eBay

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 00:05:38 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <aej94t$1q7$1@nntp9.atl.mindspring.net>
Source record: 43249

The 3001 has indicator LEDs which gave me a clue as to which module was the culprit... And it may have been a tantalum that failed. It was quite awhile ago, but it was either an electrolytic or a tantalum.

Fortunately, I had the service manual and I was able to troubleshoot to the exact component.

Jim Pennell
N6BIU

487. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 00:11:45 UTC
From: w_tom <w_tom1@usa.net>
Message-ID: <3D0D2940.E64BE95D@usa.net>
Source record: 43250

ehsjr does not do math before insulting others:

A #20 AWG dropped on a 20 amp circuit breakered circuit does not vaporize. The circuit breaker trips first. ehsjr would have known that if properly educated. Why? The 20 AWG copper wire has a fusing current of 58.4 amps. Again, basic EE facts.

But lets say a 100+ amp 120V circuit is short circuited by one foot of 20 AWG copper wire. 58.4 amps in that short circuit means that 0.592 volts appears on that wire as it vaporizes. Where are the other 119.41 volts? Elsewhere in the circuit. A 1 second short circuit dissipates only 34.6 joules in the wire AND 6970 joules elsewhere in the circuit. Clearly that shunt does not absorb the surge. As a nearly ideal short circuit, it absorbs nearly 0 joules of energy.

According to ehsjr, 7000 joules would be "absorbed" by a one second the copper wire short circuit. Reality: 99.51% of the surge energy created by a 20 AWG shorting wire is absorbed elsewhere.

MOVs operate same. They also shunt surges. Most of the energy shunted by an MOV is absorbed elsewhere. ehsjr would have us believe that an MOV absorbs the entire surge. What nonsense! ehsjr also would have us believe the vaporized 20 AWG wire also absorbed the entire transient that vaporized the wire. In reality, the wire is vaporized only by 0.49% of the energy involved in that short circuit. If the wire were an ideal short ciruit, then it would have absorbed 0% of the energy.

ehsjr must not have any EE training. He thinks a 20 amp breaker would vaporize a #20 AWG copper wire - because he fails first to do the numbers. Where does he get these ideas? Comic books? Super hero movies?

The same person who says an MOV absorbs surges also implies that differential mode and common mode transients are same. He also said so in previous threads. I have been through this same discussion with ehsjr repeatedly for many years. He still insists that 20 AWG wire short absorbs all the energy. I don't expect him to change. However his errors are cited for the benefit of others. His erroneous use of electrical principals is why he also thinks plug-in surge protectors can be effective. One thing that has changed is he is now

resorting to insults because of his insufficient engineering
background.

It does not take an engineering degree to first obtain
numbers. However when one thinks a 20 amp circuit breaker
permits a 20 AWG wire to be vaporized, then doubt that poster
has any EE training. When the poster thinks a wire shunt
absorbs all energy that passes through it, then we know it is
science fiction. Science fiction from someone who has no
credibilty criticizing another's education especially when he
cannot even perform basic math correctly.

ehsjr@bellatlantic.net wrote:
>
> w_tom wrote:
> >
> > The only short circuit that absorbs energy is one that
> > really is not a short circuit.
>
> Bullshit - you do not understand what a short circuit is.
>
> > Ideal short circuits absorb no
> > energy.
>
> He did not mention "Ideal short circuits".
>
> > Where did you take your EE training?
>
> You don't even understand ohm's law and you're attempting
> to discredit him with a snide question?
>
> > Imperfect
> > short circuits only absorb a minor percentage of energy.
>
> Bullshit. Drop a #20 bare wire across an energized
> 20 amp household circuit. What vaporizes? What absorbed
> the energy?
>
> > If
> > the purpose of short circuits were to absorb energy, then the
> > purpose of all electric company wires is also to absorb
> > energy. Obviously not. Ideal short circuits absorb no
> > energy. Better, real world short circuits absorb all but no
> > energy.
>
> How can anyone have a rational discussion of anything
> related to electrical issues with thinking like that?
>
> >
> > To say the purpose of a short circuit is to absorb energy is
> > to not understand basic EE principals and therefore to not

> > understand how surge protection works.
> >
> > Like the imperfect short circuit, the MOV does absorb a
> > minor percentage of energy.
>
> Which is a reversal of your earlier position that MOV's
> absorb NO energy. An MOV clamping a voltage at 330 and
> conducting a 100 ampere surge absorbs 100*330 or 33,000
> watts. Whether or not that is a minor percentage of the
> energy is not key. What is key is that the equipment
> the MOV protects "sees" only 330 volts, as long as the
> MOV continues to work during the surge. Where the surge
> energy goes doesn't matter to the equipment, as long as
> it doesn't "see" the damaging high voltage. You never
> mention this.
>
> ? But absorbing energy is not its
> > purpose. The purpose of MOVs and other shunt mode surge
> > protectors is to shunt - transfer energy elsewhere.
> >
> > If an MOV shunts a common mode surge across wires to an
> > appliance, then the adjacent MOV has only provided that common
> > mode surge with more paths to earth destructively through an
> > appliance.
> >
>
> Bullshit. You earlier specified that in your view
> a common mode surge can enter the house service panel on
> a single hot wire. The MOV connected from neutral to hot
> in a point of use protector protecting your refrigerator,
> clamps the voltage across line and neutral to 330 volts.
> Where are the destructive paths through the 'fridge?
>
> You always misuse the term common mode. If you want to
> make yourself clear, describe what you have in mind
> when you use the term. Give us the voltages between
> each point in the circuit that you envision so we know
> what you are talking about.
>
> > > What is it about this fact that makes it impossible
> > > for you to understand?
>
> It is not a fact; you misuse "common mode" so no one can
> understand you; you ignore the protection afforded when
> the MOV clamps the voltage across hot and neutral to
> ~330 volts.
>
> > Again you are describing a differential mode surge.
>
> Yes he did. And you completely ignore it.

>
> > Why to
> > you also have a problem with this basic EE concept?
>
> He understands it - you do not.
>
> > Why do
> > you confuse normal mode vs longitudinal mode transients as if
> > they were same?
>
> He did not confuse them - he specified the surge he was
> talking about. It is you who confused his description
> of a differential mode surge. Lord only knows what *you*
> think a normal mode transient is, but if you use the terms
> properly normal mode = differential mode, and common mode
> = longitudinal mode.
>
> > Put all MOVs across all the AC inputs to an appliance - and
> > the common mode surge will simply fly past them on its way to
> > earth ground through the appliance.
>
> Bullshit. The common mode surge elevates both the neutral
> and the hot wires. But the neutral wire is elevated far
> less, because it is connected to the grounding electrode
> via the grounding electrode conductor and main bonding
> jumper. Therefore, the hot wire is elevated far higher
> than the neutral wire. That means that there is a differential
> mode surge that could be "seen" by the appliance.
> The MOV's will clamp the voltage that the 'fridge "sees"
> to ~330 volts. The case of the fridge is connected to
> the same place in the service panel as the neutral, via
> the equipment grounding conductor. Unless there is a defect
> in the 'fridge, there is no internal path for current to
> flow to the case of the 'fridge. In addition, an external
> point of use MOV connected hot to ground clamps the hot
> to case potential to ~ 330 volts if a surge causes it to
> switch from very high resistance to low resistance.
>
> > Even better, short all
> > the AC wires together with wire. Still the common mode surge
> > will pass by on its way, destructively, through appliance to
> > earth ground.
>
> Show us the path. We've got the neutral, hot and egc
> shorted together at the receptacle into which the
> refrigerator is plugged. A common mode surge occurs
> and enters your service panel. What is the destructive path
> through the fridge to ground?
>
> > Somehow you keep thinking that a common mode

> > transient is just like a differential mode transient.
>
> He has made only one post in this thread, so any observation
> by you that he "keep(s) thinking" something is not supported.
> But that is not the problem. He SPECIFIED a particular
> surge, and you insist on trying to twist it to something else.
>
> And aside from that, you do not understand a common mode
> surge to begin with. You seem to think that any surge
> that "seeks ground" automatically precludes a differential
> mode - hot to neutral - surge. In fact, any common mode
> surge entering your service panel will be a differential
> mode surge on the hot and neutral branch circuit wiring
> in a grounded service.
>
> >
> > If that MOV worked across AC inputs to appliances, then why
> > do appliance manufacturers not install them? Answer to that
> > question is essential for your claims of protection to have
> > any credibility.
>
> Absolute fucking bullshit. 1) MOV's are included in some
> equipment, so your premise is FALSE. 2) Whether or not
> an appliance manufacturer includes a particular component
> or not has nothing to do with whether or not that component
> can provide a particular function that is not essential
> to the appliance's operation or acceptability for market.
> Your logic is totally bizarre.
>
> > Those MOVs are not installed inside
> > appliances
>
> False premise. They are in some appliances.
>
> > because they are not effective when too close to
> > transistors and too far from earth ground.
>
> False. You ignore differential surges; you assume
> transistors.
>
> > Even your own
> > example demonstrate no effective surge protection. All that
> > was proven is a grossly undersized surge protectors was
> > damaged by a surge too small to even damage the appliance.
>
> Howinthehell do you know the surge was too small to damage
> the appliance? Like the rest of your unsupported statements,
> your thinking boggles the mind.
>
> >

> > If your surge protector across AC inputs worked, then in
> > engineering terms, where did the surge go?
>
> How many eff-ing times will you post this drivel? The
> protector absorbed enough energy to destroy it. You
> earlier admitted he was talking about a differential
> mode surge, and now twist it to common mode. Ok,
> lets use your common mode surge, specified at 100
> amps, which "approaches the appliance", and his destroyed
> supressors, since you insist it had to be common mode.
> There, it encounters two MOVs, one from neutral to ground
> and one from hot to ground. Each clamps the voltage
> to 330 volts. We don't know the individual currents,
> all we know is that there is a path that causes 100
> amps to be drawn. But we do know the total amperage
> across them is 100 amps and the voltage across them is 330
> volts. Therefore, at the instant in time where 100 amps
> is flowing in the circuit and the MOVs are clamping the
> voltage to 330, the combined wattage is 33,000 watts.
> If you want to make the math just a bit messier, consider
> the protected appliance. He did not specify - I will.
> It is a 60 watt TV with rabbit ears. The path for
> the common mode surge is "the outside world" into the
> service entry panel. From there, it follows the
> grounding electrode conductor to the grounding electrode
> system. Some of the energy is dissipated in the grounding
> electrode conductor, some is dissipated in the ground and
> some in the electrode system. So far, all of that energy found
> its path from the neutral wire feeding your house -
> none of it from the hot wire, since the hot wire is
> not connected to the ground system. The result is a voltage
> drop across the neutral wire feeding into your house,
> without a corresponding voltage drop in the hot wire.
> This creates a DIFFERENTIAL surge at the service panel.
> In your specification, there is at least enough energy
> "left over" to allow a 100 amp current flow towards the
> appliance. It does so across the neutral and the hot wires,
> as a differential mode surge. The TV at the end of the
> circuit is connected to only those two points - there
> is no other available path, aside from the MOV point of use
> protector. Considering the part of the surge you mentioned,
> the 100 amps that approaches the appliance - the path
> is simple: from panel via hot wire to mov to panel via
> neutral wire. And, as mentioned earlier, from panel neutral
> to ground via the grounding system. In the path, energy
> passing through the MOV is absorbed in accordance with
> ohm's law. It is also absorbed in the hot wire and the
> neutral wire and the ground system - all in accordance
> with ohm's law. You have never grasped this concept. You
> seem to think diverted energy does nothing but somehow

> "flow into" ground. You seem to think that all of the
> energy in a surge must be "returned to ground" as
> an electrical charge. Not so. In addition to "charging
> ground" (i.e. raising the local ground potential),
> electrical surge energy can be, and is, converted into
> heat in the wires, the MOV and ground itself.
>
> Your continued erroneous postings on the technical aspects
> of this destroy any good points you want to make.
>
> What was the
> > incoming path and what was the outgoing path? A 100 amp
> > common mode surge approaches the appliance. What does that
> > MOV across the AC inputs do? This is basic engineering. To
> > say that a surge protector worked demands that you can say
> > why? What was the incoming and outgoing path of that surge?
> >

488. Re: Calling For Simple Circuits For Student Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 00:15:11 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3D0D2A0F.854A5B56@ay.com.au>
Source record: 43251

Hans Summers wrote:
>
> You might like some of my stuff, follow the URL below for my page

I like the nixie clock :-)

--
Alan Yates
http://www.vk2zay.net/

489. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 01:12:41 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aejd29$7qm$1@paris.btinternet.com>
Source record: 43252

> I haven't got the antenna book on me right now, what formular do you
> use to get that?
==========

What makes you think the Antenna Book will give you a formula for the Q of a quarterwave vertical on the 10m band ?

I doubt that it does. I don't get my information from there.

And if it does, how will you know it's correct ?

Regards, Reg. G4FGQ

490. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 01:23:59 UTC
From: 2w8ji@contesting.com
Message-ID: <3d0d335b.87661343@news.akorn.net>
Source record: 43253

On Sun, 16 Jun 2002 20:11:45 -0400, w_tom <w_tom1@usa.net> wrote:

> But lets say a 100+ amp 120V circuit is short circuited by
>one foot of 20 AWG copper wire. 58.4 amps in that short
>circuit means that 0.592 volts appears on that wire as it
>vaporizes. Where are the other 119.41 volts? Elsewhere in
>the circuit. A 1 second short circuit dissipates only 34.6
>joules in the wire AND 6970 joules elsewhere in the circuit.
>Clearly that shunt does not absorb the surge. As a nearly
>ideal short circuit, it absorbs nearly 0 joules of energy.

That is not correct. It takes a finite amount of time for the wire to
melt, and the power would divide between the resistance in the wire
and the ESR or impedance of the rest of the system outside the wire.

> According to ehsjr, 7000 joules would be "absorbed" by a one
>second the copper wire short circuit. Reality: 99.51% of the
>surge energy created by a 20 AWG shorting wire is absorbed
>elsewhere.

The truth is we don't know what the surge current is because we don't
know what the system ESR or impedance is outside the wire loop.

> MOVs operate same. They also shunt surges. Most of the
>energy shunted by an MOV is absorbed elsewhere. ehsjr would

Not true, for the reasons given above. Power divides according to
system resistances, and surge current and power can be limited by
system reactances. Factually, neither of you can have any idea what
the total energy is and how it is distributed...because there are too
many unknowns. The energy dissipated in the MOV can range from near
100% of available energy to near zero percent.

>have us believe that an MOV absorbs the entire surge.

Of course it does not absorb the entire surge.

>nonsense! ehsjr also would have us believe the vaporized 20
>AWG wire also absorbed the entire transient that vaporized the
>wire. In reality, the wire is vaporized only by 0.49% of the
>energy involved in that short circuit. If the wire were an

You are both wrong. The truth is the small wire absorbs somewhere
between 100% and *much less* than .49% of the entire tansient.

>ideal short ciruit, then it would have absorbed 0% of the
>energy.

Now that much is certainly true, because in this case we know the dissipation in the perfect short...no matter what the rest of the circuit is comprised of.... is zero.

73 Tom

491. Re: 1N5397 Replacement

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 02:20:53 UTC
From: cowboy67 <cowboy67111@yahoo.com>
Message-ID: <aejh2g$f943$1@news3.infoave.net>
Source record: 43254

Try Part number NTE 580

"No PC here" <RAJohnGM@worldnet.att.net> wrote in message
news:5f9P8.45064$UT.3089550@bgtnsc05-news.ops.worldnet.att.net...
> Is a 1N5397 a general purpose diode. What is a replacement?
> Tnx. Bob
>
>

492. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 02:23:09 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aejh6c$t4$1@helle.btinternet.com>
Source record: 43255

I don't know how you got mixed up with helicals. Everybody makes a cock-up now and again. I do it all the time.

But I just made a more accurate check.

Height of whip or rod = 98 inches.

Average conductor diameter = 0.5"

Resonant frequency = 29.0 MHz.

Resonant input resistance = 68 ohms.

At resonance minimum SWR with respect to 50 ohms = 1.4:1

IF SWR is adjusted to 1:1 at resonance then bandwidth between SWR = 1.5:1 points is 1.3 MHz.

Bandwidth between SWR = 2:1 points is 2.0 MHz.

Which are wide enough to drive a horse and cart through.

But the perfectionists would be happier with a tuner consisting of a few turns on a coil and a small variable capacitor. CB-ers are quite happy without one.

The above figures will change several percent depending on size of vehicle the antenna is mounted on and the location of the antenna on the vehicle.

Basic message - fit the CB antenna and start transmitting. Look out for low road bridges.

Regards, Reg. G4FGQ.

Bandwidth between SWR =

493. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 03:04:02 UTC
From: gaschafer@attbi.com
Message-ID: <3d0d4e4f.19565804@netnews.attbi.com>
Source record: 43256

On Mon, 17 Jun 2002 02:23:09 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>
>But I just made a more accurate check.
>
>Height of whip or rod = 98 inches.
>
>Average conductor diameter = 0.5"
>
>Resonant frequency = 29.0 MHz.
>
>Resonant input resistance = 68 ohms.

Hi Reg,

How does it come out to 68 ohms? Is there that much ground loss from
the ideal 36 ohms?

73
Gary K4FMX

494. Re: Slug-tuned coil forms

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 03:08:58 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3D0D5137.4257F4EC@gte.net>
Source record: 43257

Tom W8JI wrote:

> Does anyone still manufacture nice high-quality powdered iron core
> slug-tuned coil forms, like the old ceramic forms from years ago?
>
> If not, what do people do for modest power high-stability inductors
> that must have a reasonably large but stable adjustment range??
>
> Thanks,
>
> Tom

Hi Tom,
I have kept a few in the junk box over the years- don't see anything
new. Seems today's broadbanded P.A.'s are all toroidal with high power
clad caps.
What exactly are you looking for, maybe I have something in the shop.
Dale W4OP

495. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 04:01:48 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aejmvb$o02$1@knossos.btinternet.com>
Source record: 43258

> How does it come out to 68 ohms? Is there that much ground loss from
> the ideal 36 ohms?
==========

As I said, I make cock-ups all the time.

I did the calculation on a center-fed dipole and forgot to divide by two.
It's the drink !

The feedpoint resistance of the decribed 1/4-wave resonant vertical, 10m band antenna is in fact 34 ohms. All the other relative bandwidth details are correct because they apply equally to both 1/4-wave and 1/2-wave antennas.

34 ohms is less than the 'ideal' 36.6 because of the 'end effect'. To bring the antenna into perfect resonance (zero reactance)it is neccesary to shorten it by a few percent. But shortening the antenna also reduces the radiation resistance relative to the antenna free-space 1/4-wavelength at the velocity of light. But you are probably already aware of this sort of effect.

The minimum SWR at resonance is then 50/34 = 1.5:1 but who cares !

Good to know somebody reads my stuff and thinks about it. Thanks very much for taking the trouble to point out what is quite a serious error. My lurking critics could have had a field day with it ! ;o)

The relationships between antenna length, diameter, resonant frequency, input resistance, are covered by program WIRECAGE which can cope with very fat antennas as used by wide-band TV transmitters.

See you around.

==========
Regards from Reg G4FGQ
Free Radio Modelling Software
Go to http://www.g4fgq.com
==========

496. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 04:14:07 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3D0D620F.26AF37E0@ay.com.au>
Source record: 43259

Reg Edwards wrote:

> What makes you think the Antenna Book will give you a formula for the Q of a
> quarterwave vertical on the 10m band ?

I seem to remember a graph in there of conductor diameter vrs bandwidth
for dipoles (and monopoles over large perfect ground). Near the bit on
scaling of tapered elements.

> I doubt that it does. I don't get my information from there.

Well, please enlighten the group, how did you arrive at that figure? I
am not doubting it, I'd just like to know how to work it out in general
for other bands.

> And if it does, how will you know it's correct ?

I wouldn't, but at least it might have some math alongside that I can
see has more rigour than a quoted figure on usenet. :-/ If I could be
bothered to dig out my ancient Radio Engineers bible it would probably
have it.

--
Alan Yates
http://www.vk2zay.net/

497. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 04:17:10 UTC
From: Bill Turner <w7ti@dslextreme.com>
Message-ID: <jhoqguk5e6vrav281soro8s4oirpcpi8r4@4ax.com>
Source record: 43260

On 16 Jun 2002 21:52:00 GMT, jgboyles@aol.com (JGBOYLES) wrote:

>T coils run around 200-600 khz depending on
>how big a coil you got. These are solenoid coils, but still 1/4 wave resonant.

Do you mean "parallel resonant"? Been doing this stuff since the '50s
and have never heard of a coil that was "1/4 wave resonant".

'Splain, please.

Bill, W7TI

498. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 04:24:15 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3D0D646F.EFEB7346@ay.com.au>
Source record: 43261

Reg Edwards wrote:
>
> I don't know how you got mixed up with helicals. Everybody makes a cock-up
> now and again. I do it all the time.

Not reading the original post completely :-(

9ft stainless whips are expensive and uncommon for the CB operator here, most use the 3-4 ft fibreglass whip, so the first thing that came to mind was a helical, and then I went and shot my mouth off about some experences I'd had the burning them up and having to rematch the short ones ever 50kHz.

> But I just made a more accurate check.
<snip>

You used one of the programs on your site?

Unfortunately I don't have DOS here, and short of installing dosemu or finding my old DOS 3.3 disks, I can't run thos programs. They look pretty damn useful, any chance of posting the source or the formulas on the site so I can wrap them in a bit of C and use them myself?

Ever thought of making a few pages up that do the calcs for people, just punch the numbers into the forms and out drops the results. I'll provide the hosting with dynamic support (ie PHP) if you like?

--
Alan Yates
http://www.vk2zay.net/

499. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 05:29:01 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D0D7408.75A7CAC6@bellatlantic.net>
Source record: 43262

You did not answer a single question I posted. You
decided that the "What vaporizes?" question in "Drop a
#20 bare wire across an energized 20 amp household circuit.
What vaporizes?" was a statement, and did respond to that.
And you were wrong.

When you drop a #20 wire onto an energized 20 amp
household circuit, a small portion of the #20 wire vaporizes.
The sparks you see when the wire is first dropped onto
the energized circuit demonstrate that. The burn marks
on the wire and the places it touched demonstrate that.
You may even be able to smell the odor, which also
demonstrates that.

Every one of your statements to the
effect "ehsjr would have us believe ..." is incorrect.

Here's one of them, as an example:
"ehsjr would have us believe that an MOV absorbs the entire surge. "
Now take a look at what I said:
"In the path, energy passing through the MOV is absorbed in
accordance with ohm's law. It is also absorbed in the hot
wire and the neutral wire and the ground system - all in
accordance with ohm's law. "

This pattern is repeated over and over. Either you
do not comprehend what you read, or you just twist it
around in your effort to discredit the poster.

You have not answered any of the technical questions, but
you have implied that what I posted included the term joules.
In fact, what I posted not only did not use that term, it
did not include any mention of time duration. How in the hell
do you get 7000 joules from anything I said, when I did not
mention time or joules?

Quoting you: " According to ehsjr, 7000 joules would be
"absorbed" by a one second the copper wire short circuit."

It is clear that you either will not or cannot discuss the
subject intelligently: you do not answer the questions posed;
you misunderstand and misrepresent what has been said; you
attempt to discredit the poster rather than address the issues.
You have no credibility.

w_tom wrote:
>

> ehsjr does not do math before insulting others:
>
> A #20 AWG dropped on a 20 amp circuit breakered circuit does
> not vaporize. The circuit breaker trips first. ehsjr would
> have known that if properly educated. Why? The 20 AWG copper
> wire has a fusing current of 58.4 amps. Again, basic EE
> facts.
>
> But lets say a 100+ amp 120V circuit is short circuited by
> one foot of 20 AWG copper wire. 58.4 amps in that short
> circuit means that 0.592 volts appears on that wire as it
> vaporizes. Where are the other 119.41 volts? Elsewhere in
> the circuit. A 1 second short circuit dissipates only 34.6
> joules in the wire AND 6970 joules elsewhere in the circuit.
> Clearly that shunt does not absorb the surge. As a nearly
> ideal short circuit, it absorbs nearly 0 joules of energy.
>
> According to ehsjr, 7000 joules would be "absorbed" by a one
> second the copper wire short circuit. Reality: 99.51% of the
> surge energy created by a 20 AWG shorting wire is absorbed
> elsewhere.
>
> MOVs operate same. They also shunt surges. Most of the
> energy shunted by an MOV is absorbed elsewhere. ehsjr would
> have us believe that an MOV absorbs the entire surge. What
> nonsense! ehsjr also would have us believe the vaporized 20
> AWG wire also absorbed the entire transient that vaporized the
> wire. In reality, the wire is vaporized only by 0.49% of the
> energy involved in that short circuit. If the wire were an
> ideal short ciruit, then it would have absorbed 0% of the
> energy.
>
> ehsjr must not have any EE training. He thinks a 20 amp
> breaker would vaporize a #20 AWG copper wire - because he
> fails first to do the numbers. Where does he get these
> ideas? Comic books? Super hero movies?
>
> The same person who says an MOV absorbs surges also implies
> that differential mode and common mode transients are same.
> He also said so in previous threads. I have been through this
> same discussion with ehsjr repeatedly for many years. He
> still insists that 20 AWG wire short absorbs all the energy.
> I don't expect him to change. However his errors are cited
> for the benefit of others. His erroneous use of electrical
> principals is why he also thinks plug-in surge protectors can
> be effective. One thing that has changed is he is now
> resorting to insults because of his insufficient engineering
> background.
>
> It does not take an engineering degree to first obtain

> numbers. However when one thinks a 20 amp circuit breaker
> permits a 20 AWG wire to be vaporized, then doubt that poster
> has any EE training. When the poster thinks a wire shunt
> absorbs all energy that passes through it, then we know it is
> science fiction. Science fiction from someone who has no
> credibilty criticizing another's education especially when he
> cannot even perform basic math correctly.
>
> ehsjr@bellatlantic.net wrote:
> >
> > w_tom wrote:
> > >
> > > The only short circuit that absorbs energy is one that
> > > really is not a short circuit.
> >
> > Bullshit - you do not understand what a short circuit is.
> >
> > > Ideal short circuits absorb no
> > > energy.
> >
> > He did not mention "Ideal short circuits".
> >
> > > Where did you take your EE training?
> >
> > You don't even understand ohm's law and you're attempting
> > to discredit him with a snide question?
> >
> > > Imperfect
> > > short circuits only absorb a minor percentage of energy.
> >
> > Bullshit. Drop a #20 bare wire across an energized
> > 20 amp household circuit. What vaporizes? What absorbed
> > the energy?
> >
> > > If
> > > the purpose of short circuits were to absorb energy, then the
> > > purpose of all electric company wires is also to absorb
> > > energy. Obviously not. Ideal short circuits absorb no
> > > energy. Better, real world short circuits absorb all but no
> > > energy.
> >
> > How can anyone have a rational discussion of anything
> > related to electrical issues with thinking like that?
> >
> > >
> > > To say the purpose of a short circuit is to absorb energy is
> > > to not understand basic EE principals and therefore to not
> > > understand how surge protection works.
> > >
> > > Like the imperfect short circuit, the MOV does absorb a

> > > minor percentage of energy.
> >
> > Which is a reversal of your earlier position that MOV's
> > absorb NO energy. An MOV clamping a voltage at 330 and
> > conducting a 100 ampere surge absorbs 100*330 or 33,000
> > watts. Whether or not that is a minor percentage of the
> > energy is not key. What is key is that the equipment
> > the MOV protects "sees" only 330 volts, as long as the
> > MOV continues to work during the surge. Where the surge
> > energy goes doesn't matter to the equipment, as long as
> > it doesn't "see" the damaging high voltage. You never
> > mention this.
> >
> > ? But absorbing energy is not its
> > > purpose. The purpose of MOVs and other shunt mode surge
> > > protectors is to shunt - transfer energy elsewhere.
> > >
> > > If an MOV shunts a common mode surge across wires to an
> > > appliance, then the adjacent MOV has only provided that common
> > > mode surge with more paths to earth destructively through an
> > > appliance.
> > >
> >
> > Bullshit. You earlier specified that in your view
> > a common mode surge can enter the house service panel on
> > a single hot wire. The MOV connected from neutral to hot
> > in a point of use protector protecting your refrigerator,
> > clamps the voltage across line and neutral to 330 volts.
> > Where are the destructive paths through the 'fridge?
> >
> > You always misuse the term common mode. If you want to
> > make yourself clear, describe what you have in mind
> > when you use the term. Give us the voltages between
> > each point in the circuit that you envision so we know
> > what you are talking about.
> >
> > > > What is it about this fact that makes it impossible
> > > > for you to understand?
> >
> > It is not a fact; you misuse "common mode" so no one can
> > understand you; you ignore the protection afforded when
> > the MOV clamps the voltage across hot and neutral to
> > ~330 volts.
> >
> > > Again you are describing a differential mode surge.
> >
> > Yes he did. And you completely ignore it.
> >
> > > Why to
> > > you also have a problem with this basic EE concept?

> >
> > He understands it - you do not.
> >
> > > Why do
> > > you confuse normal mode vs longitudinal mode transients as if
> > > they were same?
> >
> > He did not confuse them - he specified the surge he was
> > talking about. It is you who confused his description
> > of a differential mode surge. Lord only knows what *you*
> > think a normal mode transient is, but if you use the terms
> > properly normal mode = differential mode, and common mode
> > = longitudinal mode.
> >
> > > Put all MOVs across all the AC inputs to an appliance - and
> > > the common mode surge will simply fly past them on its way to
> > > earth ground through the appliance.
> >
> > Bullshit. The common mode surge elevates both the neutral
> > and the hot wires. But the neutral wire is elevated far
> > less, because it is connected to the grounding electrode
> > via the grounding electrode conductor and main bonding
> > jumper. Therefore, the hot wire is elevated far higher
> > than the neutral wire. That means that there is a differential
> > mode surge that could be "seen" by the appliance.
> > The MOV's will clamp the voltage that the 'fridge "sees"
> > to ~330 volts. The case of the fridge is connected to
> > the same place in the service panel as the neutral, via
> > the equipment grounding conductor. Unless there is a defect
> > in the 'fridge, there is no internal path for current to
> > flow to the case of the 'fridge. In addition, an external
> > point of use MOV connected hot to ground clamps the hot
> > to case potential to ~ 330 volts if a surge causes it to
> > switch from very high resistance to low resistance.
> >
> > > Even better, short all
> > > the AC wires together with wire. Still the common mode surge
> > > will pass by on its way, destructively, through appliance to
> > > earth ground.
> >
> > Show us the path. We've got the neutral, hot and egc
> > shorted together at the receptacle into which the
> > refrigerator is plugged. A common mode surge occurs
> > and enters your service panel. What is the destructive path
> > through the fridge to ground?
> >
> > > Somehow you keep thinking that a common mode
> > > transient is just like a differential mode transient.
> >
> > He has made only one post in this thread, so any observation

> > by you that he "keep(s) thinking" something is not supported.
> > But that is not the problem. He SPECIFIED a particular
> > surge, and you insist on trying to twist it to something else.
> >
> > And aside from that, you do not understand a common mode
> > surge to begin with. You seem to think that any surge
> > that "seeks ground" automatically precludes a differential
> > mode - hot to neutral - surge. In fact, any common mode
> > surge entering your service panel will be a differential
> > mode surge on the hot and neutral branch circuit wiring
> > in a grounded service.
> >
> > >
> > > If that MOV worked across AC inputs to appliances, then why
> > > do appliance manufacturers not install them? Answer to that
> > > question is essential for your claims of protection to have
> > > any credibility.
> >
> > Absolute fucking bullshit. 1) MOV's are included in some
> > equipment, so your premise is FALSE. 2) Whether or not
> > an appliance manufacturer includes a particular component
> > or not has nothing to do with whether or not that component
> > can provide a particular function that is not essential
> > to the appliance's operation or acceptability for market.
> > Your logic is totally bizarre.
> >
> > > Those MOVs are not installed inside
> > > appliances
> >
> > False premise. They are in some appliances.
> >
> > > because they are not effective when too close to
> > > transistors and too far from earth ground.
> >
> > False. You ignore differential surges; you assume
> > transistors.
> >
> > > Even your own
> > > example demonstrate no effective surge protection. All that
> > > was proven is a grossly undersized surge protectors was
> > > damaged by a surge too small to even damage the appliance.
> >
> > Howinthehell do you know the surge was too small to damage
> > the appliance? Like the rest of your unsupported statements,
> > your thinking boggles the mind.
> >
> > >
> > > If your surge protector across AC inputs worked, then in
> > > engineering terms, where did the surge go?
> >

> > How many eff-ing times will you post this drivel? The
> > protector absorbed enough energy to destroy it. You
> > earlier admitted he was talking about a differential
> > mode surge, and now twist it to common mode. Ok,
> > lets use your common mode surge, specified at 100
> > amps, which "approaches the appliance", and his destroyed
> > supressors, since you insist it had to be common mode.
> > There, it encounters two MOVs, one from neutral to ground
> > and one from hot to ground. Each clamps the voltage
> > to 330 volts. We don't know the individual currents,
> > all we know is that there is a path that causes 100
> > amps to be drawn. But we do know the total amperage
> > across them is 100 amps and the voltage across them is 330
> > volts. Therefore, at the instant in time where 100 amps
> > is flowing in the circuit and the MOVs are clamping the
> > voltage to 330, the combined wattage is 33,000 watts.
> > If you want to make the math just a bit messier, consider
> > the protected appliance. He did not specify - I will.
> > It is a 60 watt TV with rabbit ears. The path for
> > the common mode surge is "the outside world" into the
> > service entry panel. From there, it follows the
> > grounding electrode conductor to the grounding electrode
> > system. Some of the energy is dissipated in the grounding
> > electrode conductor, some is dissipated in the ground and
> > some in the electrode system. So far, all of that energy found
> > its path from the neutral wire feeding your house -
> > none of it from the hot wire, since the hot wire is
> > not connected to the ground system. The result is a voltage
> > drop across the neutral wire feeding into your house,
> > without a corresponding voltage drop in the hot wire.
> > This creates a DIFFERENTIAL surge at the service panel.
> > In your specification, there is at least enough energy
> > "left over" to allow a 100 amp current flow towards the
> > appliance. It does so across the neutral and the hot wires,
> > as a differential mode surge. The TV at the end of the
> > circuit is connected to only those two points - there
> > is no other available path, aside from the MOV point of use
> > protector. Considering the part of the surge you mentioned,
> > the 100 amps that approaches the appliance - the path
> > is simple: from panel via hot wire to mov to panel via
> > neutral wire. And, as mentioned earlier, from panel neutral
> > to ground via the grounding system. In the path, energy
> > passing through the MOV is absorbed in accordance with
> > ohm's law. It is also absorbed in the hot wire and the
> > neutral wire and the ground system - all in accordance
> > with ohm's law. You have never grasped this concept. You
> > seem to think diverted energy does nothing but somehow
> > "flow into" ground. You seem to think that all of the
> > energy in a surge must be "returned to ground" as
> > an electrical charge. Not so. In addition to "charging

> > ground" (i.e. raising the local ground potential),
> > electrical surge energy can be, and is, converted into
> > heat in the wires, the MOV and ground itself.
> >
> > Your continued erroneous postings on the technical aspects
> > of this destroy any good points you want to make.
> >
> > What was the
> > > incoming path and what was the outgoing path? A 100 amp
> > > common mode surge approaches the appliance. What does that
> > > MOV across the AC inputs do? This is basic engineering. To
> > > say that a surge protector worked demands that you can say
> > > why? What was the incoming and outgoing path of that surge?
> > >

500. About the 10m mobile antenna.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 05:30:03 UTC
From: "John S. MacKay" <k35454@direct.ca>
Message-ID: <ugqtlk200g34e@corp.supernews.com>
Source record: 43264

Make the coax connector 12 ft. or multiples thereof. VE7AFN/M.

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.371 / Virus Database: 206 - Release Date: 6/13/02

501. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 05:39:56 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D0D7698.CEFBE21F@bellatlantic.net>
Source record: 43263

Tom W8JI wrote:

> You are both wrong.

Do not believe ANY claims that w_tom makes about what I have said.

I am fully capable of being wrong without his help! :-)

If there is something wrong in what I have posted, I would very
much appreciate you pointing that out.

Aside from that, I agree 100% with your post.

> 73 Tom

502. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 06:39:22 UTC
From: w_tom <w_tom1@usa.net>
Message-ID: <3D0D841A.D753E5BA@usa.net>
Source record: 43265

You have maintained for years that an MOV absorbs all the energy of the surge. Are you now conceding that most of the energy is shunted and not absorbed by the MOV? Are you now conceding that a wire shunts - does not absorb - the surge? MOV shunts surges like wire shunts a surge - distributing surge energy onto other parts of the circuit instead of absorbing energy.

When the first paragraphs has a 120 volt 20 amp circuit vaporizing a 20 AWG wire - an absolutely ridiculous absurdity - then why bother commenting further. First you must acknowledge that a wire, absorbing less than 1% of the energy, is not absorbing energy. It is shunting energy to be absorbed elsewhere. The MOV and the shunt wire do similar. They both absorb trivial amounts of energy while shunting major amounts of energy elsewhere. The purpose of an MOV is to shunt - not absorb - the surge.

When you insult others AND start every paragraph with words such as Bullshit, then clearly your responses are, again, not technical and no longer worth comment.

The MOV across two lead on a refrigerator motor shunt a differential mode surge. Meanwhile, a common mode surge comes down one or both AC lines, passes through the refrigerator, to find a destructive path into earth. One path may be via the linoleum tile or a concrete floor. Or the ice machine water pipe. Does not matter which one. If a common mode surge finds that alternative, destructive path to earth, then damage occurs. The MOV either does nothing because it does not see the surge, or shunts the surge over to the other AC wire so that a surge has more potentially destructive paths to earth.

Furthermore there is no reason for a significant surge to be at the refrigerator if 'whole house' surge protection is properly implemented.

Either way, the MOV does nothing productive. Stop thinking that a differential transient is a common mode transient. Until you deal with that basic EE fundamental of common mode vs differential mode transients, you will live in a mythical world where plug-in surge protectors are effective.

ehsjr@bellatlantic.net wrote:
>
> You did not answer a single question I posted. You

> decided that the "What vaporizes?" question in "Drop a
> #20 bare wire across an energized 20 amp household circuit.
> What vaporizes?" was a statement, and did respond to that.
> And you were wrong.
>
> When you drop a #20 wire onto an energized 20 amp
> household circuit, a small portion of the #20 wire vaporizes.
> The sparks you see when the wire is first dropped onto
> the energized circuit demonstrate that. The burn marks
> on the wire and the places it touched demonstrate that.
> You may even be able to smell the odor, which also
> demonstrates that.
>
> Every one of your statements to the
> effect "ehsjr would have us believe ..." is incorrect.
>
> Here's one of them, as an example:
> "ehsjr would have us believe that an MOV absorbs the entire surge. "
> Now take a look at what I said:
> "In the path, energy passing through the MOV is absorbed in
> accordance with ohm's law. It is also absorbed in the hot
> wire and the neutral wire and the ground system - all in
> accordance with ohm's law. "
>
> This pattern is repeated over and over. Either you
> do not comprehend what you read, or you just twist it
> around in your effort to discredit the poster.
>
> You have not answered any of the technical questions, but
> you have implied that what I posted included the term joules.
> In fact, what I posted not only did not use that term, it
> did not include any mention of time duration. How in the hell
> do you get 7000 joules from anything I said, when I did not
> mention time or joules?
>
> Quoting you: " According to ehsjr, 7000 joules would be
> "absorbed" by a one second the copper wire short circuit."
>
> It is clear that you either will not or cannot discuss the
> subject intelligently: you do not answer the questions posed;
> you misunderstand and misrepresent what has been said; you
> attempt to discredit the poster rather than address the issues.
> You have no credibility.

503. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 06:51:22 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <pi0rgukdpkl1k1t8v5b5eu7giljg9stone@4ax.com>
Source record: 43266

On Sun, 16 Jun 2002 20:11:45 -0400, w_tom <w_tom1@usa.net> wrote:

> The same person who says an MOV absorbs surges also implies
>that differential mode and common mode transients are same.

Talking about differential and common mode transients is useful for the equipment manufacturer when designing the lab measurement procedures, but it is not very helpful when analysing the complex situation when a large surge enters a building.

Assuming ideal ground earth and neglecting the effects of the ground bounce voltage (caused by the non-zero grounding electrode resistance and especially inductance when the steep surge hits) does not permit much usable analysis about the real world situation.

Paul OH3LWR

504. Re: Slug-tuned coil forms

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 09:04:14 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <em8kea.ibb.ln@my.linux.box>
Source record: 43267

In article <3d0d02d6.75238595@news.akorn.net>, Tom W8JI wrote:
> Does anyone still manufacture nice high-quality powdered iron core
> slug-tuned coil forms, like the old ceramic forms from years ago?
>
> If not, what do people do for modest power high-stability inductors
> that must have a reasonably large but stable adjustment range??
>
> Thanks,
>
> Tom

It's been a long time time since I saw new
slug-tuned coil formers offered for sale.
You might get some from one of the surplus
suppliers.

I use Toko 10mm coil formers for low power
stuff. For higher power levels, I use fixed
inductors on a T-50 toroid and variable C.

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.18

505. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 10:13:15 UTC
From: 2w8ji@contesting.com
Message-ID: <3d0db0d6.119789653@news.akorn.net>
Source record: 43268

On Mon, 17 Jun 2002 05:39:56 GMT, ehsjr@bellatlantic.net wrote:

>If there is something wrong in what I have posted, I would very
>much appreciate you pointing that out.
>
>Aside from that, I agree 100% with your post.

Let's just start over.

The main point, for anyone trying to glean some useful information
from this, is that we really can not calculate or estimate where the
energy is dissipated because there are far too many variables or
unknowns.

One thing we do know, is anyone who claims it is xx.xx percent of
system power or whatever does not understand the problem. Especially
if he thinks fusing current somehow limits system current to that
value instantaneously.

Do you agree?

73 Tom

506. Re: About the 10m mobile antenna.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 10:19:03 UTC
From: 2w8ji@contesting.com
Message-ID: <3d0db533.120906469@news.akorn.net>
Source record: 43269

On Sun, 16 Jun 2002 22:30:03 -0700, "John S. MacKay"
<k35454@direct.ca> wrote:

>Make the coax connector 12 ft. or multiples thereof. VE7AFN/M.

Why??

507. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 13:07:22 UTC
From: jgboyles@aol.com
Message-ID: <20020617090722.12904.00000695@mb-bd.aol.com>
Source record: 43270

>Do you mean "parallel resonant"? Been doing this stuff since the '50s
>and have never heard of a coil that was "1/4 wave resonant".
>
>'Splain, please.

I am not a T coil expert, so I should have left those comments off. I have built exactly one. The way I understood its operation was that the secondary of the T coil is a 1/4 wave monopole base fed. The primary at the base of the coil is a parallel resonant circuit fed with a rotary spark gap.
Anyway, the one I built was a 3' tube 0f 4" pvc wound with as many turns of #22 enamaled wire as I had. I fed it at its base with a 250 watt variable frequency rf source against an aluminum foil ground plane. It was resonant around 500 khz as witnessed by an increase in rf current to the coil, and 1" blue arc produced at the top of the coil. My point was that I could get the same effect with a 468 foot tall vertical monopole worked against ground. The Q of the two structures would be quite different however. I was tempted to wind one and see how it would do on 160m but never got around to it. It produced enough rf to open my auto garage door. The coil was in a room right above the garage.
73 Gary N4AST

508. Re: 10-meter amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 14:14:06 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <3Qne1gQu6eD9Ewy$@fslife.co.uk>
Source record: 43271

>w9gb mentioned RF Parts for parts. They are about the only place around to
>get RF power transistors, but their prices are pretty unpleasant. Still, if
>you need something as simple as a 2SC1969 or a dipped silver mica cap, I'm
>not sure where else you could go.
>
>However, some designs rely on more mundane parts. A lot of amp designs use
>power MOSFETS and I noticed recently that B.G. Micro has some pretty
>impressive parts for very good prices. MOSFETS are relatively easy to toast
>but at a buck a piece you can afford to sacrifice a few to the cause.
>Bipolars are a little easier to deal with but their low input impedance
>makes it tough to get a lot of power gain.
>
>In either case, keep in mind that 200 watts translates into quite a pile of
>12 volts. I assume this is for SSB (25 watts on 10 meter CW is more than
>adequate) then you are probably talking about at least 30-40 amps for a
>class A amplifier. Not insurmountable, but certainly a few sheckels.
Another, not so well known source for solid state amp parts is Westgate
Labs in NJ. AFAIK they have the east coast franchise for Toshiba devices
such as the 2SC2979 etc.

Lee Martin in SC makes the Skywalker amp kits which have been mentioned
above.

Your 'buck a piece' MOSFET's above are only good for 6-7MHz. Real RF
Power MOSFET's which talk up to and beyond 30MHz are a 'Are you sitting
comfortable' sort of price.

200w will not hurt a 12v supply as long as there's some kind of trickle
charge. Remember it's peak power you're quoting, not average which is
far less.

My Metron amp has 8 devices and only peaks around 70A for 5-600w out.

Now the Skywalker 8 device amp is over 100A!

Good luck.

--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

509. RE: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 14:49:21 UTC
From: "John S. MacKay" <k35454@direct.ca>
Message-ID: <ugrtrdkjn3l49e@corp.supernews.com>
Source record: 43272

I am receiving multiple queries about this statement. 12 ft. is 1/2 wave at 10 meters (RG 58 and similar). This means that the Voltage or Current will be the same at both ends. The output of a transmitter is 52 ohms (heavy current), the input of the 1/4 wave antenna is 52 ohms (heavy current) so they are matched. This way an antenna tuner is not mandatory. By the way, will anyone with a factory- made magmount base measure the length of the coax supplied ? Is it purely coincidence that 12 ft. is the measurement usually found ? Now if somebody wants to disagree, be my guest , but when you hook up your antenna please check the SWR sooner rather than later !!
John M. VE7AFN/M.

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.371 / Virus Database: 206 - Release Date: 6/13/02

510. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 14:57:14 UTC
From: Bill Turner <w7ti@dslextreme.com>
Message-ID: <n1urguc1nbpat9skkmsvn9oc87efmdqv02@4ax.com>
Source record: 43273

On 17 Jun 2002 13:07:22 GMT, jgboyles@aol.com (JGBOYLES) wrote:

>My point was that I could get the
>same effect with a 468 foot tall vertical monopole worked against ground.

I see what you're getting at. I don't think you would get the "same"
results though; the 468 foot vertical monopole would radiate quite a bit
of the energy fed to it, whereas the shorter Tesla coil would not.

Bill, W7TI

511. ic wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 15:02:34 UTC
From: Tony Briggs <tony@briggsbuxton.screaming.net>
Message-ID: <3d0dfa0c_3@mk-nntp-1.news.uk.worldonline.com>
Source record: 43274

Hi There,
I am trying to get hold of a couple of chips of the type:
MAX231. I understand from the MAXIM web site that they are still
manufactured, but no retailers in UK seem to stock them. (that I know of !)
I could probably buy them from a wholesaler but the minimum quantity is 25
apparently. Any ideas please ? I do know that the MAX232 is available, but I
particularly want the 231.

Thanks in anticipation.

Tony

512. Simple Radio Transmitter Hunts RDF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 16:24:44 UTC
From: Doctor <doctorwho20012001@yahoo.com>
Message-ID: <ael29o$74o$1@news.cowan.edu.au>
Source record: 43276

Would any one know of a simple transmitter that can transmit over 2km or more for RDF work.
The idea is for transmitter hunts that the club, organises.
It dose not matter what frequency just the circuit which would be very helpful.

Thanks Craig

513. Re: 6146b lets put this bulb to work

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 16:24:45 UTC
From: stereog@ihug.co.zz
Message-ID: <3d0e0cc5.54851014@news.akl.ihug.co.nz>
Source record: 43275

Bill Turner <w7ti@dslextreme.com> wrote:

: On Mon, 3 Jun 2002 12:01:35 +0300, "Deos" <lineoffiretoday@yahoo.com>
: wrote:
:
: > I have a 6146b valve and no ideas or schematics to put it to use.
: >Hf or vhf schematics would be nice
: >
: >Does anyone have an idea or something that will help me out?
:
: _____
:
: Old ARRL handbooks from the '50s and '60s will have lots of information
: and schematics for the 6146. I've built several transmitters using one.
: A great tube.
:
: 73, Bill W7TI

There are also some circuits in the RSGB's (Radio
Society Of Great Britain) "The Radio Amateur
Handbook" 3rd Edition, and maybe the 4th.
(I've only got the 3rd - the 4th is a lot thicker)

The 6146 also has the European designation QV06-20
which may help you find further references. I'm
not sure if the 6146B had a separate Euro number.

Ross Matheson

514. Re: 6146b lets put this bulb to work

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 16:36:04 UTC
From: stereog@ihug.co.zz
Message-ID: <3d0e0e67.55269173@news.akl.ihug.co.nz>
Source record: 43277
Cross-posted to: rec.radio.amateur.homebrew,rec.audio.tubes

(Crossposted to rec.audio.tubes where some are
also building amps with 6146B at this moment:-)

Roy Lewallen <w7el@eznec.com> wrote:
in
rec.radio.amateur.homebrew<3CFDD056.A32403C2@eznec.com>
on Wed, 05 Jun 2002 01:48:22 -0700,

: The 6146 and 807 are certainly not exactly equivalent tubes, and they
: but they are quite similar. The 807 has 30 watt dissipation vs 25 for
: the 6146 (35 for the 6146B), and the rated screen voltage is a little
: higher for the 807. But in class C service, the 807 was typically run at
: 750 volts, 100 mA for 75 watts input, while the 6146 could be safely
: pushed to 120 mA for 90 watts, and the 6146B was good for 160 mA at 750
: volts in that service. 6146 heater current is a bit higher, but
: interelectrode capacitances and other specifications are similar. While
: there might be some applications where you couldn't replace an 807 with
: a 6146 with minor or no modifications, I think they'd be very rare. I
: wouldn't recommend substituting the other way, though. The 6146 was
: better shielded, so some circuits using a 6146 could become unstable if
: an 807 were substituted for one.
:
: The tubes have different bases, so one can't be a plug-in replacement
: for the other. In that sense, the 6146 is obviously not a "direct"
: replacement.
:
: But you can, with minor modifications at most, use a 6146 in nearly all
: the old Handbook circuits which used an 807.
:
: Roy Lewallen, W7EL
:
: Deos wrote:
: >
: > are you sure You can directly substitute a 6146 for the 807 (just asking)

Hello Roy,

I have some concerns with your remarks, mainly in
regard to screen voltages, and also I think g1
bias requirements will be different for the 6146.

I realise they were general, but I think they
might be misleading in some circumstances ...
although I'm not sure what you'd consider "minor"
modifications! However, just for some interest ...

Certainly there may not appear to be a "great" difference between the rated g2 max of 250V for 6146 (A&B) and 300V for 807, but I believe the 807 is far more forgiving, and you will see typical operation in the datasheets at the max g2 value of 300 (and of course AF triode operation at 400V) whereas typical operation for 6146 is almost always never more than 200V and often below.

There's an interesting section in the RSGB Radio Amateur Handbook (3rd Ed) that relates to this, in the Single Sideband chapter where a "medium power" class AB2 linear amp is discussed, using a pair of 5B/254M's or 807's in parallel. (the 5B254M is like a miniaturised loctal version of the 807) and modifications are given for use of 6146 in the same circuit, later in the section.

The 807's are running at Va's of either 750, 1000, or 1250V, with Vg2 300, and Vg1's of approx (adjust for specified Ia zero sig) -32, -42, -55V.

Here's the bit I found interesting:
(I denote their single use of *italics* thusly:-)
[p324]

"The circuit of Fig.51 may be adapted to QV06-20s (6146s) by replacing the VR150's in positions V3 and V4 by a VR90 and a VR105 in series to reduce the screen potential to 195V volts. The QV06-20 is far more critical than the 807 or its equivalents as regards screen supply, and a few *moments* operation at normal screen voltage in the absence of anode potential will ruin it irrevocably. Furthermore, the valve should never be controlled by interrupting the screen current and leaving the element floating, because the control grid is liable to suffer damage if drive is applied under such conditions. If it is to be used as a switching electrode in any safety interlock arrangement, the screen should be returned to earth in the OFF position. Unlike the 807, the QV06-20 has been designed expressly for class AB1 operation, and the minimal extra output obtained by driving it into the grid-current region is not worth the effort involved. It is therefore recommended that the meter 0-20mA be replaced by a more sensitive instrument registering 500uA or one milliamp at total deflection, and that it be used to indicate when the stage is being overdriven."

The corresponding table to the 807 / 5B/254M one for the 6146 shows Vg1 -50V for Va 750V, -62V for

Va 1000V, 1250V not recommended. There's a note:

"Care should be taken not to exceed the
dissipation ratings recommended by the
manufacturer. The 6146 is unusually susceptible to
damage through overunning."

Overall, what I find interesting is the remark
that the 6146 is "designed expressly for class AB1
operation" (presumably meaning in linear amp
service, since class C RF and even AB2 AF data is
given for it by RCA, but even so ...) and also
these concerns about the screen grid and so-on.

While the 6146B has a higher Pd than 6146A, the g2
max input seems to be the same (and less than 807)

I note that you can get about as much AF power out
of a pair of 6146 in AB1 as a pair of 807 in AB2.
I'd be *very* careful about Vg2 for 6146 though.

Hopefully some of all that is of interest to some!
(the remark about not leaving the screen floating
relates to an earlier thread in r.a.t. as well)

Regards to all,

Ross Matheson
[Op Certificate but no current callsign :- ( ]

515. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 16:45:50 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D0E12AF.E09327C2@bellatlantic.net>
Source record: 43278

w_tom wrote:
>
> You have maintained for years that an MOV absorbs all the
> energy of the surge.

You exhibit very limited reading comprehension skills.
I have NEVER stated that an MOV absorbs ALL the surge
energy. I have always stated an MOV absorbs the
surge energy it "sees", within the spec of the MOV.
Perhaps this misunderstanding of yours engenders
your ridiculous and inaccurate posts where you
attempt to state something to the effect of
"according to ehsjr ..."

You are the one that stated in the second post of
this thread on 5/28 at 18:34:
"Surge protectors don't stop or absorb surges.
That is urban myth."

On 5/30, in the 13th post in this thread you
admitted that MOV's DO absorb surge energy:
"Like a wire, the MOV will absorb a minor percentage
of the surge."

But then you go back to your old mantra. In the eight post
of this thread on June 11 you again state: "Surge protectors
don't stop or absorb surges as promoted by urban myths. "

You change again, in the 40th post in this thread on
June 14 when you say: "Like the imperfect short circuit,
the MOV does absorb a minor percentage of energy."

It is your repeated insistence that MOV's do not absorb
surge energy that is inaccurate - and you have demonstrated
that that insistence is inaccurate by your posts, wherein
you claim it, then contradict yourself.

> Are you now conceding that most of the
> energy is shunted and not absorbed by the MOV? Are you now
> conceding that a wire shunts - does not absorb - the surge?
> MOV shunts surges like wire shunts a surge - distributing
> surge energy onto other parts of the circuit instead of
> absorbing energy.

Again, you make me wonder about your reading comprehension.
I stated in the post of mine which you attached:
"In the path, energy passing through the MOV is absorbed in

accordance with ohm's law. It is also absorbed in the hot
wire and the neutral wire and the ground system - all in
accordance with ohm's law. " Where the energy goes is in
accordance with ohms law. Which word did you fail to
understand?

>
> When the first paragraphs has a 120 volt 20 amp circuit
> vaporizing a 20 AWG wire - an absolutely ridiculous absurdity
> - then why bother commenting further.

You are flat out wrong. Reading comprehension again?
The stated case was: "When you drop a #20 wire onto an energized
20 amp household circuit, a small portion of the #20 wire
vaporizes."
You label that an "absolute absurdity".

It was further stated: "The sparks you see when the wire is
first dropped onto the energized circuit demonstrate that.
The burn marks on the wire and the places it touched demonstrate
that. You may even be able to smell the odor, which also
demonstrates that."
What is it about the above that you fail to understand?

> First you must
> acknowledge that a wire, absorbing less than 1% of the energy,
> is not absorbing energy.

Self contradictory statement.

> It is shunting energy to be absorbed
> elsewhere.

Correct. And if you would learn the physics of an
MOV, you would discover that it works by absorbing
energy. It CANNOT go from very high resistance
to very low resistance without absorbing energy.
An MOV works by absorbing energy - that's what
makes it transition to the low resistance state.
In the low resistance state, it conducts massive
current as compared to what it conducts in the high
resistance state. The current flow causes energy to
be absorbed throughout all elements in the circuit
INCLUDING THE MOV, in accordance with ohms law.
The wires conducting the surge heat up. The MOV
heats up. If the surge energy is conducted to ground,
then the grounding electrode conductor, the grounding
electrode and the ground itself all heat up. If the
surge is conducted through appliances, then the path
through the appliance heats up. Energy is absorbed
wherever the current flows.

The MOV and the shunt wire do similar. They both
> absorb trivial amounts of energy while shunting major amounts
> of energy elsewhere. The purpose of an MOV is to shunt - not
> absorb - the surge.

You CANNOT determine what percentage of the
energy is absorbed where without knowing all the
numbers and integrating over time. As another poster
has pointed out to you, the MOV could absorb close
to 100% or close to 0% or someplace in between.
You simply don't know in the absence of numbers.

What you do know is how much energy the MOV is
capable of absorbing - it is rated that way. That
does not mean it *will* absorb (say it's rated at 70
joules) 70 joules - it may not "see" that much
surge energy.

>
> When you insult others

If you want to feel insulted, that's your choice. I have
not intended to insult you. If in fact I did insult you,
then I apologize for the insult. I have described some of
what you have posted as ridiculous or as bizarre logic or
erroneous thinking or things you do not understand etc.
These are my observations of what you have posted, not
personal attacks. I have refrained from your ongoing
snide remarks to me and others concerning EE training.
That said, I will reiterate: if anything I have posted
is in fact an insult, then I apologize. Others enjoy
flame wars, I do not want to participate in them

> AND start every paragraph with words
> such as Bullshit,

If I see it as bullshit, I'll label it as such when I
think appropriate. After several years of this discussion,
it finally became appropriate. Perhaps I erred in this:
it could be that I should have labeled it bullshit long ago.
But once again, you are wrong. You say every paragraph.
There were 22 paragraphs; 5 started out with words such as
bullshit; and it is the first time in our years of posts
you have seen me use that term.

> then clearly your responses are, again, not
> technical

This again calls into question either your reading comprehension
or your motivation. As I've said before, you seem to want
to twist what is said into discrediting someone, rather
than addressing the issue.

> and no longer worth comment.

That is an option you have - feel free to exercise it.
It won't change much - you have rarely commented
on the issues as they were posted and almost never answered
the questions.

>
> The MOV across two lead on a refrigerator motor shunt a
> differential mode surge. Meanwhile, a common mode surge comes
> down one or both AC lines, passes through the refrigerator, to
> find a destructive path into earth.

You stated:
"Even better, short all the AC wires together with wire.
Still the common mode surge will pass by on its way,
destructively, through appliance to earth ground."
That raised the issue:
"Show us the path. We've got the neutral, hot and egc
shorted together at the receptacle into which the
refrigerator is plugged. A common mode surge occurs
and enters your service panel. What is the destructive path
through the fridge to ground?"

What is the path within the refrigerator? What is the
common mode surge? If you want to make yourself clear,
describe what you have in mind when you use the term
common mode. Give us the voltages between each point in
the circuit that you envision so we know what you are
talking about.

> One path may be via the
> linoleum tile or a concrete floor. Or the ice machine water
> pipe. Does not matter which one. If a common mode surge
> finds that alternative, destructive path to earth, then damage
> occurs.

Give us the voltages. Tell us the path. Provide the voltage
drop across each element in the path in the scenario you
envision. What is the amount of current in your scenario
that is destructive?

> The MOV either does nothing because it does not see
> the surge, or shunts the surge over to the other AC wire so
> that a surge has more potentially destructive paths to earth.

Not relevant. The MOV would see equal potential on
its leads with the hot, neutral and egc all shorted
together.

>
> Furthermore there is no reason for a significant surge to be
> at the refrigerator if 'whole house' surge protection is
> properly implemented.

Right - assuming that by "properly implemented" you mean
the let through voltage will be kept below destructive
levels. But remember, in the real world that can be
damn hard to achieve.

>
> Either way, the MOV does nothing productive.

In the case you presented, with all three wires shorted
together, this is true.

> Stop thinking
> that a differential transient is a common mode transient.

Stop thinking that a common mode transient entering your
service panel will not create a differential mode transient
on the branch neutral and hot wires.

> Until you deal with that basic EE fundamental of common mode
> vs differential mode transients, you will live in a mythical
> world where plug-in surge protectors are effective.

And until you recognize that differential mode transients
exist, you will continue to erroneously think that plug
in surge protectors are not effective.

>
> ehsjr@bellatlantic.net wrote:
> >
> > You did not answer a single question I posted. You
> > decided that the "What vaporizes?" question in "Drop a
> > #20 bare wire across an energized 20 amp household circuit.
> > What vaporizes?" was a statement, and did respond to that.
> > And you were wrong.
> >
> > When you drop a #20 wire onto an energized 20 amp
> > household circuit, a small portion of the #20 wire vaporizes.
> > The sparks you see when the wire is first dropped onto
> > the energized circuit demonstrate that. The burn marks
> > on the wire and the places it touched demonstrate that.
> > You may even be able to smell the odor, which also
> > demonstrates that.
> >
> > Every one of your statements to the
> > effect "ehsjr would have us believe ..." is incorrect.
> >
> > Here's one of them, as an example:
> > "ehsjr would have us believe that an MOV absorbs the entire surge. "
> > Now take a look at what I said:
> > "In the path, energy passing through the MOV is absorbed in
> > accordance with ohm's law. It is also absorbed in the hot
> > wire and the neutral wire and the ground system - all in
> > accordance with ohm's law. "

> >
> > This pattern is repeated over and over. Either you
> > do not comprehend what you read, or you just twist it
> > around in your effort to discredit the poster.
> >
> > You have not answered any of the technical questions, but
> > you have implied that what I posted included the term joules.
> > In fact, what I posted not only did not use that term, it
> > did not include any mention of time duration. How in the hell
> > do you get 7000 joules from anything I said, when I did not
> > mention time or joules?
> >
> > Quoting you: " According to ehsjr, 7000 joules would be
> > "absorbed" by a one second the copper wire short circuit."
> >
> > It is clear that you either will not or cannot discuss the
> > subject intelligently: you do not answer the questions posed;
> > you misunderstand and misrepresent what has been said; you
> > attempt to discredit the poster rather than address the issues.
> > You have no credibility.

516. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 16:56:34 UTC
From: w9wi@linux1.localdomain
Message-ID: <slrnags5bn.rs3.w9wi@linux1.localdomain>
Source record: 43279

On Mon, 17 Jun 2002 07:49:21 -0700, John S. MacKay <k35454@direct.ca> wrote:
>I am receiving multiple queries about this statement. 12 ft. is 1/2 wave at
>10 meters (RG 58 and similar). This means that the Voltage or Current will
>be the same at both ends. The output of a transmitter is 52 ohms (heavy
>current), the input of the 1/4 wave antenna is 52 ohms (heavy current) so
>they are matched. This way an antenna tuner is not mandatory. By the way,
>will anyone with a factory- made magmount base measure the length of the
>coax supplied ? Is it purely coincidence that 12 ft. is the measurement
>usually found ? Now if somebody wants to disagree, be my guest , but when
>you hook up your antenna please check the SWR sooner rather than later !!

But if the line is properly matched, the voltage and current will be the
same at both ends *regardless* of length. On a properly-matched line an
antenna tuner is never necessary, regardless of line length.

"Magic" lengths do sometimes help when the line is *not* properly matched;
some line length may exist which will cause the transmitter to see 50 ohms
even when the antenna isn't. Or at least be closer. And at the very least,
using a multiple of 1/2 wave will ensure the line doesn't transform the
mismatch to something that's even harder for the transmitter to deal with.
But if you're matched properly it doesn't matter.

Actually, I think there was a typo in your original post. I'm having a hard
time imagining a PL-259 connector 12 feet long - and I'm getting a headache
trying to figure out how to put it on the cable<grin>!
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

517. Re: ic wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 17:20:11 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <ael5oamch1@helle.btinternet.com>
Source record: 43280

"Tony Briggs" <tony@briggsbuxton.screaming.net> wrote in message
news:3d0dfa0c_3@mk-nntp-1.news.uk.worldonline.com...
> Hi There,
> I am trying to get hold of a couple of chips of the type:
> MAX231. I understand from the MAXIM web site that they are still
> manufactured, but no retailers in UK seem to stock them. (that I know of
!)
> I could probably buy them from a wholesaler but the minimum quantity is 25
> apparently. Any ideas please ? I do know that the MAX232 is available, but
I
> particularly want the 231.

You should be able to buy them direct from Maxim UK. Details are on the web site. Alternatively, you could scrounge a couple as free samples. Sometimes it's easier to get free samples out of Maxim than it is to buy them from their distributors!

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.com
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

518. Need source for BF982

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 18:24:58 UTC
From: "Scott M." <scottzm@netzcommander.com>
Message-ID: <3d0e277f$1_6@corp-goliath.newsgroups.com>
Source record: 43281

Does anyone know of a US retail source for BF982 MosFETS? I can't seem to find one and the obsolete parts guys want a minimum of $100.

Scott M.
KA1MRO

----------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

519. Re: About the 10m mobile antenna.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 18:49:59 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D0E2F53.65FFF769@clifto.com>
Source record: 43282

Tom W8JI wrote:
> <k35454@direct.ca> wrote:
> >Make the coax connector 12 ft. or multiples thereof. VE7AFN/M.
>
> Why??

So your fingers get a really good grip while attaching it to the rig.

--
If spammers weren't stupid, they'd be the idle rich instead of spammers.
- Morely Dotes

520. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 19:00:47 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D0E31DF.2A9F6D6C@clifto.com>
Source record: 43283

Tom W8JI wrote:
> On Sun, 16 Jun 2002 20:11:45 -0400, w_tom <w_tom1@usa.net> wrote:
> >nonsense! ehsjr also would have us believe the vaporized 20
> >AWG wire also absorbed the entire transient that vaporized the
> >wire. In reality, the wire is vaporized only by 0.49% of the
> >energy involved in that short circuit. If the wire were an
>
> You are both wrong. The truth is the small wire absorbs somewhere
> between 100% and *much less* than .49% of the entire tansient.

Nit pick: if it did vaporize, it probably absorbed at least the 0.49%
before it vaporized. :)

--
If spammers weren't stupid, they'd be the idle rich instead of spammers.
- Morely Dotes

521. Re: TOKO Inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 19:04:53 UTC
From: tkell@blackhole.nyx.net
Message-ID: <1024340693.13812@irys.nyx.net>
Source record: 43154

Try www.sycomcomp.co,uk. Robin has a web site there and he sells a range of
TOKO coils. They are/were about $.85 each with a reasonable shipping charge.
I purchased a selection from him a month ago.

Ted

SB <susantv69_uk@btinternet.com> wrote:
>Having just returned to homebrewing again, I am finding it difficult to
>source TOKO inductors here in the UK, Maplin's have now discontinued them.
>Can anyone advise of a source for these please.
>
>Simon G7CPN.
>
>

522. Re: ic wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 19:35:42 UTC
From: chrisdot muriel <muriel@analogdot.com>
Message-ID: <ijesgu8eu6cl6s15q8499j4l3u441db5ud@4ax.com>
Source record: 43284

On Mon, 17 Jun 2002 17:20:11 +0000 (UTC), "Leon Heller"
<leon_heller@hotmail.com> wrote:

>
>
>"Tony Briggs" <tony@briggsbuxton.screaming.net> wrote in message
>news:3d0dfa0c_3@mk-nntp-1.news.uk.worldonline.com...
>> Hi There,
>> I am trying to get hold of a couple of chips of the type:
>> MAX231. I understand from the MAXIM web site that they are still
>> manufactured, but no retailers in UK seem to stock them. (that I know of
>!)
>> I could probably buy them from a wholesaler but the minimum quantity is 25
>> apparently. Any ideas please ? I do know that the MAX232 is available, but
>I
>> particularly want the 231.
>
>You should be able to buy them direct from Maxim UK. Details are on the web
>site. Alternatively, you could scrounge a couple as free samples. Sometimes
>it's easier to get free samples out of Maxim than it is to buy them from
>their distributors!
>
>Leon
I'm sure Maxim allow a couple of free samples to be ordered via their
website. My employer (Analog Devices) does likewise (www.analog.com)
We have the ADM231 equivalent. For either choice, you will have to
fill in a few details on appropriate website ; if you want a couple of
samples of something else at a later stage, having registered the 1st
time, it will be less of a hassle 2nd time around (with either Maxim
or Analog).
Chris Muriel, G3ZDM

523. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 19:53:03 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D0E3E1F.8080208@eznec.com>
Source record: 43285

If the input to the antenna is 52 ohms (resistive) and the
characteristic impedance of the coax is 52 ohms, the impedance at the
input of any length of coax conntected to that antenna will be 52 ohms
(resistive). If the impedance of the antenna is anything else, it will
be transformed by the transmission line unless the line is an integral
number of electrical half wavelengths. But in that mismatched case
you're just as likely to need a tuner if you choose one one length of
line as if you choose another.

Roy Lewallen, W7EL

John S. MacKay wrote:
> I am receiving multiple queries about this statement. 12 ft. is 1/2 wave at
> 10 meters (RG 58 and similar). This means that the Voltage or Current will
> be the same at both ends. The output of a transmitter is 52 ohms (heavy
> current), the input of the 1/4 wave antenna is 52 ohms (heavy current) so
> they are matched. This way an antenna tuner is not mandatory. By the way,
> will anyone with a factory- made magmount base measure the length of the
> coax supplied ? Is it purely coincidence that 12 ft. is the measurement
> usually found ? Now if somebody wants to disagree, be my guest , but when
> you hook up your antenna please check the SWR sooner rather than later !!
> John M. VE7AFN/M.
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.371 / Virus Database: 206 - Release Date: 6/13/02
>
>

524. Re: 6146b lets put this bulb to work

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 20:02:34 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D0E405A.3090705@eznec.com>
Source record: 43286
Cross-posted to: rec.radio.amateur.homebrew,rec.audio.tubes

Thank you for posting this information. I relied on my own experience, which is now about 40 years old, with regard to the success in using a 6146 in place of an 807 a number of times. All my applications were class C, and I believe all simply relied on using a dropping resistor from the B+ to furnish screen voltage, avoiding the problem of having screen voltage applied in the absence of anode voltage.

The information you posted should provide additional guidance to anyone who might want to make the substitution.

Roy Lewallen, W7EL

RdM wrote:
>
> Hello Roy,
>
> I have some concerns with your remarks, mainly in
> regard to screen voltages, and also I think g1
> bias requirements will be different for the 6146.
> . . .

525. Re: Simple Radio Transmitter Hunts RDF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 20:11:04 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3D0E4258.7C5F1C7A@ay.com.au>
Source record: 43287

Doctor wrote:
>
> Would any one know of a simple transmitter that can transmit over 2km or
> more for RDF work.
> The idea is for transmitter hunts that the club, organises.
> It dose not matter what frequency just the circuit which would be very
> helpful.

All you need is a crystal oscillator, and an RF amp matched to some kind of antenna, perhaps with a low pass filter in there to keep the purity nuts happy, and an audio oscillator to modulate it for ease of use.

If you go to google and type in "foxhunt TX" or something similar you should be greeted with lots of pages of circuits for various ham bands.

--
Alan Yates
http://www.vk2zay.net/

526. Re: A pair of Wavetek 3002 signal generators on eBay

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 21:07:37 UTC
From: Hugh Colborn <don'tspamstockden@tiscali.co.uk>
Message-ID: <3d0e4f6a$1_2@mk-nntp-1.news.uk.worldonline.com>
Source record: 43288

Thnaks Jim, I've identified the guilty module (or, at least, the one that locks up last). I think I'll just work through checking & replacing the electolytics.

Hugh
"Jim Pennell" <NoSpam@killspam.com> wrote in message
news:aej94t$1q7$1@nntp9.atl.mindspring.net...
> The 3001 has indicator LEDs which gave me a clue as to which module was
> the culprit... And it may have been a tantalum that failed. It was
quite
> awhile ago, but it was either an electrolytic or a tantalum.
>
> Fortunately, I had the service manual and I was able to troubleshoot to
> the exact component.
>
> Jim Pennell
> N6BIU
>
>
>

527. FS: TUBES, 1000's at very low prices

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 21:58:05 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <NXsP8.43499$3R2.1375571@news1.west.cox.net>
Source record: 43289
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.swap

Email W6KRC@arrl.net for detailed list.

528. Re: MC145027 Motorola Chip - needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 22:25:20 UTC
From: Jesper <jmandre@NOSPAMbigfoot.com>
Message-ID: <3D0E61C3.2090101@NOSPAMbigfoot.com>
Source record: 43290

> Looking for MC145027 abt 20-30 pieces ... info ?

Try All electronics, http://www.allelectronics.com
I bought a bunch there some time ago for ï¿½0.69 ea.

Are you by any chance building a digital model railroad?

Jay

529. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 23:04:39 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aelpu6$jr6$1@paris.btinternet.com>
Source record: 43291

> Well, please enlighten the group, how did you arrive at that figure?
==========

A half-wave dipole is a tuned circuit.

Like all other tuned circuits it has L, C and R, all considered to be in series.

Antenna Q is calculated in the same way as any other resonant Q.

Q = X / Rr , where X is inductive reactance = 2*Pi*F*L

R is the value of the radiation resistance when uniformly distributed along the wire. In the case of a 1/2-wave dipole it is very simple. It is exactly twice the value which is usually assumed to be lumped at the center.

Rr = 2*73 = 146 ohms which is the same at all frequencies.

Now we have to find the inductance of a straight length of wire, length = 1/2-wavelength = Lambda / 2, and of diameter D.

You can get the inductance from Terman and a dozen other second-hand dealers. They don't always agree with each other.

L = 0.2 * Length * (Logn(4 * Length / D) - 1) microhenries.

Length and diameter in metres.

****

So let's calculate Q of a 1/2-wave dipole at 30 MHz, conductor (rod) diameter = 1/2" = 12.7mm

L = 0.2 * 5 *(Logn(20000 / 12.7) - 1) = 6.36 microhenrys.

Reactance of L at 30 MHz = 1200 ohms.

Q = 1200 / 146 = 8.2

And so the 3dB bandwidth is about 30 / 8.2 = 3.7 MHz.

****

Quite simple isn't it ? Not math - just arithmetic.

However, what everybody forgets, if they ever knew, insofar as the Q of the whole system is concerned, the L and C of the transmission line have just as much effect as L and C of the radiating element. But the transmission line has very little R and so has high Q. So the system bandwidth, as perceived by the user, may be more narrow than calculated above.

========================
Regards from Reg G4FGQ
Free Radio Modelling Software
Go to http://www.g4fgq.com
========================

530. Re: Need source for BF982

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-17 23:10:07 UTC
From: la8ak.xnd@online.no
Message-ID: <3d0e58ea.365926673@news.online.no>
Source record: 43292

On Mon, 17 Jun 2002 14:24:58 -0400, "Scott M."
<scottzm@netzcommander.com> wrote:

>Does anyone know of a US retail source for BF982 MosFETS? I can't seem to
>find one and the obsolete parts guys want a minimum of $100.
>
>Scott M.
>KA1MRO
>
>
>
do you really need it, it is a lot of similar transistors like BF981,
BF961 etc, believe BF982 is better if it is for a switch

--
remove ,xnd to reply

531. Re: 10-meter amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 01:14:51 UTC
From: 2w8ji@contesting.com
Message-ID: <3d0e84be.174045739@news.akorn.net>
Source record: 43293

On Mon, 17 Jun 2002 15:14:06 +0100, Philip de Cadenet
<Philstheboss@thebbc.fslife.co.uk> wrote:

>Lee Martin in SC makes the Skywalker amp kits which have been mentioned
>above.

Last I heard, Lee Martin lost his aguement that FCC rules governing
sales of amplifiers and amplifier kits should not apply to him. He
learned differently, at least according to QST.

Because his amplifiers never passed FCC TA requirements and were never
issued a TA number, they were pulled from the market.

73 Tom

532. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 01:33:49 UTC
From: 2w8ji@contesting.com
Message-ID: <3d0e8686.174501523@news.akorn.net>
Source record: 43294

On 17 Jun 2002 13:07:22 GMT, jgboyles@aol.com (JGBOYLES) wrote:

>I am not a T coil expert, so I should have left those comments off. I have
>built exactly one. The way I understood its operation was that the secondary
>of the T coil is a 1/4 wave monopole base fed.

No. By definition, that is incorrect.

A 1/4 wl monopole is, by definition, physically 1/4 wl long.

If the antenna is less than 1/4 wl long, it is properly described by
the physical length. For example, my 160-meter mobile antenna is not a
1/4 wl monopole because it is 12 ft long physically. It is a .02 wl
long monopole.

That would be true no matter how it is loaded.

>blue arc produced at the top of the coil. My point was that I could get the
>same effect with a 468 foot tall vertical monopole worked against ground.

No, you would NOT get the same effect.

The reason you would not get the same effect is because the radiation
resistance of your very short monopole (AKA tesla coil) is very very
low, so very little power is actually radiated as E-M energy. Most of
the applied power becomes heat. Voltage and magnetic flux levels are
very high because the system has essentially no load for the applied
power except the resistive losses of the coil. Voltage and current
have to increase until virtually all of the applied power is "wasted"
heating the coil or making arcs and sparks.

A 1/4 wl antenna would have many hundreds of times the radiation
resistance, and would radiate quite well. Much less end-voltage would
appear on the taller structure, because the system would be able to
couple a large portion of the applied power to space.

If you took the 1/4 wl monopole and placed it inside an RF tight
lossless box, the open end voltage would again become quite high. So
would current.

1/4 wl of wire stretched out as far as possible spatially is a 1/4 wl
antenna. A 1/4 wl of wire or even a full wl of wire in a 1/100th wl
area is a 1/100th wl antenna, nothing more.

They are nothing alike.

73 Tom

533. Re: Need source for BF982

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 01:38:15 UTC
From: jcplpsm@aol.communicate
Message-ID: <20020617213815.17189.00000594@mb-cq.aol.com>
Source record: 43295

>o you really need it, it is a lot of similar transistors like BF981,
>BF961 etc, believe BF982 is better if it is for a switch

Good question. The 982 has a 1.2 dB noise figure. I see the 961 has a 1 dB noise figure. I don't know if the max Id reduction would be an issue or not. I saw that the BF982 was recommended as a replacement in the front end of the Yaesu FT-726 to reduce noise and increase gain. I thought I'd give it a try, but they sure are hard to come by.

Scott M.

534. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 01:45:05 UTC
From: 2w8ji@contesting.com
Message-ID: <3d0e8aee.175629663@news.akorn.net>
Source record: 43296

On Mon, 17 Jun 2002 14:00:47 -0500, "Clifton T. Sharp Jr."
<clifto@clifto.com> wrote:

>> You are both wrong. The truth is the small wire absorbs somewhere
>> between 100% and *much less* than .49% of the entire tansient.
>
>Nit pick: if it did vaporize, it probably absorbed at least the 0.49%
>before it vaporized. :)

Maybe, but maybe not.

Think about it.

We have no idea what the energy level was. While we might assume
total system energy was considerably higher than the energy required
to vaporize the wire, we have no idea if that is true or not.

We don't know anything about the rest of the system, it could have an
ESR of nearly zero ohms, or a million ohms. We only know the wire
consumed enough energy to vaporize, and that might have been near zero
percent of the system surge or near 100%.

Now the real question, how can there be a 300 line argument where one
person calls the other a dummy....when no one could possibly know the
distribution of energy in the system?

73 Tom

535. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 01:50:36 UTC
From: 2w8ji@contesting.com
Message-ID: <3d0e8dd0.176368005@news.akorn.net>
Source record: 43147

On Mon, 17 Jun 2002 16:56:34 GMT, w9wi@linux1.localdomain (Doug Smith
) wrote:

>
>"Magic" lengths do sometimes help when the line is *not* properly matched;
>some line length may exist which will cause the transmitter to see 50 ohms
>even when the antenna isn't. Or at least be closer. And at the very least,

Wait a minute Doug.

If the line is 50 ohms, and the load is mismatched, there is NO length
of 50-ohm line that will cause the impedance to be a better match to
50 ohms. SWR remains the same all along the line, so mismatch is the
same all along the line.

It is a circle on a Smith Chart, and never ever gets closer to the 50
ohm j0 center.

The only exception is if the line has significant loss, and then the
longer the line the better the match.

73 Tom

536. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 01:53:46 UTC
From: 2w8ji@contesting.com
Message-ID: <3d0e8ebd.176605293@news.akorn.net>
Source record: 43148

On Mon, 17 Jun 2002 07:49:21 -0700, "John S. MacKay"
<k35454@direct.ca> wrote:

>I am receiving multiple queries about this statement. 12 ft. is 1/2 wave at
>10 meters (RG 58 and similar). This means that the Voltage or Current will
>be the same at both ends. The output of a transmitter is 52 ohms (heavy
>current), the input of the 1/4 wave antenna is 52 ohms (heavy current) so
>they are matched. This way an antenna tuner is not mandatory. By the way,
>will anyone with a factory- made magmount base measure the length of the
>coax supplied ? Is it purely coincidence that 12 ft. is the measurement
>usually found ? Now if somebody wants to disagree, be my guest , but when
>you hook up your antenna please check the SWR sooner rather than later !!
>John M. VE7AFN/M.

Sorry John, but that is not true. If the load is 50-ohms, the line has
the same voltage and current all along its length.

If the 50-ohm line is mismatched, and you have it grounded correctly
at the antenna, SWR and match does NOT change with line length.

If you are finding it to change, you have something wrong with the
grounding, the feedline, or the meter you are using.

73 Tom

537. FS: Small bags of NOS Sangamo Micas, dipped etc. Cheep!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 03:17:55 UTC
From: rlucch2098@aol.com
Message-ID: <20020617231755.28536.00000790@mb-cr.aol.com>
Source record: 43149

Hi Fellas;
I have for SALE:
Many small bags with various qty's of NOS micas, etc!
If you see anything you can use, e-mail me & i'll give you more info. This will save me time if no one is interested!
Sangamo red mica caps, 74pf, 3740pf, 150pf, 450pf, 4170pf, 27pf, 50pf, 74pf, 400pf.

El-Menco red micas, 300pf, 12pf, 500.510pf,

Samgamo dipped micas, 1450pf, 732pf, 68pf, 150pf,

Bag of 1" lg approx. 10mhy ww RF chokes.

Bag of .02 Sprague Round axial caps.

Thanks es 73....Rich WA2RQY (1961)
RLUCCH2098@aol.com
"Keep those heaters on"

538. Re: Simple Radio Transmitter Hunts RDF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 06:04:42 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <aemii6bhh1@slb3.atl.mindspring.net>
Source record: 43150

Doctor wrote:
>
> Would any one know of a simple transmitter that can transmit over 2km or
> more for RDF work.
> The idea is for transmitter hunts that the club, organises.
> It does not matter what frequency just the circuit which would be very
> helpful.

2 KM range, huh ?

Well, 2 meters can do that. Besides most hams will have 2 meter radios
so it is probably the best band to use for a club T-hunt.

You will of course have to use a 5/8 wave antenna or some such on the
transmitter. It will also need a big enough battery to provide power.
This all makes the unit relatively large.....

==========

You will need a transmitter and an identifier as well to be legal. Any
other sort of unit will probably have a LOT of people employing RDF to find
the illegal Tx.

I seem to remember that Ramsey Kits has some type of kit that is a
"hidden" transmitter for RDF hunts.

Alternatively, there is a book about transmitter hunting that most ham
radio stores will have which shows construction information. I am sorry
to say I do not recall the precise title, but it is a fairly well known
book.

Many RDF hunts use a ham with a mobile as the fox and that works nicely
for a hunt that is meant to be over a large geographic area. A regular 2
meter mobile setup has enough power and the operator will identify often
enough to satisfy the FCC.

Jim Pennell
N6BIU

539. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 06:38:37 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D0ED56D.6E3E2713@clifto.com>
Source record: 43151

Tom W8JI wrote:
> Now the real question, how can there be a 300 line argument where one
> person calls the other a dummy....when no one could possibly know the
> distribution of energy in the system?

That's easy. This is Usenet, remember?

--
If spammers weren't stupid, they'd be the idle rich instead of spammers.
- Morely Dotes

540. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 07:24:30 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d0edff7.6291838@news.cantech.net.au>
Source record: 43152

On Tue, 18 Jun 2002 01:50:36 GMT, 2w8ji@contesting.com (Tom W8JI)
wrote:

>On Mon, 17 Jun 2002 16:56:34 GMT, w9wi@linux1.localdomain (Doug Smith
>) wrote:
>
>>
>>"Magic" lengths do sometimes help when the line is *not* properly matched;
>>some line length may exist which will cause the transmitter to see 50 ohms
>>even when the antenna isn't. Or at least be closer. And at the very least,
>
>Wait a minute Doug.
>
>If the line is 50 ohms, and the load is mismatched, there is NO length
>of 50-ohm line that will cause the impedance to be a better match to
>50 ohms. SWR remains the same all along the line, so mismatch is the
>same all along the line.
>
>It is a circle on a Smith Chart, and never ever gets closer to the 50
>ohm j0 center.
>
>The only exception is if the line has significant loss, and then the
>longer the line the better the match.

No, the exception is ANY line which has ANY loss - as they all do.

541. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 07:42:49 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D0EE479.9080403@eznec.com>
Source record: 43153

A quick EZNEC calculation of a 1/2" diameter resonant dipole at 30 MHz shows the Q to be 6.82 (equivalent feedpoint L = 2.60 uH). The L is easily determined by having EZNEC calculate source impedance at two frequencies, one just above and one just below resonance. I used 29.9 and 30.1 MHz. Call the difference between the feedpoint reactances at the two frequencies DX (6.536 ohms in this case) and the difference between the two frequencies DF (0.2 X 10^6). Then L = DX / (4 * pi * DF) = 2.60 uH for this antenna. (This formula for equivalent L is valid only near half wave resonance.) The reactance of a 2.60 uH inductor at 30 MHz = 490 ohms. Divide this by the feedpoint resistance at resonance reported by EZNEC (71.9 ohms) to get the Q of 6.82. Reg's simple calculation of gives a result (Q of 8.2) about 20% high, not too bad for a simple approximation.

I repeated the experiment with a 1/4" diameter dipole, and got a Q of 9.11 using Reg's method and 7.75 using EZNEC. Calculation using Reg's method are only 18% higher in this case, so the accuracy of that method apparently improves as the wire gets thinner.

Modeling an antenna as a series RLC network is valid only near odd half wave resonances (and the values of R, L, and C are different for each resonance).

Roy Lewallen, W7EL

Reg Edwards wrote:
>>Well, please enlighten the group, how did you arrive at that figure?
>
> ================================
>
> A half-wave dipole is a tuned circuit.
>
> Like all other tuned circuits it has L, C and R, all considered to be in
> series.
>
> Antenna Q is calculated in the same way as any other resonant Q.
>
> Q = X / Rr , where X is inductive reactance = 2*Pi*F*L
>
> R is the value of the radiation resistance when uniformly distributed along
> the wire. In the case of a 1/2-wave dipole it is very simple. It is exactly
> twice the value which is usually assumed to be lumped at the center.
>
> Rr = 2*73 = 146 ohms which is the same at all frequencies.
>

> Now we have to find the inductance of a straight length of wire, length =
> 1/2-wavelength = Lambda / 2, and of diameter D.
>
> You can get the inductance from Terman and a dozen other second-hand
> dealers. They don't always agree with each other.
>
> L = 0.2 * Length * (Logn(4 * Length / D) - 1) microhenries.
>
> Length and diameter in metres.
>
> **********
>
> So let's calculate Q of a 1/2-wave dipole at 30 MHz, conductor (rod)
> diameter = 1/2" = 12.7mm
>
> L = 0.2 * 5 *(Logn(20000 / 12.7) - 1) = 6.36 microhenrys.
>
> Reactance of L at 30 MHz = 1200 ohms.
>
> Q = 1200 / 146 = 8.2
>
> And so the 3dB bandwidth is about 30 / 8.2 = 3.7 MHz.
>
> **********
>
> Quite simple isn't it ? Not math - just arithmetic.
>
> However, what everybody forgets, if they ever knew, insofar as the Q of the
> whole system is concerned, the L and C of the transmission line have just as
> much effect as L and C of the radiating element. But the transmission line
> has very little R and so has high Q. So the system bandwidth, as perceived
> by the user, may be more narrow than calculated above.
> ----
> ==========
> Regards from Reg G4FGQ
> Free Radio Modelling Software
> Go to http://www.g4fgq.com
> ==========
>
>

542. 6LB6 in FT-101

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 14:57:41 UTC
From: "Scott M." <scottzm@netzcommander.com>
Message-ID: <3d0f486a_6@corp-goliath.newsgroups.com>
Source record: 43155

Does anyone have any experience using 6JB6s in the FT-101 in place of the 6JS6s? If so, what changes do you need to make? Neutralization cap? Are they as good as the 6JS6? All comments welcome.

Thanks,
Scott M.
KA1MRO

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543. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 15:03:07 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aeni3a$op7$1@helle.btinternet.com>
Source record: 43156

An interesting comparison between Roy's Eznec inductance and Terman. A discrepancy of 20%. This seems high so I took another look at Terman.

Terman's inductance formula is for a straight length of wire. He does make corrections for the difference between VLF and HF values. But he makes no mention of wire lengths which are an appreciable fraction of a wavelength. There's no reason why he should. He is more interested in the practical values of inductance of connecting wires between radio parts and components rather than antennas.

When a conductor is longer than, say, 1/10th wavelength the current may no longer be uniform along its length. When examined in the context of inductive energy storage the equivalent uniformly-distributed inductance is a little less than when the current is uniformly distributed.

Another way of looking at a 1/2-wave dipole is to consider it to be two 1/4-wave 'verticals' connected back-to-back. If the inductance is calculated for each 1/4-wave seperately and then added together we find the total inductance to be less than that of just one length of wire.

So a more accurate formula (but just as simple) for the distributed inductance of a 1/2-wave dipole is -

L = 0.2 * Length * (Logn(Lambda / Dia) - 1) microhenrys.

Using the previous example: F = 30 MHz, Diameter = 1/2" the inductance is 5.44 microhenrys. Note that the length is the truly resonant dipole ngth - that which has been pruned (by about 4%) to give zero feedpoint reactance.

The discrepancy between the above formula and Roy+Eznec is 4.6%. Which is more than good enough for the purpose intended.

I would guess that Roy's hazardous method of determining dipole inductance is just as likely to be the reason as inacuracy in the formula.

Incidentally, in my programs where dipole inductance is involved in an analysis the above formula is used. But the value of antenna inductance is not reported in the output data. It is seldom of any interest.

Reg, G4FGQ

544. Re: 6JB6 in FT-101

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 15:04:46 UTC
From: "Scott M." <scottzm@netzcommander.com>
Message-ID: <3d0f4a13_6@corp-goliath.newsgroups.com>
Source record: 43157

Sorry, the Subject should have read 6JB6 in FT-101.

"Scott M." <scottzm@netzcommander.com> wrote in message
news:3d0f486a_6@corp-goliath.newsgroups.com...
> Does anyone have any experience using 6JB6s in the FT-101 in place of the
> 6JS6s? If so, what changes do you need to make? Neutralization cap? Are
> they as good as the 6JS6? All comments welcome.
>
> Thanks,
> Scott M.
> KA1MRO
>
>
>
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545. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 15:07:21 UTC
From: Dave Holford <holford@sympatico.ca>
Message-ID: <3D0F4CA9.75D71B0C@sympatico.ca>
Source record: 43158

"John S. MacKay" wrote:
>
> I am receiving multiple queries about this statement. 12 ft. is 1/2 wave at
> 10 meters (RG 58 and similar). This means that the Voltage or Current will
> be the same at both ends. The output of a transmitter is 52 ohms (heavy
> current), the input of the 1/4 wave antenna is 52 ohms (heavy current) so
> they are matched. This way an antenna tuner is not mandatory. By the way,
> will anyone with a factory- made magmount base measure the length of the
> coax supplied ? Is it purely coincidence that 12 ft. is the measurement
> usually found ? Now if somebody wants to disagree, be my guest , but when
> you hook up your antenna please check the SWR sooner rather than later !!
> John M. VE7AFN/M.
>
> ---

Even assuming that this is any sort of a good idea; it will only be true
at one specific frequency. Since 10M is a pretty wide band it will be a
long way from a 1/2 wave as you tune away from the frequency it is cut
for - or did you plan to limit operation to a single frequency?

Just check the SWR at various points on the band and this becomes
immediately obvious.

Dave VE3HLU

546. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 16:23:27 UTC
From: Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <aenmpv$c4t$1@woodrow.ucdavis.edu>
Source record: 43159
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

Well Pete'e

You imply that 4cx250b type tubes are bad news in the IMD department.
There are many tubes with better operational IMD specs, but the 4cx250b
family works just fine in linear service. IMD is not any type of problem
if you pay attention to the proper circuit and operational details. Basic
linear amplifier 101 related to a specific family of high gain tetrodes.

If any of the 4cx250b family of tubes are around cheap/free, one should
not be scared off from using said by people posting blanket bad news IMD
statements on New Groups. How about you posting some comparisons of IMD
operational preformanc of some popular tetrodes vs the 4cx250b family and
we'll beat the data back and forth.

The 4cx250b family of tubes work well in properly designed and
constructed linear circuits, simple enough.

Your turn to "enlighten us" with some actual data that you have measured,
not something reprinted or quoted out of an older Handbook...

73
skipp

: In rec.radio.swap Uncle Peter <radioconnectionNO@cox.netspam> wrote:
: Skippy,
: Where did I say it didn't "meet FCC requirements"? There are
: thousands of linear designs (albiet mostly UHF/VHF that use
: 4CX250s). I only pointed out
: that as far as IMD performance, there are much better ceramic
: tubes available than the 4CX250.
: Enlighten us.
: 73
: Pete

: "Skipp" <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
: news:ae894h$m90$1@woodrow.ucdavis.edu...
:> Bbbbbuuuuuzzzzzzzzzzzzzz.....!!!!!!!! (the error buzzer sounds)
:>
:> You don't qualify your statement... A well done 4cx250 amplifier easily
:> meets FCC requirements. It's all about how you design and build it...
:>
:> A little home work is always required....
:>
:> skipp
:> http://sonic.ucdavis.edu

```
:>
:> : In rec.radio.amateur.homebrew Uncle Peter
:> : <radioconnectionNO@cox.netspam> wrote:
:> : 4CX250 tubes aren't the best for IMD performance -- but, they are cheap
:> : and available.
:> : Pete
:>
:> : "Skipp" <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
:> : news:adm4om$oip$9@woodrow.ucdavis.edu...
:> :>
:> :> In reference to another thread where someone asked questions about
:> :> converting an amplifier from 6LQ6 "sweep tubes" over to 4CX250B
: "ceramic"
:> :> tubes...
:> :>
:> :> Here's a web link to a few photos of a Dentron GLA-1000B which was
:> :> converted over to a pair of 4CX250's by an Italian Amateur Radio
: Operator.
:> :> I also have pictures of the same amplifier with some of the newer
: Russian
:> :> GU7 series tubes on board, but that's off topic. Anyway have a look if
:> :> your interested.
:> :>
:> :> cheers
:> :> skipp@pilotNOSPAMPLEASE.ucdavis.edu
:> :>
:> :> http://sonic.ucdavis.edu/dentron
:> :>
:> :>
:> :> The main page for the sonic server..
:> :>
:> :> http://sonic.ucdavis.edu
:> :> chow for now
:> :> skipp
:>
:>
```

547. HF Direction Finder(DF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 16:28:28 UTC
From: cowboy67 <cowboy67111@yahoo.com>
Message-ID: <aerh1c$4l4a$1@news3.infoave.net>
Source record: 43112

Howdy all,

Does anyone know how to make an HF DF? Just curious if there are any plans out there on how to make one.

Thanks,

Jim

548. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 17:29:05 UTC
From: timnebo@aol.com187
Message-ID: <20020618132905.16989.00002224@mb-fq.aol.com>
Source record: 43160

buy a wilson 1000 cb antenna and tune it for your operating freq and you'll do great. these are a good qaulity antenna

>
>Hello everyone,
>I need advice on how to put together a mobile antenna for 10 meters.
>Should i use a cb whip and cut it to the poroper length?(around 8FT)
>Or is there a better material to use?
>
>Dan KB3IBT
>
>
>
>
>
>

Tim Nebo

http://www.TimNebo.com

549. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 17:31:25 UTC
From: timnebo@aol.com187
Message-ID: <20020618133125.16989.00002225@mb-fq.aol.com>
Source record: 43161

this subject is much better suited for the yahoo group cbtricks@yahoogroups.com
because its the exact same theory high powered cb stations use to gain
advantage in mobile keydown comeptitions. some of these guys have perfected it.

>
>I went the tuner route when I changed from an htx100 to an htx10 in the car,
>but one other option has always interested me.
>
>Has anyone tried putting one antenna in the back of the car cut to cover
>28.1-.5 and another antenna cut to cover 29.5-.7 in the front of the car.
>Using an antenna switch if you pick the rear antenna, the front antenna will
>somewhat act as a director, if using the front antenna, the rear antenna
>will act as a reflector. Point the car in the direction you are trying to
>communicate (preferably not while going down the highway) and it becomes a 2
>element antenna. You may lose more in the antenna switch than you gain with
>the second element, but I have always wanted to try this.
>thanks, John.
>KC5DWD
>
>
>
>
>
>
>
>

Tim Nebo

http://www.TimNebo.com

550. Re: 10-meter amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 17:55:04 UTC
From: timnebo@aol.com187
Message-ID: <20020618135504.16989.00002231@mb-fq.aol.com>
Source record: 43162

thats pure garbage. 10db is still 10db regardless of what band or the shape its in. a 25 watt radio with a mobile antenna doesnt come close to the signal of a 100 watt rig and a dipole does but a 250 watt mobile with a qaurter wave whip isnt too shabby and wont be at a disadavantage when compared to a fixed station. the original poster would just be best off buying either a texas star 400 that runs a qaud set of 2sc2290's or a texas star that runs a dual set of 2sc2879's. either one of these boxes will work fine and are used by many hams world wide for mobile dx'ing.

>If you are talking SSB, and if you are talking paths of, say, over 500
>miles, then going from 25 watts to 200 watts isn't going to help much on 10.
>In fact, I'd be surprised if you could see any difference at all.

Tim Nebo

http://www.TimNebo.com

551. Re: 10-meter amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 17:56:57 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <TPmnicIpR3D9EwHv@fslife.co.uk>
Source record: 43165

Hello Tom,

>>Lee Martin in SC makes the Skywalker amp kits which have been mentioned
>>above.
>
>Last I heard, Lee Martin lost his aguement that FCC rules governing
>sales of amplifiers and amplifier kits should not apply to him. He
>learned differently, at least according to QST.
>
>Because his amplifiers never passed FCC TA requirements and were never
>issued a TA number, they were pulled from the market.
Last I looked at Lee's website (around a month ago) he stated he was
back in business!

I have a local RF designer here in London laying out a single board with
16 of the 2SC2879's on it just to see if it can be tweaked to see that
magic 1500w peak (after filtering) from a stock 100w HF transceiver as
the driver on a stiff 14v rail into a big Bird Termaline.

The data sheet says no, (lack of enough drive) but I'm a perpetual
optimist.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

552. WTB: 2 X NOS 4-1000A/8166 tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 17:58:52 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <bfrl23IcT3D9EwHX@fslife.co.uk>
Source record: 43166

Prefer Amperex but will consider others.

Tnx
--
Philip de Cadenet

553. ADS Cadet RDS/RBDS ISA Radio Card

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 19:31:32 UTC
From: ddmga@yahoo.com
Message-ID: <296ea75a.0206181131.51445ef1@posting.google.com>
Source record: 43163
Cross-posted to: alt.radio.scanner.uk,rec.radio.amateur.homebrew

I just ordered this RDS/RBDS radio card. So, I'm going to be trying
out different programs from the 'net for using/decoding those signals.
Please let me know your experiences and if you have any programs or
hardware for using the RDS/RBDS signals from this card. It only cost
$6.50 for this radio, apparently heavily discounted for whatever
reason I don't know. But for that price it should be worth it.

Again, any information, advice, additional hardware, cables or
programs for this ISA card would be much appreciated. Here are links
for this radio:

http://www.adstech.com/products/CadetPCRadio/intro/CadetPCRadio.asp?pid=RDX-1187

http://www.pricegrabber.com/search_getprod.php/masterid=27923/ut=0c5984f33eb13538

http://www.pricegrabber.com/redirect.php3?retid=486&priceret=6.50&zip=&masterid=27923&url=
http%3A%2F%2Fstore.yahoo.com%2Fcgi-bin%2Fclink%3Fmeritline%2Bf5G2PX%2Badscaddatrad.html&pr
ank=2&nmerch=10&pricehi=74.99&pricelow=5.50&priceavg=20.13&availpct=0.8&brank=0&md5=a54aea
c37eeab628c0fde1a3799c8032&bl=2&ut=0c5984f33eb13538

ddmga@yahoo.com (David) wrote in message
news:<296ea75a.0206101950.4f5b50ff@posting.google.com>...
> I am participating in the ratings panel for Arbitron
> (www.arbitronpanel.com). They gave me this equipment which captures
> and re-emits coded signals in radio and TV broadcasts. The signals
> are supposedly inaudible to the human ear. Well, I'm interested in
> finding out the frequency used by this equipment and on radio and TV
> and if it can be monitored and decoded using a PC.
>
> I haven't found any information or programs to do this on the net.
>
> The patent numbers on the devices are:
>
> 5,764,763 Apparatus and methods for including codes in audio signals
> and decoding
>
> 5,483,276 Compliance incentives for audience monitoring/recording
> devices
>
> 5,450,490 Apparatus and methods for including codes in audio signals
> and decoding
>
> Any ideas or information is much appreciated!

554. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 19:45:17 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3D0F8DCD.8549A068@ay.com.au>
Source record: 43164

budgie wrote:

> No, the exception is ANY line which has ANY loss - as they all do.

Uh huh, so 100 metres later it may have spiralled down towards an
acceptable match? Not very practical, unless you want a dummy load.

Resonant feedlines are only useful for repeating the load impedance for
measuring purposes or for current forcing in arrays. To effect any kind
of match you need stubs or a chunk of different Z line.

--
Alan Yates
http://www.vk2zay.net/

555. Re: 38Khz crystal,

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 19:58:41 UTC
From: Kev <parker.kREMOVE@btinternet.com>
Message-ID: <aeo3de$ph3$1@helle.btinternet.com>
Source record: 43167

Thank you, But as i am based in the UK it would cost more in postage then
the crystal is worth, but if i dont get any luck here i will give then a
try.. at least its a start.

"George" <gschwab@florida-knife.com> wrote in message
news:SNrO8.2186$ks6.352@nwrddc02.gnilink.net...
> Digi-Key catalog lists part number
> SE3314-ND as a 38Khz Cylinder type Quartz Crystal.
> Don't know if the specs on are what U need tho.
> Page 412 in Catalog #TO13
> or 1-800-344-4539
> George
>
> "Kev" <parker.kREMOVE@btinternet.com> wrote in message
> news:aede95$sv9$1@paris.btinternet.com...
> > I know I posted this a while ago but after various emails to companys I
am
> > still having difficulty locating a 38Khz crystal, preferably the
> cylinder
> > type.
> >
> > Thank you for your support
> >
> > K Parker
> >
> >
> >
>
>

556. Re: TOKO Inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 20:16:12 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3D0F95AC.E04C923E@alma.demon.co.uk>
Source record: 43168

ted kell wrote:
>
> Try www.sycomcomp.co,uk. Robin has a web site there and he sells a range of
> TOKO coils. They are/were about $.85 each with a reasonable shipping charge.
> I purchased a selection from him a month ago.
>
> Ted
>
> SB <susantv69_uk@btinternet.com> wrote:
> >Having just returned to homebrewing again, I am finding it difficult to
> >source TOKO inductors here in the UK, Maplin's have now discontinued them.
> >Can anyone advise of a source for these please.
> >
> >Simon G7CPN.
> >
> >

I've been to this web site, but none of the selectable pages lead to
TOKO inductors. I must be missing something really obvious.

Can you explain how to find this information?

regards...

--Gary

557. Re: Simple to build Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 20:30:22 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <yLMP8.57014$Hn4.1946121@news1.east.cox.net>
Source record: 43169
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,rec.radio.amateur.equipment

There a quite a few surplus tube and parts dealers that cater to
the vintage radio restoration buffs. Parts are available, and
reasonably priced.

Pete

"Mark Keith" <nm5k@wt.net> wrote in message
news:25eb70d7.0205260241.2a6cf743@posting.google.com...
> RVMJ <RVMJ@Safety-&-Arming.Clara.co.uk> wrote in message
news:<qklveukgodt7q3e6hu8c0edauga44s98ve@4ax.com>...
> > Mark Keith wrote:
> >
> > >The problem is it's sort of hard to find tube parts
> > >these days. Used to, any junk tv had most of the parts to build a
> > >simple transmitter. "transformer, etc".
> >
> > I'm sorry to disagree with you, but a visit to a rally such as
> > Dunstable Downs would have enabled you to come away with simply loads
> > of components for building the gear you mention. They're not new, not
> > shrink-wrapped, and not on glitzy display stands; but they're there!
>
> Yep, you can find them, but I didn't know if he want to or had close
> access to any hamfests. I guess most do at some point in the year.
> Most flea markets and hamfests will usually have loads of junk parts
> laying around for cheap. Many times people will drag the stuff out to
> sell, and end up giving it away just so they don't have to haul it
> back home. MK

558. Re: Need source for BF982

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 21:04:25 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <p87oea.7au.ln@my.linux.box>
Source record: 43171

In article <20020617213815.17189.00000594@mb-cq.aol.com>, SAM wrote:
>>o you really need it, it is a lot of similar transistors like BF981,
>>BF961 etc, believe BF982 is better if it is for a switch
>
> Good question. The 982 has a 1.2 dB noise figure. I see the 961 has a 1 dB
> noise figure. I don't know if the max Id reduction would be an issue or not. I
> saw that the BF982 was recommended as a replacement in the front end of the
> Yaesu FT-726 to reduce noise and increase gain. I thought I'd give it a try,
> but they sure are hard to come by.
>
> Scott M.

The BF961, BF981, 3SK88 and 3SK45(tin-can) are all very
good on 2M. I have two rigs for 2M. One has a BF961 in
the front-end, the other has a twenty year old 3SK45.
Both rigs are good enough to hear GB3VHF (603KM away) even
when tropo' conditions are poor.

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.18

559. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-18 21:39:08 UTC
From: jgboyles@aol.com
Message-ID: <20020618173908.04409.00001395@mb-bd.aol.com>
Source record: 43170

>A 1/4 wl monopole is, by definition, physically 1/4 wl long.
Hi Tom,
Ok, by definition I stand corrected.

>If the antenna is less than 1/4 wl long, it is properly described by
>the physical length. For example, my 160-meter mobile antenna is not a
>1/4 wl monopole because it is 12 ft long physically. It is a .02 wl
>long monopole.

Yes, but my 160m mobile rig thinks it has a 1/4 wave vertical out there because
of all the loading and matching I have to do.
.>>blue arc produced at the top of the coil. My point
was that I could get the
>>same effect with a 468 foot tall vertical monopole worked against ground.
>
>No, you would NOT get the same effect.

The point I am trying to make is that a 1/4 wave monopole and a Tesla coil are
both resonant. You can make a 3' coil and a 468 foot vertical both resonant at
the same frequency. They have a current maximum at the base, and a voltage
maximum at the other end. Other than that, no similarity. A T coil is not a
good antenna, 1/4 wave monopole is not a good T coil. The first response to
the orginal poster was refering to helical wound cb mobile antennas acting like
Tesla coils at high (transmitter) power. I was stumbling around trying to
explain why.
BTW I did get enough rf from my T coil to open my garage door. Arc, induction
field, or actual radiation from the coil?

73 Gary N4AST

560. SALE: Operators & Service Manuals Icom IC-R7100 ICR7100 7100

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 01:32:23 UTC
From: David Goldstein <d.goldstein@worldnet.att.net>
Message-ID: <HaRP8.49382$UT.3343518@bgtnsc05-news.ops.worldnet.att.net>
Source record: 43172
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Operators Manual and Service Manual for the Icom IC-R7100 receiver for sale. The manuals contain instructions, information and diagrams, in particular regarding the internal service, adjustments, options and jumper blocks. Information in these manuals is exclusive and not found from any other source. The lower margin of the Operators Manual is cut short but the manual is complete.

561. WANTED: Triad M-15 Mod transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 01:45:13 UTC
From: Chuck O'Neal <coneal@ultranet.com>
Message-ID: <aeono8$j8p$1@bob.news.rcn.net>
Source record: 43173
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

I'm still looking for one. $50, plus shipping, for a good one if
anyone has one available!
73,
Chuck...K1KW

562. Wanted to buy;VSWR BRIDGE!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 01:46:26 UTC
From: jos <soj@sympatico.ca>
Message-ID: <3D0FE272.6568BAEB@sympatico.ca>
Source record: 43174

Greetings!

I am looking for a 1 Ghz, 75 ohm VSWR Bridge. They were manufactured by
Wavetek, Wideband Engineering, Avcom and others.
Regards! Jos. VE2AUC.

563. Looking for ICs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 02:06:47 UTC
From: Bob Liesenfeld <robert.liesenfeld@neicoltech.org>
Message-ID: <3D0FE737.2F060C14@neicoltech.org>
Source record: 43175

Hey gang,
I'm looking for 2 or 3 each of MC4044P and MC4024P ICs. Anyone got
some they want to sell? Thanks

Bob WB0POQ

564. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 03:18:48 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d0ff76b.4063118@news.cantech.net.au>
Source record: 43176

On Tue, 18 Jun 2002 19:45:17 GMT, Alan Yates <alany@ay.com.au> wrote:

>budgie wrote:
>
>> No, the exception is ANY line which has ANY loss - as they all do.
>
> Uh huh, so 100 metres later it may have spiralled down towards an
>acceptable match? Not very practical, unless you want a dummy load.

You missed the point, Alan. Tom stated:
"If the line is 50 ohms, and the load is mismatched, there is NO
length of 50-ohm line that will cause the impedance to be a better
match to 50 ohms.". That is ONLY true of a lossless line, and in my
thirty-plus years in the industry I have yet to see one.

And as an aside, yes we have used trickie dickie's cheap "RG58" as a
dummy load at UHF, unterminated at that ...

> Resonant feedlines are only useful for repeating the load impedance for
>measuring purposes or for current forcing in arrays. To effect any kind
>of match you need stubs or a chunk of different Z line.

Agreed.

565. Re: Need source for BF982

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 03:45:24 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0206181945.795b1f3f@posting.google.com>
Source record: 43177

"Scott M." <scottzm@netzcommander.com> wrote in message
news:<3d0e277f$1_6@corp-goliath.newsgroups.com>...

> Does anyone know of a US retail source for BF982 MosFETS? I can't seem to

> find one and the obsolete parts guys want a minimum of $100...

The last BF9xx MOSFETs I bought were from Les Cyclades
in Paris and from Cricklewood in London. Both had all
I could carry.

What do you need a U.S. source for? Ours is an
international hobby. Or did you forget that?

Laura Halliday VE7LDH ï¿½ ï¿½ "Que les nuages soient notre
Grid: CN89lg ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½pied a terre..."
ICBM: 49 16.57 N 123 0.24 W ï¿½ ï¿½ ï¿½ ï¿½- Hospital/Shafte

566. Re: Basic surge arrester circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 04:11:06 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D1004C3.B0C0795A@bellatlantic.net>
Source record: 43178

Tom W8JI wrote:
>
> On Mon, 17 Jun 2002 05:39:56 GMT, ehsjr@bellatlantic.net wrote:
>
> >If there is something wrong in what I have posted, I would very
> >much appreciate you pointing that out.
> >
> >Aside from that, I agree 100% with your post.
>
> Let's just start over.
>
> The main point, for anyone trying to glean some useful information
> from this, is that we really can not calculate or estimate where the
> energy is dissipated because there are far too many variables or
> unknowns.
>
> One thing we do know, is anyone who claims it is xx.xx percent of
> system power or whatever does not understand the problem. Especially
> if he thinks fusing current somehow limits system current to that
> value instantaneously.
>
> Do you agree?

Yes, and thanks, particularly for "Let's just start over."
Makes me realize that for my part I've extended this too
long.

>
> 73 Tom

Thanks. I agree

567. Re: Looking for ICs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 04:21:22 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D100751.2003@pop.removethistomailme.net>
Source record: 43179

```
Bob Liesenfeld wrote:
>
> Hey gang,
> I'm looking for 2 or 3 each of MC4044P and MC4024P ICs. Anyone got
> some they want to sell? Thanks
>
> Bob WB0POQ

http://www.findchips.com

-- jm

-----------------------------------------------------
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
-----------------------------------------------------
```

568. Re: Looking for ICs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 05:11:09 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <aep3pcekq1@paris.btinternet.com>
Source record: 43180

"Bob Liesenfeld" <robert.liesenfeld@neicoltech.org> wrote in message
news:3D0FE737.2F060C14@neicoltech.org...
> Hey gang,
> I'm looking for 2 or 3 each of MC4044P and MC4024P ICs. Anyone got
> some they want to sell? Thanks

What on earth do you want these for? I was playing about with them 25 years
ago, and they aren't much use for current designs. I don't have any, BTW.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.com
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

569. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 06:06:13 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3D101F54.5B91E14B@ay.com.au>
Source record: 43181

budgie wrote:

> And as an aside, yes we have used trickie dickie's cheap "RG58" as a
> dummy load at UHF, unterminated at that ...

Yeah I am sure we all have :-)

Trouble is it gets stinking hot near the fed end where most of the
power gets washed off.

--
Alan Yates
http://www.vk2zay.net/

570. Re: Looking for ICs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 11:23:23 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <LQZP8.60876$Hn4.2120390@news1.east.cox.net>
Source record: 43182

Bob

I have a fairly good supply of obsolete Motorola chips.. Drop me an email at radioconnection@juno.com and I will check the parts drawers in the cellars. I should have at least one, if not both items.

Peter k1zjh

"Bob Liesenfeld" <robert.liesenfeld@neicoltech.org> wrote in message news:3D0FE737.2F060C14@neicoltech.org...
> Hey gang,
> I'm looking for 2 or 3 each of MC4044P and MC4024P ICs. Anyone got
> some they want to sell? Thanks
>
> Bob WB0POQ
>

571. Re: 10-meter amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 11:43:54 UTC
From: 2w8ji@contesting.com
Message-ID: <3d106dad.77729197@news.akorn.net>
Source record: 43183

On Tue, 18 Jun 2002 18:56:57 +0100, Philip de Cadenet
<Philstheboss@thebbc.fslife.co.uk> wrote:

>Last I looked at Lee's website (around a month ago) he stated he was
>back in business!

Then I assume he has obtained type acceptance, and does not ship
amplifiers or amplifier parts kits capable of operation between 25 and
35 MHz.

After all, we should all follow the published regulations.

73 Tom

572. Re: 10-meter amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 11:56:37 UTC
From: 2w8ji@contesting.com
Message-ID: <3d107009.78334105@news.akorn.net>
Source record: 43184

On 18 Jun 2002 17:55:04 GMT, timnebo@aol.com187 (www.TimNebo.com)
wrote:

>station. the original poster would just be best off buying either a texas star
>400 that runs a qaud set of 2sc2290's or a texas star that runs a dual set of
>2sc2879's. either one of these boxes will work fine and are used by many hams
>world wide for mobile dx'ing.

I would certainly hope NOT.

There is a danger in purchasing totally illegal non-type-accepted
amplifiers, like the illegal CB amplfiers manufactured by Texas Star.

They operate class C, and have poor or no filtering. That means they
splatter and trash up the ten meter band, and will even cause TVI and
you might also run the risk of interfering with other licensed
services. In fairness, they would be suitable for FM and CW use if you
added a low-pass filter.

I've actually measured some Texas Star amplifiers, and they were in
the area of -15dB IM3 below one tone, and had harmonics suppressed
only 20 dB!

To put it bluntly they belong only on the CB band with illegal
operators, not on the amateur bands! Ten meters is bad enough with CB
QRM, we don't need a bunch of hams trashing the band with CB amps.

573. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 12:08:02 UTC
From: 2w8ji@contesting.com
Message-ID: <3d1071eb.78815959@news.akorn.net>
Source record: 43185

On 18 Jun 2002 21:39:08 GMT, jgboyles@aol.com (JGBOYLES) wrote:

>Yes, but my 160m mobile rig thinks it has a 1/4 wave vertical out there because
>of all the loading and matching I have to do.

No, your radio simply "sees" a low SWR load. It does not see a "1/4 wl
antenna" unless there is one.

>The point I am trying to make is that a 1/4 wave monopole and a Tesla coil are
>both resonant. You can make a 3' coil and a 468 foot vertical both resonant at
>the same frequency. They have a current maximum at the base, and a voltage
>maximum at the other end. Other than that, no similarity.

True enough, but we have to remember the limits. A coil generally has
very close to uniform current throughout the structure. A large
monopole antenna does not. That mostly has to do with the EM
radiation.

The exception is if the coil radiates a significant portion of the
applied energy, like the antenna does. The exception requires the coil
to be physically large in terms of the wavelength, or has significant
current shunting loads along it's length.

73 Tom

574. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 12:19:59 UTC
From: 2w8ji@contesting.com
Message-ID: <3d10758f.79747699@news.akorn.net>
Source record: 43186

On Wed, 19 Jun 2002 03:18:48 GMT, budgie@nowhere.cantech.net.au
(budgie) wrote:

>You missed the point, Alan. Tom stated:
>"If the line is 50 ohms, and the load is mismatched, there is NO
>length of 50-ohm line that will cause the impedance to be a better
>match to 50 ohms.". That is ONLY true of a lossless line, and in my
>thirty-plus years in the industry I have yet to see one.

You are intentionally or unintenitionally misquoting me by lifting
only PART of what I said from my post.

If you include the last sentence, you will see I already cover the
real-world lines. I said:

"The only exception is if the line has significant loss, and then the
longer the line the better the match."

The key word is **significant** loss. For ANY line to improve the VSWR
through length, when line impedance equals desired system impedance
(like a 50-ohm load in a 50-ohm line) the loss MUST be significant.

The loss is generally **NOT** significant in twelve feet of coax on
ten meters, so the SWR reduction he claims can not come from line
length with the exception that his meter might not be calibrated to
the line Z0 or the system might have common mode currents that are
changing the load impedance seen by the line as line length is varied.

There is enough misunderstanding about this without complicating the
discussion by misquoting people.

73 Tom

575. Re: How to make a 10 Meter mobile antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 12:48:41 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1906020848560001@c-66-176-144-254.se.client2.attbi.com>
Source record: 43187

In article <3d1071eb.78815959@news.akorn.net>, 2w8ji@contesting.com (Tom W8JI) wrote:

> On 18 Jun 2002 21:39:08 GMT, jgboyles@aol.com (JGBOYLES) wrote:
>
>
> >Yes, but my 160m mobile rig thinks it has a 1/4 wave vertical out there because
> >of all the loading and matching I have to do.
>
> No, your radio simply "sees" a low SWR load. It does not see a "1/4 wl
> antenna" unless there is one.
>
> >The point I am trying to make is that a 1/4 wave monopole and a Tesla coil are
> >both resonant. You can make a 3' coil and a 468 foot vertical both resonant at
> >the same frequency. They have a current maximum at the base, and a voltage
> >maximum at the other end. Other than that, no similarity.
>
> True enough, but we have to remember the limits. A coil generally has
> very close to uniform current throughout the structure. A large
> monopole antenna does not. That mostly has to do with the EM
> radiation.
>
> The exception is if the coil radiates a significant portion of the
> applied energy, like the antenna does. The exception requires the coil
> to be physically large in terms of the wavelength, or has significant
> current shunting loads along it's length.
>
> 73 Tom

I joined this thread lately and have probably missed significant portions, but Tom is right. In fact, if the vertical conducting structure gets to be short enough, then you essentially end up with a helical whip. For 160 mtrs, these pitches would probably yield an antenna efficiency of -30 dbi at best, but this is a stab in the dark for value. Put another way, it won't be very efficient. If practical (I don't do 160), a loop would be better for 160.

BTW, what happened to the thread about 10 MTR's? An 11 MTR bumper mount works great when pruned. Don't get concerned about line loss in the RG58. It's not much at these freq's. Also, please don't flame me because the whip is at 38 ohms or thereabouts instead of the 50 ohms of the RG58, mismatch loss is not that bad either.

Steve Carlton WB4CZR
ex Moto Engineer
Plantation, FL

576. Re: Wanted to buy;VSWR BRIDGE!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 12:58:09 UTC
From: ae517@FreeNet.Carleton.CA
Message-ID: <aepv51$c5r$1@freenet9.carleton.ca>
Source record: 43188

jos (soj@sympatico.ca) writes:

> I am looking for a 1 Ghz, 75 ohm VSWR Bridge. They were manufactured by
> Wavetek, Wideband Engineering, Avcom and others.
> Regards! Jos. VE2AUC.

Salut Jos.

If you don't have any luck finding a commercial one, there was a
RLB designed by Paul Wade published in QEX that goes up to 2.4 GHz.
It will measure both 50 and 75 ohms, depending on how it's set up.

Russ va3rr/aa8lu
--
73 de va3rr/aa8lu
http://www.qsl.net/va3rr

577. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 12:59:31 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d107f5e.15472077@news.cantech.net.au>
Source record: 43189

On Wed, 19 Jun 2002 12:19:59 GMT, 2w8ji@contesting.com (Tom W8JI)
wrote:

>On Wed, 19 Jun 2002 03:18:48 GMT, budgie@nowhere.cantech.net.au
>(budgie) wrote:
>
>>You missed the point, Alan. Tom stated:
>>"If the line is 50 ohms, and the load is mismatched, there is NO
>>length of 50-ohm line that will cause the impedance to be a better
>>match to 50 ohms.". That is ONLY true of a lossless line, and in my
>>thirty-plus years in the industry I have yet to see one.
>
>
>You are intentionally or unintenitionally misquoting me by lifting
>only PART of what I said from my post.

I don't believe it is misquoting at all.

>If you include the last sentence, you will see I already cover the
>real-world lines. I said:
>
>"The only exception is if the line has significant loss, and then the
>longer the line the better the match."
>
>The key word is **significant** loss. For ANY line to improve the VSWR
>through length, when line impedance equals desired system impedance
>(like a 50-ohm load in a 50-ohm line) the loss MUST be significant.
>
>The loss is generally **NOT** significant in twelve feet of coax on
>ten meters, so the SWR reduction he claims can not come from line
>length with the exception that his meter might not be calibrated to
>the line Z0 or the system might have common mode currents that are
>changing the load impedance seen by the line as line length is varied.

I still beg to differ. ANY loss will improve the match. Significant
loss will introduce a significant improvement.

>There is enough misunderstanding about this without complicating the
>discussion by misquoting people.

You made the statements. Either alone is incorrect. Both together
remain incorrect. There was no misquoting whatsoever, and I do not
believe that either part was taken out of context. YMMV as much as you
like.

578. Re: Need source for BF982

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 14:26:50 UTC
From: "Scott M." <scottzm@netzcommander.com>
Message-ID: <3d1092ad$1_3@corp-goliath.newsgroups.com>
Source record: 43190

"Laura Halliday" <marsgal42@hotmail.com> wrote in message
> What do you need a U.S. source for? Ours is an
> international hobby. Or did you forget that?

I just don't get to London and Paris as much as I would like, and buying a ticket just for the sake of purchasing a couple of transistors seems a little eccentric to me.

Scott M.
KA1MRO

------------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

579. Re: Need source for BF982

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 15:25:25 UTC
From: MS Bob <msbob@hotmail.com-edy>
Message-ID: <6581hugf0a3vl19gq3ffu49pqsn1o63q6i@4ax.com>
Source record: 43191

On 18 Jun 2002 20:45:24 -0700, marsgal42@hotmail.com (Laura Halliday)
wrote:

>"Scott M." <scottzm@netzcommander.com> wrote in message
news:<3d0e277f$1_6@corp-goliath.newsgroups.com>...
>
>> Does anyone know of a US retail source for BF982 MosFETS? I can't seem to
>
>> find one and the obsolete parts guys want a minimum of $100...
>
>The last BF9xx MOSFETs I bought were from Les Cyclades
>in Paris and from Cricklewood in London. Both had all
>I could carry.
>
>What do you need a U.S. source for? Ours is an
>international hobby. Or did you forget that?

Cheaper and quicker shipping is one reason that many US/Cdn would
prefer a source in the US or Canada I suspect.

Of course paying a high prices for BF9xx in US doesn't make sense if
you can get them at a reasonable price in another country.

I'd like to ask, have you ever had problems with foreign (not incld.
US) electronics by mail order? E.g. Customs, shipping, currency
exchange rate, etc.

Sidenote: I'm trying to find about a dozen MB506 Fujitsu 2.4 GHz
prescalers, which appears to be obsolete now. I'd prefer DIP but would
consider the SMT version as well. Any advice?

Thanks. VE????

580. Re: 6LB6 in FT-101

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 15:39:58 UTC
From: Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <aeq8ke$8r7$2@woodrow.ucdavis.edu>
Source record: 43192

Scott,

If the replacement tube would cause you to rewire the socket (which might require screen and bias potential changes), would it be worth the bother. Based on the prices I see for used 6JS6 vs the 6JB6, I would stick with NOS 6JS6 tubes. Yep, the neutralization cap value would need to be tweaked, but even a change to same type replacement tubes should require the Neutralization cap to be checked/set.

If you can retro a replacement similar tube into a tranceiver because of high NOS tube costs or short/unavailable supply... ok if its worth the work.

cheers
skipp
http://sonic.ucdavis.edu

: Scott M. <scottzm@netzcommander.com> wrote:
: Does anyone have any experience using 6JB6s in the FT-101 in place of the
: 6JS6s? If so, what changes do you need to make? Neutralization cap? Are
: they as good as the 6JS6? All comments welcome.

: Thanks,
: Scott M.
: KA1MRO

581. Re: 10-meter amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 15:44:39 UTC
From: Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <aeq8t7$8r7$3@woodrow.ucdavis.edu>
Source record: 43193

www.cbtricks.com

A company called CCI has various plans, parts and information about
building amplifiers.

The older ARRL Handbooks are a great reference source.

cheers
skipp

: ogrowup@webtv.net wrote:
: Anyone know any website(s) with shematics/plans for a 10-meter linear
: capable of boosting 25W to 200 or so? There are times my HTX-10 @25W
: doesn'tquite 'cut the mustard'!
: Patrick, N1NCJ

582. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 15:54:28 UTC
From: "n7ws at arrl net"
Message-ID: <3d10a04b.1828997@news.triconet.org>
Source record: 43194

On Wed, 19 Jun 2002 12:59:31 GMT, budgie@nowhere.cantech.net.au
(budgie) wrote:

|On Wed, 19 Jun 2002 12:19:59 GMT, 2w8ji@contesting.com (Tom W8JI)
|wrote:
|
|>On Wed, 19 Jun 2002 03:18:48 GMT, budgie@nowhere.cantech.net.au
|>(budgie) wrote:
|>
|>>You missed the point, Alan. Tom stated:
|>>"If the line is 50 ohms, and the load is mismatched, there is NO
|>>length of 50-ohm line that will cause the impedance to be a better
|>>match to 50 ohms.". That is ONLY true of a lossless line, and in my
|>>thirty-plus years in the industry I have yet to see one.
|>
|>
|>You are intentionally or unintenitionally misquoting me by lifting
|>only PART of what I said from my post.
|
|I don't believe it is misquoting at all.

I believe that when you offer a quote, the quote should stand alone
(be its own paragraph) and not have one of your comments tacked on the
end as you did when "quoting" Tom.

Had Tom's statement stood alone, there would have been less chance for
the misunderstanding that seems to have taken place here.

Wes Stewart N7WS

583. Re: TOKO Inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 16:29:34 UTC
From: tkell@blackhole.nyx.net
Message-ID: <1024504174.748016@irys.nyx.net>
Source record: 43104

In article <3D0F95AC.E04C923E@alma.demon.co.uk>,
Gary Morton <gary@alma.demon.co.uk> wrote:
>ted kell wrote:
>>
>> Try www.sycomcomp.co,uk. Robin has a web site there and he sells a range of
>> TOKO coils. They are/were about $.85 each with a reasonable shipping charge.
>> I purchased a selection from him a month ago.
>>
>> Ted
>>
>> SB <susantv69_uk@btinternet.com> wrote:
>> >Having just returned to homebrewing again, I am finding it difficult to
>> >source TOKO inductors here in the UK, Maplin's have now discontinued them.
>> >Can anyone advise of a source for these please.
>> >
>> >Simon G7CPN.
>> >
>> >
>
>I've been to this web site, but none of the selectable pages lead to
>TOKO inductors. I must be missing something really obvious.
>
>Can you explain how to find this information?
>
>regards...
>
>--Gary

As I recall, it's a bit complicated. You get the part number from wherever,
I had them from the schematic, and them email to Robin telling him what you
want and does he have them. Probably not the most straightforward procedure,
but it's better than not being able to get them at all over here.

Ted

584. Kenwood ts430 help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 17:35:01 UTC
From: XTC <jeflol@yahoo.com>
Message-ID: <aeqf9nqeg1@ctb-nnrp2.saix.net>
Source record: 43195
Cross-posted to:
rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.scanner

Great rig but developped this problem.Any ideas,help appreciated.When rig is switched on all ok but the moment ptt is pressed and released the on air light stays on dimmer and reception goes off freq.the only way to bypass is to keep the rit activated.traced the prob to the relay under the radio on rf board.when ptt pressed 2 relays kick in one at the back and this one on rf board.when ptt released both also release again,but the one on the rf board doesnt anymore and seem to have something to do with the att to because that kicked in the same relay but now also not functional.Any ideas or Help?Please email me at jefbay@ananzi.co.za

585. Need Hitachi V-302B Oscilloscope Manua.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 17:38:15 UTC
From: w.harbourjr@worldnet.att.net
Message-ID: <deafe3d9.0206190938.5a80ecb8@posting.google.com>
Source record: 43196

Anyone know where I might get or download the manual?

Tnx,

Bill

586. Re: Kenwood ts430 help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 17:53:45 UTC
From: Don Baker <DocDB@excite.com>
Message-ID: <YC3Q8.1098$qZ.8618@news.abs.net>
Source record: 43097
Cross-posted to:
rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.scanner

430's have a "known failure mode" for the final output transistors. This is a combination of a circuit board that is a little to light duty and riveted transistor connections. I have fixed 2 of these, and one acted very much like yours with a pll / vfo "unlock".

Don

"XTC" <jeflol@yahoo.com> wrote in message news:aeqf9nqeg1@ctb-nnrp2.saix.net...
> Great rig but developped this problem.Any ideas,help appreciated.When rig is
> switched on all ok but the moment ptt is pressed and released the on air
> light stays on dimmer and reception goes off freq.the only way to bypass is
> to keep the rit activated.traced the prob to the relay under the radio on rf
> board.when ptt pressed 2 relays kick in one at the back and this one on rf
> board.when ptt released both also release again,but the one on the rf board
> doesnt anymore and seem to have something to do with the att to because that
> kicked in the same relay but now also not functional.Any ideas or
> Help?Please email me at jefbay@ananzi.co.za
>
>

587. Re: MC145027 Motorola Chip - needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 19:18:35 UTC
From: Peter Hofmann <peter.hofmann@teleweb.at>
Message-ID: <fO4Q8.295564$305.4294797@news.chello.at>
Source record: 43098

Jay,

Yes you are right. Its hard to get this device ! Do you have a better solution for decoding of this format ? May be its better to solve it with a microcontroller, but in this case software has to be written ;-) Lets see
regards peter

"Jesper" <jmandre@NOSPAMbigfoot.com> schrieb im Newsbeitrag news:3D0E61C3.2090101@NOSPAMbigfoot.com...
> > Looking for MC145027 abt 20-30 pieces ... info ?
>
>
> Try All electronics, http://www.allelectronics.com
> I bought a bunch there some time ago for ?0.69 ea.
>
> Are you by any chance building a digital model railroad?
>
> Jay
>
>
>
>

588. permeability problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 20:01:32 UTC
From: dstalk@exculink.com
Message-ID: <wq5Q8.27496$Z6.317334@nnrp1.uunet.ca>
Source record: 43099

Hello,

Perhaps some of the more enlightened hams can explain to me what I'm
doing wrong when I try to determine the permeability of a ferrite rod.

I wanted to build a Tuna Tin 2 using some ferrite rods that I
already have. This led me to look at the Radio Shack 273-101
which was used in the original rig.

The 273-101 specifications are:

inductance: 10 uH
number of turns: 31 [1]
rod diameter: 0.25" [2]
rod length: 1"
coil length: 0.67"

When I calculate [3] the the "open air" inductance of the coil,
I get 1.9 uH.

Now, my understanding [4] is that the permeability of the rod is:

L(with core)/L(open air) = 10/1.9 = 5.26

My problem is is that, in the original Tuna-Tin 2 article [5],
Doug DeMaw states that the permeability of the rod material
is about 125. That's quite a bit different than my calculations.
I understand that the "rod" permeability and the material permeability
are not necessarily the same [6], but for a rod of this dimension they
should be quite close.

Can someone show me where I've gone wrong?

Thanks and 73,

Don ve3hur

dstalk@execulink.com
http://www.execulink.com/~dstalk

[1] Counted from picture of the "Sardine Sender" on the cover of
the October 1978 QST.

[2] These dimensions are estimated from the "Sardine Sender" article
(pages 15-17) and picture as well as data on the 273-102 provided
on KU4QW's www page (no longer online).

[3] Using the familiar formula L = N^2*R^2/(9*R+10*L).

[4] 1998 ARRL Handbook page 6.24 and a document titled
"Ferrite Property Measurement" from the Steward www site
(http://www.steward.com/Steward/pdfs/cores/ferrprop.pdf).

[5] May 1976 QST, pages 14-16.

[6] February 1992 Amidon catalogue page 63 "Rod Permeability vs. Rod
Length divided by Rod Diameter".

589. Re: Need source for BF982

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 20:41:30 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0206191241.7e603583@posting.google.com>
Source record: 43100

"Scott M." <scottzm@netzcommander.com> wrote in message
news:<3d1092ad$1_3@corp-goliath.newsgroups.com>...
> "Laura Halliday" <marsgal42@hotmail.com> wrote in message
> > What do you need a U.S. source for? Ours is an
> > international hobby. Or did you forget that?
>
> I just don't get to London and Paris as much as I would like, and buying a
> ticket just for the sake of purchasing a couple of transistors seems a
> little eccentric to me.

So phone them. Or email them.

Les Cyclades don't have an Internet presence, but
Cricklewood do. As do zillions of other outfits - I
get most of my "European" electronics from Barend
Hendriksen in Holland. They have interesting stuff
(including BF982 for EUR 0.91), take plastic over
the net, and ship promptly. What more do you want?

We're supposed to be communicators. Communicate!

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

590. Signal Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 21:11:43 UTC
From: w.harbourjr@worldnet.att.net
Message-ID: <deafe3d9.0206191311.760a2e97@posting.google.com>
Source record: 43101

I'm looking for a signal generator that I can use to align and test the QRP receivers that I'm homebrewing. I'd like it to have attenuation down to a level low enough to test the sensitivity of my receivers.

Can I find such an animal for less than $100 (Heathkit, Eico, other models)?

Any guidance is appreciated.

Tnx,

Bill
KD4PWB

591. Re: 10-meter amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 21:16:50 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <kP6Q8.2841$mg3.152352@newsfep1-win.server.ntli.net>
Source record: 43103

> To put it bluntly they belong only on the CB band with illegal
> operators, not on the amateur bands! Ten meters is bad enough with CB
> QRM, we don't need a bunch of hams trashing the band with CB amps.
=========
Unless of course a Ham with homebrew experience converts such an amp for
linear operation
in class AB1 ,be it (possibly) with a somewhat lower RF output.
It might even be possible to convert such a unit to a decent 50 MHz linear
amplifier.

Frank gm0csz.kn6wh@ntlworld.com

592. Re: Bowick RF Circuit Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 21:34:34 UTC
From: Glenn Pederson <gpeder@elnet.com>
Message-ID: <uh1u7i5m6hd20d@corp.supernews.com>
Source record: 43102

Mike,

I believe that you are correct. The value of the effective shunt resistance would be 447 ohms. In this case, the insertion loss would become 6.4 dB. Or maybe Mr. Bowick meant that the Q of the coil was 100 instead of the stated 10. This would put his 4.5K resistor in the ball park.

Glenn Pederson, WB9QIQ
gpeder@elnet.com

593. HF JFET modules?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 22:19:37 UTC
From: damon@4motion.org
Message-ID: <Pine.LNX.4.44.0206191813070.14910-100000@4motion.org>
Source record: 43105

In the February 1994 QST, K9AY described a 25 watt MF/HF amplifier using the "SLAM-0111" JFET module from a company called MicroWave Technology. Unfortunately MicroWave Technology does not appear to sell this module any longer. Can anyone offer suggestions for a similar device?

Damon

594. Re: TOKO Inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 22:23:36 UTC
From: John Fletcher <John@kanga.demon.co.uk>
Message-ID: <s9qFbBAoRQE9EwLr@kanga.demon.co.uk>
Source record: 43116

BEC Distribution is now known as coils-uk.com ltd. Address/phone number still the same; 12 Elder Way, Langley Business Park, Slough, Berkshire SL3 6EP. 01753 549502. http://www.coils-uk.com. Hope this helps.

Disclaimer. I have no connection with coils-uk other than being a satisfied customer.

John G4EDX

--
John Fletcher

595. Re: Signal Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 23:10:03 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3D110F48.5D45C187@ay.com.au>
Source record: 43106

Bill Harbour wrote:
>
> I'm looking for a signal generator that I can use to align and test
> the QRP receivers that I'm homebrewing. I'd like it to have
> attenuation down to a level low enough to test the sensitivity of my
> receivers.

You could build one?

If all you want is a fairly stable signal for tuning up IFs, just build a FET oscillator, add a buffer, a low impedance driver, and a POT for a level adjustment. Then make yourself up some 50<->50 pads for whatever attenuation you want, say 3dB, 6dB, 10dB, and a few 30dB, or a switchable attenuator. Should cost < $20, perhaps the variable cap for the oscillator being the most expensive part.

You can also rig up crystal oscillators for various IFs if you want spot frequencies with accuracy and stability. A frequency counter or receiver is all you need for absolute frequency alignment with a sufficiently stable oscillator.

You'd need a scope or RF volt meter of sufficient bandwidth to get accurate level calibration for sensivity testing, or take the finished product to a mate with the equipment to calibrate it and the attenuators.

You can also buy some cheap and nasty RF signal generators for < $50 new, and there is always the second hand market. They are all basically just oscillators with a buffer, the only bells are PLL locking, digital read out, calibrated output, inbuilt step attenuators, and sweep/tracking ability, which is probably all overkill anyway.

--
Alan Yates
http://www.vk2zay.net/

596. Re: Signal Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 23:21:49 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3D11120C.6EDB4DE5@ieee.org>
Source record: 43109

Bill Harbour wrote:

> I'm looking for a signal generator that I can use to align and test
> the QRP receivers that I'm homebrewing. I'd like it to have
> attenuation down to a level low enough to test the sensitivity of my
> receivers.
>
> Can I find such an animal for less than $100 (Heathkit, Eico, other
> models)?
>
> Any guidance is appreciated.
>
> Tnx,
>
> Bill
> KD4PWB

A simple oscillator would (I think) be too unstable for narrow receiver
use.
I would suggest crystal oscillators for a few selected frequencies.

Also stray radiation from the circuitry will be a problem for weak
signal testing.

My recommendation; put one or more crystal oscillators in a sealed box.

filter the power leads. and remove the signal using a "wave guide beyond
cutoff"
variable attenuator. The attenuate uses two coupling loops inside a
brass tube
with the spacing of the loops adjustable.

Details of this construction should be available on the net someplace.

Bill K7NOM

597. Re: Signal Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 23:30:34 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uh251hmunlf354@corp.supernews.com>
Source record: 43107

Alan's suggestion was pretty similar to mine but a lot less specific.

In a recent QQ there was an article on building an attenuator, might have run over a few issues. Find someone local who is an ARCI member and hangs on to those things. It's actually pretty tough to get a signal down low enough that it can be useful for testing modern QRP receivers (even simple homebrew ones). You're not going to find an inexpensive signal generator that can do that.

This sort of attenuator isn't all that simple a project, but the parts count is small so it's not too expensive. It's just a ton of work.

Alan's crystal oscillator idea was good, I would find some NJQRP Fireball-40's. NJQRP hawked a million of those things, and although they no longer sell them, there must be a lot of them out there, unused or unbuilt. I'd suggest posting QRP-L and see who has one to sell. These things were ten bucks new. You probably want a few.

If you get to wanting to build a crystal oscillator or five, look into the Epson SG-8000 series of package oscillators from DigiKey. These things sometimes have quite a bit of phase noise, so they aren't great for local oscillators, but they are just fine for testing, and at $3.33 each, they won't break the bank. Plus, if you find some FB-40's, you can plug 'em right in and avoid any work at all. Just be sure to specify UPS Ground - DigiKey's standard shipping is second day air and the shipping will cost you ten times what the oscillators cost.

..

"Bill Harbour" <w.harbourjr@worldnet.att.net> wrote in message
news:deafe3d9.0206191311.760a2e97@posting.google.com...
> I'm looking for a signal generator that I can use to align and test
> the QRP receivers that I'm homebrewing. I'd like it to have
> attenuation down to a level low enough to test the sensitivity of my
> receivers.
>
> Can I find such an animal for less than $100 (Heathkit, Eico, other
> models)?
>
> Any guidance is appreciated.
>
> Tnx,
>
> Bill
> KD4PWB

598. Re: permeability problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-19 23:37:24 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D1115B4.8060508@eznec.com>
Source record: 43108

The effective permeability of a coil wound on a rod is much less than the permeability of the material the rod is made from. That's because there's a long air gap in the magnetic path (from one end of the rod to the other). This long air gap has a relative permeability of 1, and it appears in series with the magnetic circuit. The relationship between the effective permeability and the rod material's permeability depends on the length/diameter ratio of the rod and the rod's permeability. Only when the magnetic path is entirely in the material, such as a toroid or ungapped pot or EI core, is the inductor's effective permeability the same as the material's permeability.

Roy Lewallen, W7EL

dstalk@exculink.com wrote:
> Hello,
>
> Perhaps some of the more enlightened hams can explain to me what I'm
> doing wrong when I try to determine the permeability of a ferrite rod.
>
> I wanted to build a Tuna Tin 2 using some ferrite rods that I
> already have. This led me to look at the Radio Shack 273-101
> which was used in the original rig.
>
> The 273-101 specifications are:
>
> inductance: 10 uH
> number of turns: 31 [1]
> rod diameter: 0.25" [2]
> rod length: 1"
> coil length: 0.67"
>
> When I calculate [3] the the "open air" inductance of the coil,
> I get 1.9 uH.
>
> Now, my understanding [4] is that the permeability of the rod is:
>
> L(with core)/L(open air) = 10/1.9 = 5.26
>
> My problem is is that, in the original Tuna-Tin 2 article [5],
> Doug DeMaw states that the permeability of the rod material
> is about 125. That's quite a bit different than my calculations.
> I understand that the "rod" permeability and the material permeability
> are not necessarily the same [6], but for a rod of this dimension they
> should be quite close.
>

> Can someone show me where I've gone wrong?
>
> Thanks and 73,
>
> Don ve3hur
>
> dstalk@execulink.com
> http://www.execulink.com/~dstalk
>
>
> [1] Counted from picture of the "Sardine Sender" on the cover of
> the October 1978 QST.
>
> [2] These dimensions are estimated from the "Sardine Sender" article
> (pages 15-17) and picture as well as data on the 273-102 provided
> on KU4QW's www page (no longer online).
>
> [3] Using the familiar formula L = N^2*R^2/(9*R+10*L).
>
> [4] 1998 ARRL Handbook page 6.24 and a document titled
> "Ferrite Property Measurement" from the Steward www site
> (http://www.steward.com/Steward/pdfs/cores/ferrprop.pdf).
>
> [5] May 1976 QST, pages 14-16.
>
> [6] February 1992 Amidon catalogue page 63 "Rod Permeability vs. Rod
> Length divided by Rod Diameter".
>

599. Re: permeability problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 00:56:00 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aer96u$j09$1@knossos.btinternet.com>
Source record: 43110

There's a funny thing about ferrite rod antennas of the usual dimensions.

Regardless of the actual permeability of the rod material, the EFFECTIVE permeabilty of the rod is usually in the vicinity of 20 to 25. With a bundle of rods, containing air gaps, it will fall in the ratio of air-to-ferrite cross-section.

This is because much of the magnetic path is in the air gap between the ends of the rod. (Like a bar maget). When the rod permeability increases above 100 or so, the effective permeabilty doesn't increase much more.

The effective permeability is determined by measuring the coil inductance twice. Once with the rod inserted and again with the rod removed. Mu = L1 divided by L2. You can then calculate the number of turns to put you in the desired frequency band. Twice the number of turns will halve the frequency with the same value tuning capacitor. And that's about all you need to know.

There is little point in using material permeabilities greater than 200. This is a nice value to stop at because this is the value at which ferrites have the lowest loss, ie., give the greatest coil Q up to roughly 2 or 3 MHz. At higher frequencies you will be better off using some other sort of antenna.

Far and away the best way of designing a rod antenna is to obtain a rod which will fit inside your equipment, the bigger the better, wind some turns on it and see what you get.

The efficiency as an intenna is invariably terrible. It is worse than a 3-feet whip antenna. But at least you can get it inside the pocket receiver case and it is easily Z-matched to the first transistor. Which is the only reason the cussed things are ever used.

Please don't take a pessimistic view. You can have great fun experimenting with very few and inexpensive materials on the kitchen table. Believe me, that's the way the top designers do it !

Ph.D's have produced 'learned' but useless papers on the subject. Well, everybody tries to make a living of some sort.

Reg, G4FGQ

600. Re: Signal Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 01:36:38 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3D1131A6.4F1DA5F1@ay.com.au>
Source record: 43111

xpyttl wrote:

> This sort of attenuator isn't all that simple a project, but the parts count
> is small so it's not too expensive. It's just a ton of work.

Ain't that the truth. I started to build one of those switchable jobs,
with each stage shielded carefully. It took hours per stage, and the
switches bled through too much in the end.

Now days I just build discrete attenuators with inline sockets.

Bleeding around the things and coupling via the power supply of the
signal generator limits the lower limits of testing. If you are just
tuning for best sensivity you can move the generator away, or stick it
in the fridge or something.

Actual measurement needs calibration and lots of effort for accurate
results. I've never bothered to go that far, so within 6dB is OK for
me.

> Alan's crystal oscillator idea was good, I would find some NJQRP
> Fireball-40's. NJQRP hawked a million of those things, and although they no
> longer sell them, there must be a lot of them out there, unused or unbuilt.
> I'd suggest posting QRP-L and see who has one to sell. These things were
> ten bucks new. You probably want a few.

I've built a small single transistor test oscillator, just a
fundamental, no overtone tuned circuits, with a crystal socket and a
battery all inside a cast Al box, the only thing sticking out is the
BNC, the power switch is simply plugging in the battery snap.
Unfortunately it needs to be calibrated for each crystal's output level,
but it is scaresly detectable with the ouput shunted with a dummy load.

Doubles as a crystal checker.

I guess you could stick the whole thing with the attenuators into
pieces of pipe if you wanted to be really sure there was minimal
feed-around, but I've never found that to be a big problem, maybe my
receivers are just deaf :-)

My VFO signal generator is similar, all in the one metal box with just
the RF socket, power switch, pot and tuning cap spindles sticking out.
The coils are socketed on DIN plugs inside, and the power is from a 9v
battery.

--
Alan Yates
http://www.vk2zay.net/

601. Re: 100mW transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 03:32:43 UTC
From: pdrunen@aol.com
Message-ID: <20020619233243.25121.00001613@mb-mh.aol.com>
Source record: 43113

Check out the transmitter on a chip from Micrel at http://www.micrel.com.

The transmitter is for On/Off keying but you could hold the carrier and frequency deviate the reference crystal to product narrow-band FM modulation.

If you design around 433.92 which is another common frequency, the ref crystal, which would have a freq of 433.92 divided by 32 (MHz). These are easy to obtain, I am not sure about 418 MHz ref crystal.

Another method is to use a colpitt type osc circuit and varactor diode to create FM modulation. This is a much harder method where as the transmitter on a chip is easier to get going.

Micrel has a PCB demo board you could start with.

Cheers,

Good Luck

602. Re: Looking for ICs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 03:43:37 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0206191943.104c4a5c@posting.google.com>
Source record: 43114

Bob Liesenfeld <robert.liesenfeld@neicoltech.org> wrote in message
news:<3D0FE737.2F060C14@neicoltech.org>...
> Hey gang,
> I'm looking for 2 or 3 each of MC4044P and MC4024P ICs. Anyone got
> some they want to sell? Thanks
>
> Bob WB0POQ

I agree with the comment that these are pretty old to be used in
a new design; they are over thirty years old. If you just need
the function, the CD4046 has the same sort of phase detector in it,
and uses less power. The VCO would be about the same as the 4024,
though the frequency range is much less. The 74HC4046 might get up
to about where the MC4044/MC4024 combination topped off at. Or,
there are other possibilities, and you really need to be less vague
about what you need these for.

If you are talking replacement, I've seen the pair in old floppy
disk controllers (I guess they were used in the data separators);
I can't remember if it was the controller for the PC jr, or
just an old controller for the "IBM PC".

Michael VE2BVW

603. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 05:29:11 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D116875.17C0F642@bellatlantic.net>
Source record: 43115

budgie wrote:
>
> On Wed, 19 Jun 2002 12:19:59 GMT, 2w8ji@contesting.com (Tom W8JI)
> wrote:
>
> >On Wed, 19 Jun 2002 03:18:48 GMT, budgie@nowhere.cantech.net.au
> >(budgie) wrote:
> >
> >>You missed the point, Alan. Tom stated:
> >>"If the line is 50 ohms, and the load is mismatched, there is NO
> >>length of 50-ohm line that will cause the impedance to be a better
> >>match to 50 ohms.". That is ONLY true of a lossless line, and in my
> >>thirty-plus years in the industry I have yet to see one.
> >
> >
> >You are intentionally or unintenitionally misquoting me by lifting
> >only PART of what I said from my post.
>
> I don't believe it is misquoting at all.
>
> >If you include the last sentence, you will see I already cover the
> >real-world lines. I said:
> >
> >"The only exception is if the line has significant loss, and then the
> >longer the line the better the match."
> >
> >The key word is **significant** loss. For ANY line to improve the VSWR
> >through length, when line impedance equals desired system impedance
> >(like a 50-ohm load in a 50-ohm line) the loss MUST be significant.
> >
> >The loss is generally **NOT** significant in twelve feet of coax on
> >ten meters, so the SWR reduction he claims can not come from line
> >length with the exception that his meter might not be calibrated to
> >the line Z0 or the system might have common mode currents that are
> >changing the load impedance seen by the line as line length is varied.
>
> I still beg to differ. ANY loss will improve the match. Significant
> loss will introduce a significant improvement.
>
> >There is enough misunderstanding about this without complicating the
> >discussion by misquoting people.
>
> You made the statements. Either alone is incorrect. Both together
> remain incorrect. There was no misquoting whatsoever, and I do not

> believe that either part was taken out of context. YMMV as much as you
> like.

Funny, I understood Tom's post. All of his statements
are correct. It is clear he is talking about a lossless
line in the first paragraph - you even mention it. And
it is equally clear that he is talking real world in his
last paragraph where he mentions the coax with significant loss.

A statement addressing the principle of impedance transformation
via lossless line such as Tom's is not refuted by a statement
that requires lines with loss.

Nor does a statement that ANY line has loss, such as yours,
refute the statement that to get a "better match" you need a
line with significant loss.

I think the only question here is concerning how much
loss and how many feet make a real world difference, so
I'll ask you what you have in mind: how much additional coax,
at what loss per foot, would have to be added to the 12 foot
length to make a noticeably "better match"?

When
discussing impedance transformation created by a length
of coax with someone who apparently does not understand
what goes on, you need to establish that there isn't any
with a perfect, lossless match. Only then can you make
it clear that

604. Re: Signal Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 07:35:22 UTC
From: n2cqr@clix.pt
Message-ID: <3d118542.1873922582@news.clix.pt>
Source record: 43117

I saw a an interesting ideas in RADCOMS Tech Topics column. Take one
of hose old Heath SG-6 or SG-8 like tube sig generators and replace
the tubes with mosfets. Run the thing off an internal 9 volt battery.
Not precise, but it would be somewhat useful.

73 Bill CU2JL
73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 25.7 W
http://planeta.clix.pt/n2cqr

605. HELP with Two-Modulus synth

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 08:27:33 UTC
From: ronayling@hotmail.com
Message-ID: <3d1291cf.8676213@news.freeserve.co.uk>
Source record: 43118

Hi
I've been playing with remote operation of the Philips
1000 series synth but it uses a Two-Modulus system
of which I know very little, I gather its a way
of increasing the resolution of the synth to a few
Htz but presumably not used to it full extent for
just 12.5khz spacing in the 1100
Can anyone give me an idea or an example how to
work out the data for standard 12.5khz operation
I understand how to load the data into the R counter
A counter and M counter but a bit dim on the operation
of the control logic. also is there a way of ignoring
the 2nd Modulus? ie just run it as a standard Single
modulus system? any information welcome
The synth chip is a NJ8821 with an SP8703 divider
and a ref xtal of 8.4mhz for the 2mtr band.

from Ron g3yuh....

606. Re: 10-meter amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 10:35:32 UTC
From: 2w8ji@contesting.com
Message-ID: <3d11ab39.159033788@news.akorn.net>
Source record: 43119

On Wed, 19 Jun 2002 22:16:50 +0100, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>> To put it bluntly they belong only on the CB band with illegal
>> operators, not on the amateur bands! Ten meters is bad enough with CB
>> QRM, we don't need a bunch of hams trashing the band with CB amps.
>=========
>Unless of course a Ham with homebrew experience converts such an amp for
>linear operation
>in class AB1 ,be it (possibly) with a somewhat lower RF output.
>It might even be possible to convert such a unit to a decent 50 MHz linear
>amplifier.

Hi Frank,

Even if we would add a stiff positive bias source and move the
collector conduction angle to class AB (there is no AB1 or AB2,
because it is a transistor), and add a filter, we must run a CB amp
like a Texas Star at a fraction of the manufacturer's published power
to maintain any type of reasonable linearity and IMD performace.

Of course on FM, andto a large extent on CW, that isn't a problem
because linearity doesn't matter, so they are OK amps for those modes
(if filtered to reduce harmonics).

You'd also have to educate the user to not use the amp anywher near
rated output on SSB. Most CB amplifiers, including the Texas Star, are
rated at or even far beyond the saturated power output level of the
transistors.

A typical 100W CB amp will only run about 20-40 watts of reasonably
clean SSB peak power, after you change the bias and add a low pass
filter.

As in a radio, you need a LOT of headroom on a solid state PA to keep
it reasonably clean.

73 Tom

607. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 10:45:25 UTC
From: 2w8ji@contesting.com
Message-ID: <3d11b11d.160541716@news.akorn.net>
Source record: 43120

On Wed, 19 Jun 2002 12:59:31 GMT, budgie@nowhere.cantech.net.au
(budgie) wrote:

>I still beg to differ. ANY loss will improve the match. Significant
>loss will introduce a significant improvement.

As long as we are picking nits, that is not true. Increased loss in a
transmission line can also make the apparent line SWR worse.

On the other hand, a significant change in loss might not make a
noticable change in SWR.

But then I'm sure you know that, and just didn't say it right. ;-)

73 Tom

608. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 11:12:10 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d11b53d.1912872@news.cantech.net.au>
Source record: 43121

On Thu, 20 Jun 2002 05:29:11 GMT, ehsjr@bellatlantic.net wrote:

>
>
>budgie wrote:
>>
>> On Wed, 19 Jun 2002 12:19:59 GMT, 2w8ji@contesting.com (Tom W8JI)
>> wrote:
>>
>> >On Wed, 19 Jun 2002 03:18:48 GMT, budgie@nowhere.cantech.net.au
>> >(budgie) wrote:
>> >
>> >>You missed the point, Alan. Tom stated:
>> >>"If the line is 50 ohms, and the load is mismatched, there is NO
>> >>length of 50-ohm line that will cause the impedance to be a better
>> >>match to 50 ohms.". That is ONLY true of a lossless line, and in my
>> >>thirty-plus years in the industry I have yet to see one.
>> >
>> >
>> >You are intentionally or unintenitionally misquoting me by lifting
>> >only PART of what I said from my post.
>>
>> I don't believe it is misquoting at all.
>>
>> >If you include the last sentence, you will see I already cover the
>> >real-world lines. I said:
>> >
>> >"The only exception is if the line has significant loss, and then the
>> >longer the line the better the match."
>> >
>> >The key word is **significant** loss. For ANY line to improve the VSWR
>> >through length, when line impedance equals desired system impedance
>> >(like a 50-ohm load in a 50-ohm line) the loss MUST be significant.
>> >
>> >The loss is generally **NOT** significant in twelve feet of coax on
>> >ten meters, so the SWR reduction he claims can not come from line
>> >length with the exception that his meter might not be calibrated to
>> >the line Z0 or the system might have common mode currents that are
>> >changing the load impedance seen by the line as line length is varied.
>>
>> I still beg to differ. ANY loss will improve the match. Significant
>> loss will introduce a significant improvement.
>>
>> >There is enough misunderstanding about this without complicating the

>> >discussion by misquoting people.
>>
>> You made the statements. Either alone is incorrect. Both together
>> remain incorrect. There was no misquoting whatsoever, and I do not
>> believe that either part was taken out of context. YMMV as much as you
>> like.
>
>Funny, I understood Tom's post. All of his statements
>are correct. It is clear he is talking about a lossless
>line in the first paragraph - you even mention it. And
>it is equally clear that he is talking real world in his
>last paragraph where he mentions the coax with significant loss.
>
>A statement addressing the principle of impedance transformation
>via lossless line such as Tom's is not refuted by a statement
>that requires lines with loss.

Then what's your gripe?

The statement that I took issue with related to length of line and
possible improvement in match. And to reference the REAL world where
lines do have loss doesn't smack of idealism - rather it relates to
the O/P's question as much as rotation on a Smith Chart.

>Nor does a statement that ANY line has loss, such as yours,
>refute the statement that to get a "better match" you need a
>line with significant loss.

Whoa big boy! I repeat, and I'll try to use small words so you can
keep up: ANY loss will improve the match. ANY loss will give a
"better match". And anyone who can work out an R.L. can see how much
loss they need to get a certain improvement if the source end is
matched.

>I think the only question here is concerning how much
>loss and how many feet make a real world difference,

AHA! We have a breakthrough!
>so
>I'll ask you what you have in mind: how much additional coax,
>at what loss per foot, would have to be added to the 12 foot
>length to make a noticeably "better match"?

Depends on your threshold of noticeability.

> When
>discussing impedance transformation created by a length
>of coax with someone who apparently does not understand
>what goes on, you need to establish that there isn't any
>with a perfect, lossless match. Only then can you make
>it clear that

(Dunno where that bit belongs ....)

You can't change the laws of physics just because your audience may not understand them. If having that audience sector keep up is so important, that situation calls for a bit more effort to EXPLAIN them.

Tom's first statement I reiterate that ANY loss improves the match. You now introduce the concept of a 'noticeably "better match"' which is a different story entirely.

609. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 11:23:32 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d11baff.3386961@news.cantech.net.au>
Source record: 43122

On Thu, 20 Jun 2002 10:45:25 GMT, 2w8ji@contesting.com (Tom W8JI)
wrote:

>On Wed, 19 Jun 2002 12:59:31 GMT, budgie@nowhere.cantech.net.au
>(budgie) wrote:
>
>>I still beg to differ. ANY loss will improve the match. Significant
>>loss will introduce a significant improvement.
>
>As long as we are picking nits, that is not true. Increased loss in a
>transmission line can also make the apparent line SWR worse.
>
>On the other hand, a significant change in loss might not make a
>noticable change in SWR.
>
>But then I'm sure you know that, and just didn't say it right. ;-)

Sounds familiar 8^)

610. Re: permeability problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 12:06:11 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <r9g3hucgk69civ4i9ql0jnugoee5h6nui4@4ax.com>
Source record: 43123

On Wed, 19 Jun 2002 20:01:32 GMT, dstalk@exculink.com wrote:

>My problem is is that, in the original Tuna-Tin 2 article [5],
>Doug DeMaw states that the permeability of the rod material
>is about 125. That's quite a bit different than my calculations.
>I understand that the "rod" permeability and the material permeability
>are not necessarily the same [6], but for a rod of this dimension they
>should be quite close.
>
>Can someone show me where I've gone wrong?
>

As Roy has said, the effective ueff of a rod is much less than the rod permeability urod.

There is a useful graph of Ueff versus L/D ratio and urod in the FairRite catalog:

http://www.fair-rite.com/fr_catalog-14thed_rev3.pdf

Jump down to Page 131 of the catalog for the graph.

In your case, L/D = 4 and urod = 125 (Type 61 material from FairRite). The graph shows ueff = 12.

While ueff doesn't match your measured ueff of 5.26, it's a lot closer than basing the calculation on urod = 125.

In truth, there are several more corrections that must be applied:

*Ratio of coil length to rod length
* Coil offset from being centered on the rod
* Winding "fill ratio" tied to the ratio of "copper" to open air in the coil.

I spent an interesting few months a couple years ago trying to understand these factors and wrote about 90% of an article attempting to describe in a quantative fashion all of these various factors with respect to ferrite rod antennas. If you are really interested, I'll e-mail you a copy. It's not finished, and is several Mb long, as it has embedded graphs and photographs. Microsoft word format.

Jack K8ZOA

611. Series T-10 relays

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 12:51:32 UTC
From: pdrunen@aol.com
Message-ID: <20020620085132.02404.00002162@mb-dh.aol.com>
Source record: 43124

Hi Group,

Having problems getting a series T-10 relays. Can not even find them on the
web.
Anyone have one with a 5V coil?

Paul

KJ4UO

612. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 12:53:17 UTC
From: Dan Richardson <k6mhe@arrl.net>
Message-ID: <31k3hu84v99dnlvtvua8rfm48hk6i1ah7v@4ax.com>
Source record: 43126

On Thu, 20 Jun 2002 10:45:25 GMT, 2w8ji@contesting.com (Tom W8JI)
wrote:

>Increased loss in a
>transmission line can also make the apparent line SWR worse.

How?

Danny

613. Re: Signal Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 13:18:32 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <aeskn8kim1@paris.btinternet.com>
Source record: 43125

"Alan Yates" <alany@ay.com.au> wrote in message
news:3D110F48.5D45C187@ay.com.au...
> Bill Harbour wrote:
> >
> > I'm looking for a signal generator that I can use to align and test
> > the QRP receivers that I'm homebrewing. I'd like it to have
> > attenuation down to a level low enough to test the sensitivity of my
> > receivers.
>
> You could build one?
>
> If all you want is a fairly stable signal for tuning up IFs, just build
> a FET oscillator, add a buffer, a low impedance driver, and a POT for a
> level adjustment. Then make yourself up some 50<->50 pads for whatever
> attenuation you want, say 3dB, 6dB, 10dB, and a few 30dB, or a
> switchable attenuator. Should cost < $20, perhaps the variable cap for
> the oscillator being the most expensive part.

To make meaningful sensitivity measurements you need *very* good screening
on the signal source, and the leads (double-screened are best), especially
with a sensitive Rx.

I had a great deal of trouble once with leakage when I had to demonstrate to
the customer that a pair of military HF transceivers could operate
effectively in various modes at the lowest specified signal level. I had to
use two screened rooms connected by a double-screened cable.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.com
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

614. Re: Signal Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 14:50:24 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <aesqg0jah1@slb2.atl.mindspring.net>
Source record: 43127

Bill Harbour wrote:

> I'm looking for a signal generator that I can use to align and test
> the QRP receivers that I'm homebrewing. I'd like it to have
> attenuation down to a level low enough to test the sensitivity of my
> receivers.
>
> Can I find such an animal for less than $100 (Heathkit, Eico, other
> models)?
>
> Any guidance is appreciated.
>
> Tnx,
>
> Bill
> KD4PWB

I'd do as several people have suggested, a crystal oscillator in a shielded box. You can power it either with CAREFULLY filtered and bypassed wires or possibly a built in battery.

As for a way to set the level, I'd build in switched attenuators using slide switches and resistors as shown in ARRL handbook.

Be careful to keep the maximum attenuation per switch section to 20 dB. There'd be too much signal leakage around the switch if you tried for more attenuation in a single switch.

I have built several of these attenuators over the years, using regular 10% resistors and they have been accurate to 1 or 2 dB up to about 500 MHz. The top frequency limit depends on precise construction technique, but for up to 100 MHz you can expect good performance. Just keep the wires short and use shield walls everywhere to force the signal through the switches.

Build the entire thing, including the attenuators, in a shielded box using copper clad printed circuit board.

And, of course, shields between each switch section. The ARRL handbook shows a good construction technique.

You can easily get enough attenuation and it you power the oscillator by a built in battery you remove the most likely source of signal leakage out of the oscillator.

This should do what you need, and I suppose you could add a switch to switch a couple of oscillators for different frequencies in the same signal generator.

Jim Pennell
N6BIU

615. Re: permeability problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 16:08:07 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D11FDE7.77E09563@clifto.com>
Source record: 43128

Jack Smith wrote:
> I spent an interesting few months a couple years ago trying to
> understand these factors and wrote about 90% of an article attempting
> to describe in a quantative fashion all of these various factors with
> respect to ferrite rod antennas. If you are really interested, I'll
> e-mail you a copy. It's not finished, and is several Mb long, as it
> has embedded graphs and photographs. Microsoft word format.

Me too! Me too! :)

--
If spammers weren't stupid, they'd be the idle rich instead of spammers.
- Morely Dotes

616. A very simple SSB receiver ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 17:05:59 UTC
From: pic16f876@yahoo.ca
Message-ID: <3d120b2b.20059418@news1.qc.sympatico.ca>
Source record: 43129

Hi

Can you help me to find the schematic of a simple but effective ssb receiver.

It will be tune over a narrow band around 13.5 Mhz with a VCO of my own (DDS).

There is a single chip solution; is the direct conversion the best way to go ?

Any help or suggestion will be appreciated.

Thanks in advance for you collaboration and excuse my English

Gilles Auger VE2DRW

617. Re: I passed!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 17:16:13 UTC
From: Tech <newbury66@hotmail.com>
Message-ID: <z5oQ8.1216$kb3.96061@news8-gui.server.ntli.net>
Source record: 43130

Congratulations!
"John Fletcher" <johnfletch@2e1gmv.freeserve.co.uk> wrote in message
news:ae2v9b$pd9$1@news6.svr.pol.co.uk...
> Congrats from G land!
> "Itsme" <antwoord_mij@hotmail.com> wrote in message
> news:3d04c8ea$0$8137$ba620e4c@news.skynet.be...
> > Congratulations !
> >
> > on7jq
> >
> > "Matt Patterson" <mattpatt@1starnet.com> schreef in bericht
> > news:4GVM8.178712$Kp.17247748@bin7.nnrp.aus1.giganews.com...
> > > Passed Element 4 today to upgrade to Extra! I'm excited! I couldn't
> hold
> > > it in any longer, I just had to tell someone. :-) I've went from Tech
> to
> > > Extra in 2 months.
> > >
> > >
> > > Matt
> > > KC5YTV / AE
> > >
> > >
> > >
> > >
>
>

618. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 17:22:26 UTC
From: Tech <newbury66@hotmail.com>
Message-ID: <oboQ8.1226$kb3.96038@news8-gui.server.ntli.net>
Source record: 43131
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Why not buy her a brand new domestic appliance, that way she can't gripe,
can she?

73

"Al Bunch" <bunchah@nospam.yahoo.com> wrote in message
news:K28M8.13$lS1.671806@news.cpqcorp.net...
> Take out an ad:
>
> Addicted to ragchewing, thinking of dropping another $5K on equipment? I
> have the solution - proven results, you won't buy another thing as long as
> you have this. One left, hurry before she's gone. Will consider trades
for
> existing new/used equipment or other offers.
>
> ...or you could just be blatantly honest...
>
> Take my wife in exchange for your used amateur radio equipment. She won't
> let me further my hobby so if you're getting out, she'll make sure you
stay
> that way. All trades completely final.
>
> If nobody bites, you can always dangle a high ticket item in front of her
> that she really really wants and wait for her to start chomping at the bit
> about getting it, then spring the compromise on her. This could get nasty
> though when either A) she figures out what you're up to or B) she agrees
and
> that becomes the norm for all of your future purchases.
>
> However you proceed, please - keep us posted so those of us
> luck...errr..unfortunate enough to not be married yet will know how to
> handle ourselves should we ever get into the same situation.
>
> 73's
> -Al Bunch
>
> "KC8SSG" <kc8ssg@qsl.net> wrote in message news:VXAL8.62$13.1028@news...
> > I'm having a hard time getting my wife to get used to me buying radios
and
> > stuff. Any help or suggestions would be great!
> >
> > --
> > KC8SSG
> >

> >
> >
>
>

619. Re: A very simple SSB receiver ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 17:44:23 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <td44hu8pt750sh3il5q594382hsjj2rsvv@4ax.com>
Source record: 43132

On Thu, 20 Jun 2002 17:05:59 GMT, pic16f876@yahoo.ca (Gillis) wrote:

>Can you help me to find the schematic of a simple but effective ssb
>receiver.
>
>It will be tune over a narrow band around 13.5 Mhz with a VCO of my
>own (DDS).
>
>There is a single chip solution; is the direct conversion the best way
>to go ?

I'm not aware of any single chip solutions for such things. You basically have two choices: direct conversion or filter. They each have advantages and disadvantages.

If you're really not concerned with selectivity, you can buy a narrow ceramic filter or build a two pole crystal filter which should do reasonably well. Build your receiver around a couple of '602 chips and a 386 audio amplifier and you've built a pretty good beginner's radio.

If you're looking for performance and just slightly more complex circuitry, I'd like to recommend KK7B's R2 series of receivers. In particular, the miniR2 would meet your needs very nicely. Dynamic range is very good, audio quality is excellent, and opposite sideband rejection can approach 50 dB, given a reasonable effort at matching parts.

The down side of the miniR2 is that you'll need higher power than typical coming out of your DDS to drive the two mixers. Most builders use +7 dBm LO drive for the mixers, meaning you'll need at least +10 dB coming out of the DDS buffer amplifier, unless you have both I and Q outputs already.

If you're interested in the R2 series of radios see

http://www.bright.net/~kanga/kanga/kk7b.htm

Good Luck!

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

620. Heathkit extender board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 18:41:27 UTC
From: George <gschwab@florida-knife.com>
Message-ID: <rlpQ8.90393$ks6.15703@nwrddc02.gnilink.net>
Source record: 43133

Here is a rough sketch of what I have in mind for an extender board for the Heathkit.
Think it will work??
http://www.laser-blades.com/ae4mh/extender.html

George, AE4MH

621. new program - feedline radiation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 21:34:47 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aethpm$5mi$3@paris.btinternet.com>
Source record: 43134

New Program FEEDPOWR.exe

RADIATION FROM BRAID OF COAXIAL FEEDLINE.

Radiation due to unbalanced feedline currents is often considered undesirable.
It may sometimes be thought useful. The main effect is distortion of the radia-
tion pattern. Power loss in a wanted direction can occur - but how unfortunate
is it? Signals or noise from an unwanted direction can be a nuisance - but how
much of a nuisance? An estimate of the strength of feedline radiation before
taking precautions seems desirable. Precautions might not be necessary

A crude estimate will be sufficient because much of a feedline''s length runs in
a cluttered, uncertain environment. This program models and analyses the most
simple and worst-case situation - a dipole centre-fed via a coaxial line.

An RF source is placed at the centre of a horizontal dipole of given length and
height. Also from one side of the source a 3rd conductor descends to ground
level where it is grounded via a loss resistor. This 3rd conductor corresponds
to the braid of the coaxial feedline from the antenna back to the transmitter.

The 3 radiation resistances are computed. Then input Z of each of the 3 conduc-
tors followed by the 3 input currents. Finally the percentage of radiated power
contributed by each of the 3 conductors is calculated.

A balanced-to-unbalanced transformer (balun) at the antenna end of the line can
constrain the currents in the conductors to be equal and opposite to each other.
Line radiation is then reduced to a low level and the radiation pattern remains
undistorted. This program does not allow for currents being re-introduced in the
line due to the line not being led away from the antenna at a 90 degree angle.

The need for a balun with a simple dipole is much debated amongst radio
hams.
Attention is focussed on feedline radiation and on a line''s receiving
ability.
But with only anecdotal evidence offered by participants debates inevitably
fail
to arrive at any conclusions.

In the absence of numerical information on the subject this program attempts
to
fill the gap. There is only one quantity of consequence - the fraction of
total
power which is due to unbalanced feedline current. It depends only on
antenna
dimensions and frequency. That radiation emanates from any particular part
of a
structure is a popular misconception but in this case the myth serves a
useful
purpose. The analysis involves some simplifying assumptions justifiable on
the
grounds that the uncertainties introduced are probably no greater than the
un-
certainties associated with details omitted from the input data.

As will be seen, radiation from a coaxial feedline in a particular
installation
can vary widely with frequency. Random resonances occur. If by some chance
one
occurs in an amateur band it can be shifted by changing the feedline length.

Download FEEDPOWR from website below.

=======================
Regards from Reg G4FGQ
Free Radio Modelling Software
Go to http://www.g4fgq.com
=======================

622. wave ends on a conductor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 21:45:11 UTC
From: Kurt Stocklmeir <kurtstocklmeir@worldnet.att.net>
Message-ID: <01c2189a$5f26be40$3e755b0c@oemcomputer>
Source record: 43135

I think people say some thing like when an electromagnetic wave hits a conductor the electric field is suppose to not have an intensity. This can be compared to standing waves on a string between 2 ends. I think people say there are only standing waves between 2 conductors. I do not know how a photon gets absorbed or reflected when there is not any electric field intensity.

A lot of times a photon which is an electromagnetic wave hits a conductor and the electric field intensity is big. I guess the electric field will be absorbed by the conductor
and electrons will start moving. It is probably true the electric field will be destroyed fast and it will not travel a lot pass the surface. I guess if this is true there can be waves between 2 conductors that are not standing waves.

Thank your for any answers.

623. Wanted FFSK modem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 23:00:55 UTC
From: LEX-Lutor <lex-lutor@post.hinet.hr>
Message-ID: <aetmn2$bc3$1@as201.hinet.hr>
Source record: 43137
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.design

I`m looking for FFSK modem, speed 1200, radio use !

Any information about, schematic, plans, source for parts or OEM devices are wellcome !

Tnx !!

624. Re: Heathkit extender board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-20 23:52:31 UTC
From: Idontwantspam@net
Message-ID: <3d12698a.5016924@news.bellatlantic.net>
Source record: 43138

On Thu, 20 Jun 2002 18:41:27 GMT, "George" <gschwab@florida-knife.com>
wrote:

>Here is a rough sketch of what I have in mind for an extender board for the
>Heathkit.
>Think it will work??
>http://www.laser-blades.com/ae4mh/extender.html
>
>George, AE4MH
>
Extender boards are often used in troubleshooting live equipment, when
you need to measure or adjust something on a board normally in a card
rack. Your design is quite similar to the ones I've worked with.

Pay attention to not zapping yourself, or shorting something on the
board as you do this. Use test leads with insulation except for the
very tips. If there is any serious voltage, use the one hand in pocket
rule.

You might have odd RF issues because the case would not be closed up.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

625. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-21 00:10:51 UTC
From: Murray Neece <radioranch@cableone.net>
Message-ID: <3D126F0B.9A5A99F9@cableone.net>
Source record: 43136
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc
Body handling: Binary attachment payload not displayed: radioranch.vcf

.....I got a nice Browning .45 for my wife, best trade I ever made!!! Maybe
you can trade too!!

Tech wrote:

> Why not buy her a brand new domestic appliance, that way she can't gripe,
> can she?
>
> 73
>
> "Al Bunch" <bunchah@nospam.yahoo.com> wrote in message
> news:K28M8.13$lS1.671806@news.cpqcorp.net...
> > Take out an ad:
> >
> > Addicted to ragchewing, thinking of dropping another $5K on equipment? I
> > have the solution - proven results, you won't buy another thing as long as
> > you have this. One left, hurry before she's gone. Will consider trades
> for
> > existing new/used equipment or other offers.
> >
> > ...or you could just be blatantly honest...
> >
> > Take my wife in exchange for your used amateur radio equipment. She won't
> > let me further my hobby so if you're getting out, she'll make sure you
> stay
> > that way. All trades completely final.
> >
> > If nobody bites, you can always dangle a high ticket item in front of her
> > that she really really wants and wait for her to start chomping at the bit
> > about getting it, then spring the compromise on her. This could get nasty
> > though when either A) she figures out what you're up to or B) she agrees
> and
> > that becomes the norm for all of your future purchases.
> >
> > However you proceed, please - keep us posted so those of us
> > luck...errr..unfortunate enough to not be married yet will know how to
> > handle ourselves should we ever get into the same situation.
> >
> > 73's
> > -Al Bunch
> >
> > "KC8SSG" <kc8ssg@qsl.net> wrote in message news:VXAL8.62$13.1028@news...
> > > I'm having a hard time getting my wife to get used to me buying radios

> and
> > > stuff. Any help or suggestions would be great!
> > >
> > > --
> > > KC8SSG
> > >
> > >
> > >
> >
> >

[One or more binary attachments are retained only in the source text.]

626. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-21 01:44:41 UTC
From: codemaan <codeman@gj.net>
Message-ID: <aeu0do01r6@enews3.newsguy.com>
Source record: 43139
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Did you know a person can go to Hell for taking such obscene advantage of unknown people like you did? :) So, how does the .45 shoot?

"Murray Neece" <radioranch@cableone.net> wrote in message news:3D126F0B.9A5A99F9@cableone.net...
> .....I got a nice Browning .45 for my wife, best trade I ever made!!! Maybe
> you can trade too!!
>
> Tech wrote:
>
> > Why not buy her a brand new domestic appliance, that way she can't gripe,
> > can she?
> >
> > 73
> >
> > "Al Bunch" <bunchah@nospam.yahoo.com> wrote in message
> > news:K28M8.13$lS1.671806@news.cpqcorp.net...
> > > Take out an ad:
> > >
> > > Addicted to ragchewing, thinking of dropping another $5K on equipment? I
> > > have the solution - proven results, you won't buy another thing as long as
> > > you have this. One left, hurry before she's gone. Will consider trades
> > for
> > > existing new/used equipment or other offers.
> > >
> > > ...or you could just be blatantly honest...
> > >
> > > Take my wife in exchange for your used amateur radio equipment. She won't
> > > let me further my hobby so if you're getting out, she'll make sure you
> > stay
> > > that way. All trades completely final.
> > >
> > > If nobody bites, you can always dangle a high ticket item in front of her
> > > that she really really wants and wait for her to start chomping at the bit
> > > about getting it, then spring the compromise on her. This could get

nasty
> > > though when either A) she figures out what you're up to or B) she
agrees
> > and
> > > that becomes the norm for all of your future purchases.
> > >
> > > However you proceed, please - keep us posted so those of us
> > > luck...errr..unfortunate enough to not be married yet will know how to
> > > handle ourselves should we ever get into the same situation.
> > >
> > > 73's
> > > -Al Bunch
> > >
> > > "KC8SSG" <kc8ssg@qsl.net> wrote in message
news:VXAL8.62$13.1028@news...
> > > > I'm having a hard time getting my wife to get used to me buying
radios
> > and
> > > > stuff. Any help or suggestions would be great!
> > > >
> > > > --
> > > > KC8SSG
> > > >
> > > >
> > > >
> > >
> > >
>

627. 100 MHz crystal

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-21 03:10:57 UTC
From: pdrunen@aol.com
Message-ID: <20020620231057.29347.00000085@mb-ce.aol.com>
Source record: 43140

Hi Hams,

Looking for a 100 MHz series-resonate crystal for a mixer project out of Ham Radio Oct '95. It has to operate on the fundimental mode.

Mostly see crystals up to 50 MHz but no 100 MHz.

So, if anyone has a source or suggested source let me know.

tnx de KJ4UO

628. FS: HV DIODES:1200 V+

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-21 03:33:41 UTC
From: Joe Hargis <joehargis@worldnet.att.net>
Message-ID: <p8xQ8.46916$LC3.3581257@bgtnsc04-news.ops.worldnet.att.net>
Source record: 43141

Have 1N 5408 1200vdc + at 1.5A for 10 cents each.
(+postage) : Joe in MO

629. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-21 05:42:19 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D12BD1F.B4B836A4@bellatlantic.net>
Source record: 43142

budgie wrote:

> >> >
> >> >The loss is generally **NOT** significant in twelve feet of coax on
> >> >ten meters, so the SWR reduction he claims can not come from line
> >> >length with the exception that his meter might not be calibrated to
> >> >the line Z0 or the system might have common mode currents that are
> >> >changing the load impedance seen by the line as line length is varied.
> >>
> >> I still beg to differ. ANY loss will improve the match. Significant
> >> loss will introduce a significant improvement.
> >>

>
> >I think the only question here is concerning how much
> >loss and how many feet make a real world difference,
>
> AHA! We have a breakthrough!
> >so
> >I'll ask you what you have in mind: how much additional coax,
> >at what loss per foot, would have to be added to the 12 foot
> >length to make a noticeably "better match"?
>
> Depends on your threshold of noticeability.

(much snipped above)

The thread talks about a reduction in SWR.
The threshold of noticeability would be a
distinct difference in the swr reading using
a vswr meter before adding the cable and after
adding the cable. I would think a "noticeably
better match", in the context of this thread,
would be bringing the VSWR say .5 closer to 2.0
from somewhere near 3.0 So, in your view, how
much additional coax, at what loss per foot do
you have in mind?

630. Re: Signal Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-21 05:54:53 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D12C011.E0073034@bellatlantic.net>
Source record: 43143

Bill Harbour wrote:
>
> I'm looking for a signal generator that I can use to align and test
> the QRP receivers that I'm homebrewing. I'd like it to have
> attenuation down to a level low enough to test the sensitivity of my
> receivers.
>
> Can I find such an animal for less than $100 (Heathkit, Eico, other
> models)?
>
> Any guidance is appreciated.
>
> Tnx,
>
> Bill
> KD4PWB

Hamfests. Look for old boatanchor signal generators.
I bought a beautiful Boonton generator for $15.00

The thing has a beautiful variable attenuator to
-125 Db, covers Audio and all of HF and produces
a beautiful and stable sine wave.

Draw backs: large, heavy and you have to let them
warm up.

631. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-21 06:08:29 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d12c292.8918210@news.cantech.net.au>
Source record: 43144

On Fri, 21 Jun 2002 05:42:19 GMT, ehsjr@bellatlantic.net wrote:

>
>
>budgie wrote:
>
>> >> >
>> >> >The loss is generally **NOT** significant in twelve feet of coax on
>> >> >ten meters, so the SWR reduction he claims can not come from line
>> >> >length with the exception that his meter might not be calibrated to
>> >> >the line Z0 or the system might have common mode currents that are
>> >> >changing the load impedance seen by the line as line length is varied.
>> >>
>> >> I still beg to differ. ANY loss will improve the match. Significant
>> >> loss will introduce a significant improvement.
>> >>
>>
>> >I think the only question here is concerning how much
>> >loss and how many feet make a real world difference,
>>
>> AHA! We have a breakthrough!
>> >so
>> >I'll ask you what you have in mind: how much additional coax,
>> >at what loss per foot, would have to be added to the 12 foot
>> >length to make a noticeably "better match"?
>>
>> Depends on your threshold of noticeability.
>
>
>(much snipped above)
>
>The thread talks about a reduction in SWR.
>The threshold of noticeability would be a
>distinct difference in the swr reading using
>a vswr meter before adding the cable and after
>adding the cable. I would think a "noticeably
>better match", in the context of this thread,
>would be bringing the VSWR say .5 closer to 2.0
>from somewhere near 3.0 So, in your view, how
>much additional coax, at what loss per foot do
>you have in mind?

I don't have ANY in mind. I simply rasied the point about the
incompleteness/inaccuracy/lack_of_reality in the original

statement(s).

YOU raised the consideration of noticeability.

632. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-21 07:35:09 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3D12D72C.CAD3E7D5@ay.com.au>
Source record: 43145

Tom W8JI wrote:

> As long as we are picking nits, that is not true. Increased loss in a
> transmission line can also make the apparent line SWR worse.

Huh?

The return loss is always better with increased line loss.

Unless you go all semantic about the definition of VSWR and go
measuring voltages at each end, ignoring the line loss in between, which
you can't do unless you don't believe in conservation of energy.

--
Alan Yates
http://www.vk2zay.net/

633. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-21 10:44:43 UTC
From: 2w8ji@contesting.com
Message-ID: <3d12fa80.244877896@news.akorn.net>
Source record: 43146

On Thu, 20 Jun 2002 05:53:17 -0700, Dan Richardson <k6mhe@arrl.net>
wrote:

>On Thu, 20 Jun 2002 10:45:25 GMT, 2w8ji@contesting.com (Tom W8JI)
>wrote:
>
>>Increased loss in a
>>transmission line can also make the apparent line SWR worse.
>
>How?

Loss generally prevents the line from being purely resistive in
characteristic impedance. It is not distributed between shunt and
series components like an attenuator pad would be.

With a well matched load and a lossy line, SWR INCREASES with line
loss. Attenuation generally makes the line look slightly capacitive on
the source end, and will change input resistance.

We have to be careful picking nits. The nits we pick may be our own!

73 Tom

634. Re: Signal Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-21 11:50:14 UTC
From: amdx <amdx@att.net>
Message-ID: <WpEQ8.53613$UT.3629158@bgtnsc05-news.ops.worldnet.att.net>
Source record: 43197

I'm with you, I bought an HP 651B at a hamfest for $40.00.
Covers audio to 10 Mhz.

> Hamfests. Look for old boatanchor signal generators.
> I bought a beautiful Boonton generator for $15.00
>
> The thing has a beautiful variable attenuator to
> -125 Db, covers Audio and all of HF and produces
> a beautiful and stable sine wave.
>
> Draw backs: large, heavy and you have to let them
> warm up.

635. Radio Direction Finding Transmitter RDF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-21 12:25:45 UTC
From: Doctor <doctorwho20012001@yahoo.com>
Message-ID: <aev5qcmrn1@news.cowan.edu.au>
Source record: 43198

Could anyone please tell me how to make a simple or with only a few parts, a transmitter that can transmit 3km for treasure hunt, radio direction finding activities for the club.

What I was hoping for is to make a transmitter that would give a beep every second or so.

Thanks Craig

636. Transmitters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-21 12:32:45 UTC
From: Doctor <doctorwho20012001@yahoo.com>
Message-ID: <aev67h$ms1$1@news.cowan.edu.au>
Source record: 43199

Would anyone know on how to make or design simple transmitters from some simple circuits or any books on the subject.

I have knowledge of electronics but find it a bit difficult when it comes to designing transmitters.

If there is any books on the subject I would find that most helpful.

Thanks Craig

637. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-21 17:14:03 UTC
From: "n7ws at arrl net"
Message-ID: <3d1352de.14037528@news.triconet.org>
Source record: 43200

On Fri, 21 Jun 2002 10:44:43 GMT, 2w8ji@contesting.com (Tom W8JI)
wrote:

|On Thu, 20 Jun 2002 05:53:17 -0700, Dan Richardson <k6mhe@arrl.net>
|wrote:
|
|>On Thu, 20 Jun 2002 10:45:25 GMT, 2w8ji@contesting.com (Tom W8JI)
|>wrote:
|>
|>>Increased loss in a
|>>transmission line can also make the apparent line SWR worse.
|>
|>How?
|
|Loss generally prevents the line from being purely resistive in
|characteristic impedance. It is not distributed between shunt and
|series components like an attenuator pad would be.
|
|With a well matched load and a lossy line, SWR INCREASES with line
|loss. Attenuation generally makes the line look slightly capacitive on
|the source end, and will change input resistance.
|
|We have to be careful picking nits. The nits we pick may be our own!

Exactly! Take 100 ft (30.48m for our Australian friend) of RG-213
operated on (to keep Tom happy) 1.8 MHz. Assume a perfect 50 ohm
source and a perfect 50 ohm load.

The matched line loss for this line is 0.259 dB/100 ft. As Tom
correctly points out, this loss makes the line Zo deviate from a real
50 ohm to a complex Zo = 50 - j0.855.

When terminated with the 50 ohm load, the line is mismatched and
operates with an SWR of 1.016. At the input end, the SWR presented to
the perfect 50 ohm source is 1.033.

So our nitpicking friend from down under is wrong when he states:

"Whoa big boy! I repeat, and I'll try to use small words so you can
keep up: ANY loss will improve the match. ANY loss will give a
"better match". And anyone who can work out an R.L. can see how much
loss they need to get a certain improvement if the source end is
matched."

Clearly, here is a case where "increased" loss "did not" improve the
match.

In *my* thirty-three-plus years in the rf/microwave industry, I learned to NEVER make such unequivocal statements as these. There is always going to be that one overlooked item that reaches out a bites you in the ass.

I believe some apologies are in order.

Wes N7WS

ps.

Anyone wanting to verify these numbers can download Dan's (AC6LA) excellent program at:

http://www.qsl.net/ac6la/tldetails.html

638. Re: 100 MHz crystal

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-21 17:48:54 UTC
From: k7itm@aol.com
Message-ID: <3200347.0206210948.47178838@posting.google.com>
Source record: 43201

pdrunen@aol.com (PDRUNEN) wrote in message
news:<20020620231057.29347.00000085@mb-ce.aol.com>...
> Hi Hams,
>
> Looking for a 100 MHz series-resonate crystal for a mixer project out of Ham
> Radio Oct '95. It has to operate on the fundimental mode.
>
> Mostly see crystals up to 50 MHz but no 100 MHz.
>
> So, if anyone has a source or suggested source let me know.
>
> tnx de KJ4UO

I have a few 100MHz crystals, but they are not fundamental mode...and
I doubt you'll find fundamental mode crystals at 100MHz. Why is that
a requirement?

Cheers,
Tom

639. Re: HF Direction Finder(DF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-21 18:00:23 UTC
From: k7itm@aol.com
Message-ID: <3200347.0206211000.2f2946c@posting.google.com>
Source record: 43202

"cowboy67" <cowboy67111@yahoo.com> wrote in message
news:<aerh1c$4l4a$1@news3.infoave.net>...
> Howdy all,
>
> Does anyone know how to make an HF DF? Just curious if there are any plans
> out there on how to make one.

What band(s)? You can do a reasonable small loop on 80 meters, and
probably even get it to work well on 40. Above that you may be better
off with other equipment. If you look in an antenna engineering
handbook (like Johnson and Jasik), you'll find a whole chapter on RF
direction finding, covering a wide freq range. I should also perhaps
ask if you want to do it mobile or from a fixed location, or what.
People with lots of real estate have built huge symmetrical arrays
which are steered by switching. I recently had a look at an RDF
system based on annular slot antennas which was relatively quite small
for the freq range it covered, and claims good accuracy, but then the
makers charge something like $50k for it, and the electronics runs in
a VXI cardcage.

Have you done a Google search for "HF radio direction finding"?
You'll get lots of hits.

Cheers,
Tom

640. Re: permeability problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-21 18:33:14 UTC
From: dstalk@execulink.com
Message-ID: <KjKQ8.28234$Z6.327100@nnrp1.uunet.ca>
Source record: 43203

Yes, I'd appreciate a copy.
I didn't receive the original post so I don't know your email address and can't contact you directly.

Don, ve3hur

dstalk@execulink.com

Clifton T. Sharp Jr. <clifto@clifto.com> wrote:
> Jack Smith wrote:
>> I spent an interesting few months a couple years ago trying to
>> understand these factors and wrote about 90% of an article attempting
>> to describe in a quantative fashion all of these various factors with
>> respect to ferrite rod antennas. If you are really interested, I'll
>> e-mail you a copy. It's not finished, and is several Mb long, as it
>> has embedded graphs and photographs. Microsoft word format.
>
> Me too! Me too! :)
>

641. Re: Transmitters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-21 20:42:41 UTC
From: bjorn890@aol.com12345
Message-ID: <20020621164241.27874.00000084@mb-cf.aol.com>
Source record: 43204

>Would anyone know on how to make or design simple transmitters from some
>simple circuits or any books on the subject.
>
>I have knowledge of electronics but find it a bit difficult when it comes to
>designing transmitters.
>
>If there is any books on the subject I would find that most helpful.
>
>Thanks Craig

Try looking at the transmitters in the ARRL handbook. Some are very basic and
cna be easliy modified for other uses.
BJORN890
BJORN890

642. Re: A very simple SSB receiver ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-21 20:49:49 UTC
From: dt@dt.prohosting.com
Message-ID: <uadpos6fm.fsf@dt.prohosting.com>
Source record: 43205

I'm working on a SSB receiver right now, and my choice is to use direct conversion, but use the Weaver phase cancellation method to eliminate the unwanted sideband. Strictly speaking this set isn't direct conversion but a single conversion superhet with a 4 kHZ IF and the phase method of image cancellation.

Basically it looks like this:

```
|---------|
/--MIXER--GAIN--| stereo |
ANT---FILTER---SPLIT-< | codec |-----AUDIO OUT
\--MIXER--GAIN--| and |
| DSP |
|---------|
```

Not shown are the two local oscillators. Both are DDS sinewave sources and they are programmed to be 4 kHz off from the received signal (in the same direction) and 90 degrees out of phase from one another (in quadrature). One DDS feeds each balanced mixer. (For a receiver with wide receiving range, DDS is preferable, and the input filter should track. For a narrow receiving range, it is possible to use a PLL to local a second oscillator in quadrature with the main one, thus avoiding the expense of two DDS chips.)

The output of each mixer is band-limited (in the DSP software) to 4 kHz. The result is that each mixer output contains the desired sideband and the image. In one case, the image is 90 degrees ahead, in the other case it is 90 degrees behind.

In the DSP, each channel is multiplied by a 4kHz wave, but the two 4kHz waves are 90 degrees out of phase. The products are then summed. The result is that the wanted sideband is reinforced while the image cancels. To change sidebands, just flip the phase of one of the 4KHz waves (and shift the carrier to the other side of center).

Interestingly enough, it is also possible to detect AM and FM with this topology, provided the DSP is fast enough. In that case, the local 4kHz oscillator (in the DSP) is phase locked to the incoming 4KHz heterodyne product coming from either mixer. The phase detector error signal is the FM demodulation and the sum of the multiplier products is the AM demodulated signal.

This approach is "simple" RF-wise, since very early in the signal chain you are dealing with audio frequencies. It is also "simple" in terms of overall parts count. Naturally, a lot is being done in the DSP so it isn't necessarily "simple" overall.

David

643. Power Transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-21 20:52:02 UTC
From: paul332@iwvisp.com
Message-ID: <uh74fi2vguq268@corp.supernews.com>
Source record: 43206

I have several Power Transformers in the 1-2 KW range. For a description and pictures go to:
http://www1.iwvisp.com/cinnabar/page4.html

644. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-22 02:30:29 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <9jRQ8.74723$Hn4.2644092@news1.east.cox.net>
Source record: 43207
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

Skip!

Where did I say TETRODE??? I said there are better CERAMIC tubes.
A specific example would be a 3CX800 or 3CX1500, either will
beat the 4XC250 3rd order IMD specs by several dB. (-36 and -38 dB
respectively.)

Where did I say the 4CX250 didn't meet FCC specs for IMD?
I'd be interested in a reference to the FCC regulations specifing
transmitter IMD perfermence requirements that you referenced. If they
exist, then there are a lot of vintage sweep tube amps
still in use that are far worse than the 4CX250 in terms of poor IMD
performance.

Sure, 4CX250s may be cheap, but the problems and added costs involved
with the bias supplies, screen-regulation and protection circuits, and
even
finding good quality shielded-screen bypass sockets, sure make a good
case for using more modern components. My choice would be a 4CX350--if
I was constrained to whatever ceramic tetrode was most handy and in
quantity in my tube bins.

For reference:

http://www.svetlana.com/docs/TechBulletins/technoteNo42.html

Pete

"Skipp" <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
news:aenmpv$c4t$1@woodrow.ucdavis.edu...
> Well Pete'e
>
> You imply that 4cx250b type tubes are bad news in the IMD department.
> There are many tubes with better operational IMD specs, but the 4cx250b
> family works just fine in linear service. IMD is not any type of problem
> if you pay attention to the proper circuit and operational details. Basic
> linear amplifier 101 related to a specific family of high gain tetrodes.
>
> If any of the 4cx250b family of tubes are around cheap/free, one should
> not be scared off from using said by people posting blanket bad news IMD
> statements on New Groups. How about you posting some comparisons of IMD
> operational preformanc of some popular tetrodes vs the 4cx250b family and
> we'll beat the data back and forth.
>
> The 4cx250b family of tubes work well in properly designed and

> constructed linear circuits, simple enough.
>
> Your turn to "enlighten us" with some actual data that you have measured,
> not something reprinted or quoted out of an older Handbook...
>
> 73
> skipp
>
> : In rec.radio.swap Uncle Peter <radioconnectionNO@cox.netspam> wrote:
> : Skippy,
> : Where did I say it didn't "meet FCC requirements"? There are
> : thousands of linear designs (albiet mostly UHF/VHF that use
> : 4CX250s). I only pointed out
> : that as far as IMD performance, there are much better ceramic
> : tubes available than the 4CX250.
> : Enlighten us.
> : 73
> : Pete
>
> : "Skipp" <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
> : news:ae894h$m90$1@woodrow.ucdavis.edu...
> :> Bbbbbuuuuuzzzzzzzzzzzzzz.....!!!!!!!! (the error buzzer sounds)
> :>
> :> You don't qualify your statement... A well done 4cx250 amplifier
easily
> :> meets FCC requirements. It's all about how you design and build it...
> :>
> :> A little home work is always required....
> :>
> :> skipp
> :> http://sonic.ucdavis.edu
> :>
> :> : In rec.radio.amateur.homebrew Uncle Peter
> :> : <radioconnectionNO@cox.netspam> wrote:
> :> : 4CX250 tubes aren't the best for IMD performance -- but, they are
cheap
> :> : and available.
> :> : Pete
> :>
> :> : "Skipp" <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
> :> : news:adm4omoip9@woodrow.ucdavis.edu...
> :> :>
> :> :> In reference to another thread where someone asked questions about
> :> :> converting an amplifier from 6LQ6 "sweep tubes" over to 4CX250B
> : "ceramic"
> :> :> tubes...
> :> :>
> :> :> Here's a web link to a few photos of a Dentron GLA-1000B which was
> :> :> converted over to a pair of 4CX250's by an Italian Amateur Radio
> : Operator.

> :> :> I also have pictures of the same amplifier with some of the newer
> : Russian
> :> :> GU7 series tubes on board, but that's off topic. Anyway have a look
if
> :> :> your interested.
> :> :>
> :> :> cheers
> :> :> skipp@pilotNOSPAMPLEASE.ucdavis.edu
> :> :>
> :> :> http://sonic.ucdavis.edu/dentron
> :> :>
> :> :>
> :> :> The main page for the sonic server..
> :> :>
> :> :> http://sonic.ucdavis.edu
> :> :> chow for now
> :> :> skipp
> :>
> :>
>
>

645. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-22 02:55:36 UTC
From: Mark Russo <mrrusso@optonline.net>
Message-ID: <3D13E728.AE10691B@optonline.net>
Source record: 43208
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Put her on Ebay! :-)
---

codemaan wrote:

> Did you know a person can go to Hell for taking such obscene advantage of
> unknown people like you did? :) So, how does the .45 shoot?
>
> "Murray Neece" <radioranch@cableone.net> wrote in message
> news:3D126F0B.9A5A99F9@cableone.net...
> > .....I got a nice Browning .45 for my wife, best trade I ever made!!!
> Maybe
> > you can trade too!!
> >
> > Tech wrote:
> >
> > > Why not buy her a brand new domestic appliance, that way she can't
> gripe,
> > > can she?
> > >
> > > 73
> > >
> > > "Al Bunch" <bunchah@nospam.yahoo.com> wrote in message
> > > news:K28M8.13$lS1.671806@news.cpqcorp.net...
> > > > Take out an ad:
> > > >
> > > > Addicted to ragchewing, thinking of dropping another $5K on equipment?
> I
> > > > have the solution - proven results, you won't buy another thing as
> long as
> > > > you have this. One left, hurry before she's gone. Will consider
> trades
> > > for
> > > > existing new/used equipment or other offers.
> > > >
> > > > ...or you could just be blatantly honest...
> > > >
> > > > Take my wife in exchange for your used amateur radio equipment. She
> won't
> > > > let me further my hobby so if you're getting out, she'll make sure you
> > > stay
> > > > that way. All trades completely final.
> > > >
> > > > If nobody bites, you can always dangle a high ticket item in front of

> her
> > > > that she really really wants and wait for her to start chomping at the
> bit
> > > > about getting it, then spring the compromise on her. This could get
> nasty
> > > > though when either A) she figures out what you're up to or B) she
> agrees
> > > and
> > > > that becomes the norm for all of your future purchases.
> > > >
> > > > However you proceed, please - keep us posted so those of us
> > > > luck...errr..unfortunate enough to not be married yet will know how to
> > > > handle ourselves should we ever get into the same situation.
> > > >
> > > > 73's
> > > > -Al Bunch
> > > >
> > > > "KC8SSG" <kc8ssg@qsl.net> wrote in message
> news:VXAL8.62$13.1028@news...
> > > > > I'm having a hard time getting my wife to get used to me buying
> radios
> > > and
> > > > > stuff. Any help or suggestions would be great!
> > > > >
> > > > > --
> > > > > KC8SSG
> > > > >
> > > > >
> > > > >
> > > >
> > > >
> > >
>

--

All e-mail received and SENT from me
has been checked by Norton Anti-Virus 2002.

mrrusso@optonline.net

GOD BLESS AMERICA!!!

646. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-22 05:11:47 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D140745.C44787DF@bellatlantic.net>
Source record: 43209

budgie wrote:
>
> On Fri, 21 Jun 2002 05:42:19 GMT, ehsjr@bellatlantic.net wrote:
>
> >
> >
> >budgie wrote:
> >
> >> >> >
> >> >> >The loss is generally **NOT** significant in twelve feet of coax on
> >> >> >ten meters, so the SWR reduction he claims can not come from line
> >> >> >length with the exception that his meter might not be calibrated to
> >> >> >the line Z0 or the system might have common mode currents that are
> >> >> >changing the load impedance seen by the line as line length is varied.
> >> >>
> >> >> I still beg to differ. ANY loss will improve the match. Significant
> >> >> loss will introduce a significant improvement.
> >> >>
> >>
> >> >I think the only question here is concerning how much
> >> >loss and how many feet make a real world difference,
> >>
> >> AHA! We have a breakthrough!
> >> >so
> >> >I'll ask you what you have in mind: how much additional coax,
> >> >at what loss per foot, would have to be added to the 12 foot
> >> >length to make a noticeably "better match"?
> >>
> >> Depends on your threshold of noticeability.
> >
> >
> >(much snipped above)
> >
> >The thread talks about a reduction in SWR.
> >The threshold of noticeability would be a
> >distinct difference in the swr reading using
> >a vswr meter before adding the cable and after
> >adding the cable. I would think a "noticeably
> >better match", in the context of this thread,
> >would be bringing the VSWR say .5 closer to 2.0
> >from somewhere near 3.0 So, in your view, how
> >much additional coax, at what loss per foot do
> >you have in mind?

>
> I don't have ANY in mind. I simply rasied the point about the
> incompleteness/inaccuracy/lack_of_reality in the original
> statement(s).
>
> YOU raised the consideration of noticeability.

It is clear that you only wish to argue. I don't.

647. Visio for schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-22 09:21:05 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <5kXQ8.5241$c06.104523@news2.ulv.nextra.no>
Source record: 43210

Does anybody in this group have experience with Microsoft Visio for drawing schematics?

I have access to the 2002 version at work and am trying to use the EE module. It has a lot of nice features such as automatic rerouting when components are moved. But its set of templates is limited. Specifically I am trying to draw a circuit with an LM386 audio amplifier, but it seems that I have to start by making the symbol for the LM386 myself, i.e. an op-amp with some extra connections on the top and bottom. Any tips for how to do this in a simple way?

73, Sverre

--
Sverre Holm, LA3ZA
Asker, Norway (59.8N, 10.4E)
---
www.qsl.net/la3za

648. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-22 11:21:10 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d145d7f.2080696@news.cantech.net.au>
Source record: 43211

On Sat, 22 Jun 2002 05:11:47 GMT, ehsjr@bellatlantic.net wrote:

>
>
>It is clear that you only wish to argue. I don't.

Wrong again - but then again, what else should I expect?

649. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-22 11:28:24 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d145eff.2464561@news.cantech.net.au>
Source record: 43212

On Fri, 21 Jun 2002 17:14:03 GMT, n7ws at arrl net (Wes Stewart)
wrote:

>On Fri, 21 Jun 2002 10:44:43 GMT, 2w8ji@contesting.com (Tom W8JI)
>wrote:
>
>|On Thu, 20 Jun 2002 05:53:17 -0700, Dan Richardson <k6mhe@arrl.net>
>|wrote:
>|
>|>On Thu, 20 Jun 2002 10:45:25 GMT, 2w8ji@contesting.com (Tom W8JI)
>|>wrote:
>|>
>|>>Increased loss in a
>|>>transmission line can also make the apparent line SWR worse.
>|>
>|>How?
>|
>|Loss generally prevents the line from being purely resistive in
>|characteristic impedance. It is not distributed between shunt and
>|series components like an attenuator pad would be.
>|
>|With a well matched load and a lossy line, SWR INCREASES with line
>|loss. Attenuation generally makes the line look slightly capacitive on
>|the source end, and will change input resistance.
>|
>|We have to be careful picking nits. The nits we pick may be our own!
>
>Exactly! Take 100 ft (30.48m for our Australian friend) of RG-213
>operated on (to keep Tom happy) 1.8 MHz. Assume a perfect 50 ohm
>source and a perfect 50 ohm load.
>
>The matched line loss for this line is 0.259 dB/100 ft. As Tom
>correctly points out, this loss makes the line Zo deviate from a real
>50 ohm to a complex Zo = 50 - j0.855.
>
>When terminated with the 50 ohm load, the line is mismatched and
>operates with an SWR of 1.016. At the input end, the SWR presented to
>the perfect 50 ohm source is 1.033.
>
>So our nitpicking friend from down under is wrong when he states:
>
>"Whoa big boy! I repeat, and I'll try to use small words so you can
>keep up: ANY loss will improve the match. ANY loss will give a
>"better match". And anyone who can work out an R.L. can see how much

>loss they need to get a certain improvement if the source end is
>matched."
>
>Clearly, here is a case where "increased" loss "did not" improve the
>match.

The original discussion (up until this example) related to a line
matched at the source and mismatched at the load end. Using 52 ohm
line with 50 ohm terminations is shifting the goalposts yet again.

>In *my* thirty-three-plus years in the rf/microwave industry, I
>learned to NEVER make such unequivocal statements as these. There is
>always going to be that one overlooked item that reaches out a bites
>you in the ass.
>
>I believe some apologies are in order.
>
>Wes N7WS
>
>ps.
>
>Anyone wanting to verify these numbers can download Dan's (AC6LA)
>excellent program at:
>
>http://www.qsl.net/ac6la/tldetails.html
>

650. Re: 100 MHz crystal

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-22 12:11:23 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <LPZQ8.77450$Hn4.2712114@news1.east.cox.net>
Source record: 43213

I believe Ham Radio Mag. ceased publication before 1995.

100 MHz crystals usually are overtone mode.

Peter

"PDRUNEN" <pdrunen@aol.com> wrote in message
news:20020620231057.29347.00000085@mb-ce.aol.com...
> Hi Hams,
>
> Looking for a 100 MHz series-resonate crystal for a mixer project out of
Ham
> Radio Oct '95. It has to operate on the fundimental mode.
>
> Mostly see crystals up to 50 MHz but no 100 MHz.
>
> So, if anyone has a source or suggested source let me know.
>
> tnx de KJ4UO

651. Re: Help finding 10.7MHz crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-22 12:17:14 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <eVZQ8.77471$Hn4.2712570@news1.east.cox.net>
Source record: 43214

I've used ceramic filters in log IFs for spectrum analyzers without
problems. I also was lead
to understand that very sharp skirts (good shape factors) could lead to
problems in spectrum analyzers.

Peter

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message
news:3CF65D43.4769@pop.removethistomailme.net...
> Mark Mansfield wrote:
> >
> > I also have several ceramic filters for 10.7MHz of various bandwidths
> > that I plan to use if this circuit don't pan out. I may not need these
> > at all if the crystal IF amp checks out okay (fingers crossed!).
> >
>
> My guess is that you won't want to use ceramic filters in a spectrum
> analyzer. They have terribly-jagged spurious responses all over the
> place. They're really only good for use in WBFM receivers. SAW filters
> would probably be a better choice for your wider RBWs.
>
> Also, unlike in a communications receiver, an incrementally-variable IF
> bandwidth isn't especially useful in a spectrum analyzer. It's nice if
> you can get 1/3/10 steps, but even decade steps are fine for most
> purposes. Some of the most popular surplus models from Tek only offer 1
> MHz/100 kHz/10 kHz/1 kHz choices with 100 Hz available optionally, and
> we're talking about instruments that cost $30-$50K new.
>
> It's much better to use a few high-quality filters with good shape
> factors and freedom from spurs than to worry about any type of
> variable-bandwidth hack that might compromise the important specs.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

652. Re: Visio for schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-22 13:28:22 UTC
From: Idontwantspam@net
Message-ID: <3d147ad9.49063963@news.bellatlantic.net>
Source record: 43215

On Sat, 22 Jun 2002 09:21:05 GMT, "Sverre Holm \(LA3ZA\)"
<la3za@qsl.net> wrote:

>Does anybody in this group have experience with Microsoft Visio for drawing
>schematics?
>
>I have access to the 2002 version at work and am trying to use the EE
>module. It has a lot of nice features such as automatic rerouting when
>components are moved. But its set of templates is limited. Specifically I am
>trying to draw a circuit with an LM386 audio amplifier, but it seems that I
>have to start by making the symbol for the LM386 myself, i.e. an op-amp with
>some extra connections on the top and bottom. Any tips for how to do this in
>a simple way?
>
From the 2000 version on, I believe they are owned by Microsoft.

On the Microsoft site, there are often very useful add-ons for all of
their software. These are things which would clutter it up for most
users, but some would want, or were thought of after the release.

Worth a look.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

653. Re: HELP with Two-Modulus synth

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-22 14:03:11 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3d1482f8$0$7363@echo-01.iinet.net.au>
Source record: 43216

Ron
The NJ series were made by Plessey some years ago.I wasnt aware that Philips were still selling them. I once built a "proof of concept" synthesizer for the 2M band using these devices. I got it to work but it was unstable when I tried to FM modulate it for transmit and I gave up. I used the NJ8822 series version with a SP8793 prescaler. Looking at the datasheet for the 8821 it appears to be a 4 bit parallel interface. It looks as though you use pins DS0-DS2 to address the 4 bit data to the relevant register.
For 12.5 KHz operation at 144 MHz R (addresses 101, 110 ,111) would be loaded with 8400/12.5 = 672 = 2A0 Hex or 1010100000 binary - address101 gets 0000, 110 gets 1010 and 111 gets 0010

MA would be 144000/12.5 = 11520 or 2D00 Hex or 0001 0110 10 000 0000 binary
In this case I think address 011 (A counter) gets 0000, 100 gets X000 (X dont care),000 gets 00XX, 001 gets 0110 and 011 gets 0001

It looks like you use the PE pin to strobe the data.
The A data simply follows the M in calculating the overall main divider ratio
Bear in mind that M should be > or equal to A so there may be some illegal ratios higher up in the 2M band
The MC pin from the synthesizer goes to the prescaler to toggle the divide ratio
I dont have the data for the 8703 so I dont know the details of this device.
Hope this helps

Richard

"Ron" <ronayling@hotmail.com> wrote in message
news:3d1291cf.8676213@news.freeserve.co.uk...
>
> Hi
> I've been playing with remote operation of the Philips
> 1000 series synth but it uses a Two-Modulus system
> of which I know very little, I gather its a way
> of increasing the resolution of the synth to a few
> Htz but presumably not used to it full extent for
> just 12.5khz spacing in the 1100
> Can anyone give me an idea or an example how to
> work out the data for standard 12.5khz operation
> I understand how to load the data into the R counter
> A counter and M counter but a bit dim on the operation
> of the control logic. also is there a way of ignoring
> the 2nd Modulus? ie just run it as a standard Single

> modulus system? any information welcome
> The synth chip is a NJ8821 with an SP8703 divider
> and a ref xtal of 8.4mhz for the 2mtr band.
>
>
> from Ron g3yuh....
>
>

654. Re: 6146b lets put this bulb to work

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-22 14:37:28 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <af2244nub1@nic.grnet.gr>
Source record: 43217

The passed few days on my spare time, which is little I am afraid to say .I managed to do some home work on the 6146 (found RCA's 6146.PDF) and with your ideas and guide lines things are not so cloudy any more. I rounded up for starters all the parts needed a nice power supply (modern standards no bulbs) , the rectifier diode bridges are a bit of an overkill (KBPC3510) but could not find anything smaller (in amps).I did not want to use simple diodes for esthetical reasons . In a few days the transformer will be ready (custom ordered 15V 5A , 300V 1A ,400V 1A ,500V 1A) which is as well a overkill for this application , but since you cant order transformers everyday I got one for future projects as well .

The only cloudy part at the moment are the output coils (no data at http://www.qsl.net/n6ev/57-174S.jpg) does anyone have the data I need as well as the physical coupling layout of these coils?

"Deos" <lineoffiretoday@yahoo.com> wrote in message news:adhvhqjch1@nic.grnet.gr...
> I have a 6146b valve and no ideas or schematics to put it to use.
> Hf or vhf schematics would be nice
>
> Does anyone have an idea or something that will help me out?
>
>
> --
> deosiereas.virtualave.net
>
>

655. Re: Visio for schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-22 15:06:12 UTC
From: Bruce Lane <usenet1.5.spamvac@spamgourmet.com>
Message-ID: <MPG.177e323e9312018f9898f7@news.drizzle.com>
Source record: 43218

In article <5kXQ8.5241$c06.104523@news2.ulv.nextra.no>, "Sverre Holm \(LA3ZA\)" <la3za@qsl.net> says...

> Does anybody in this group have experience with Microsoft Visio for drawing
> schematics?

<snip>

I have an older version (4.1 Technical) from before it was Borg'd (and, IMO, ruined) by Micro$platt. It works fine for simple stuff, or for mechanical layout drawings. If you're trying to do a schematic that you will want to, later, make into a PC board, or you need to simulate the circuit before building, you need to be looking for a more powerful package that is dedicated to EDA (Electronic Design Automation).

I've used several, and I've pretty much decided that it's a case of 'Use what works best for you.' Circuitmaker/Traxmaker, Protel, OrCAD, Electronics Workbench, Eagle, all have their good and bad points.

I suggest you pop a similar question on the newsgroup 'sci.electronics.cad' and see what you get back.

Good luck.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to what I have now..." (Taki Kogoma)

656. Shortwave kit reviews

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-22 15:27:57 UTC
From: itzack@hotmail.com
Message-ID: <457c1251.0206220727.114420f9@posting.google.com>
Source record: 43219

Please suggest new swl kits
WWW.geocities.com/itzack

657. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-22 15:54:01 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D149D99.6963C6CE@clifto.com>
Source record: 43220

Wes Stewart wrote:
> Exactly! Take 100 ft (30.48m for our Australian friend) of RG-213
> operated on (to keep Tom happy) 1.8 MHz. Assume a perfect 50 ohm
> source and a perfect 50 ohm load.
>
> The matched line loss for this line is 0.259 dB/100 ft. As Tom
> correctly points out, this loss makes the line Zo deviate from a real
> 50 ohm to a complex Zo = 50 - j0.855.

Curiosity, not criticism: how did you compute this? I can see you left
out the 0.4 ohm or so of the 100 feet of #12 center conductor, and whatever
resistance the shield might have; would it change the calculation to any
noticeable extent?

(Talk about picking nits...!)

--
If spammers weren't stupid, they'd be the idle rich instead of spammers.
- Morely Dotes

658. Re: 100 MHz crystal

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-22 16:45:44 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3D14A9B8.9904B7C7@mfi.net>
Source record: 43221

Tom Bruhns wrote:
>
> pdrunen@aol.com (PDRUNEN) wrote in message
news:<20020620231057.29347.00000085@mb-ce.aol.com>...
> > Hi Hams,
> >
> > Looking for a 100 MHz series-resonate crystal for a mixer project out of Ham
> > Radio Oct '95. It has to operate on the fundimental mode.
> >
> > Mostly see crystals up to 50 MHz but no 100 MHz.
> >
> > So, if anyone has a source or suggested source let me know.
> >
> > tnx de KJ4UO
>
> I have a few 100MHz crystals, but they are not fundamental mode...and
> I doubt you'll find fundamental mode crystals at 100MHz. Why is that
> a requirement?
>
> Cheers,
> Tom

Someone makes fundamental crystals past 125 Mhz. L-3 Com/Microdyne
used them in their tuner modules when I worked there. They were quite
expensive. (>$30.00) I don't know if I can find out who made them. They
just closed the plant to move it to Pennsylvania, and I've lost contact
with the ones moving, till they have the computer systems and E-mail
moved.

659. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-22 21:49:11 UTC
From: "n7ws at arrl net"
Message-ID: <3d14ee66.18072140@news.triconet.org>
Source record: 43222

On Sat, 22 Jun 2002 10:54:01 -0500, "Clifton T. Sharp Jr."
<clifto@clifto.com> wrote:

|Wes Stewart wrote:
|> Exactly! Take 100 ft (30.48m for our Australian friend) of RG-213
|> operated on (to keep Tom happy) 1.8 MHz. Assume a perfect 50 ohm
|> source and a perfect 50 ohm load.
|>
|> The matched line loss for this line is 0.259 dB/100 ft. As Tom
|> correctly points out, this loss makes the line Zo deviate from a real
|> 50 ohm to a complex Zo = 50 - j0.855.
|
|Curiosity, not criticism: how did you compute this? I can see you left
|out the 0.4 ohm or so of the 100 feet of #12 center conductor, and whatever
|resistance the shield might have; would it change the calculation to any
|noticeable extent?
|
|(Talk about picking nits...!)

Forgive me but your last comment suggests that it is nothing but
criticism.

I didn't leave out anything despite what "you see". Where else do you
suppose the loss comes from if it isn't due to skin effect (resistive)
loss and dielectric dissipation. I gave the reference right in my
post or you can look up in any number of places the resistive and
dielectric loss coefficients and derive the line parameters for
yourself.

660. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-22 22:01:07 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D14F3F4.756EB457@bellatlantic.net>
Source record: 43223

budgie wrote:
>
> On Sat, 22 Jun 2002 05:11:47 GMT, ehsjr@bellatlantic.net wrote:
>
> > >
> > >
> > >It is clear that you only wish to argue. I don't.
>
> Wrong again - but then again, what else should I expect?

Ok. Since I am wrong, that means I misunderstood your
intention, and you are willing to post the answer.

Let me ask again: with the 12 feet of 52 ohm coax feeding the
50 ohm antenna, how much coax added to the line, at what
loss per 100 feet, will give a "real world" better match
in your opinion? "Real world" here is used to mean a
sufficient change in the SWR as measured by a typical SWR
meter so that the antenna installer will definitely notice
it.

661. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-22 22:23:59 UTC
From: "n7ws at arrl net"
Message-ID: <3d14f637.20073427@news.triconet.org>
Source record: 43224

On Sat, 22 Jun 2002 11:28:24 GMT, budgie@nowhere.cantech.net.au
(budgie) wrote:

|On Fri, 21 Jun 2002 17:14:03 GMT, n7ws at arrl net (Wes Stewart)
|wrote:
|
[snip]

|>Clearly, here is a case where "increased" loss "did not" improve the
|>match.
|
|The original discussion (up until this example) related to a line
|matched at the source and mismatched at the load end. Using 52 ohm
|line with 50 ohm terminations is shifting the goalposts yet again.

Tracking this thread back as far as I can, the first comment I see
from you was:

"No, the exception is ANY line which has ANY loss - as they all do."

So you didn't seem to be limiting your comment to "the original
discussion" but making a general statement that was proven wrong.

Futhermore, I did not use a 52 ohm line; RG-213 is a nominal 50 ohm
line, at least in the northern hemisphere.

Why don't you just 'fess up and apologize.

662. Antenna for 10 meters.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-23 00:56:05 UTC
From: "John S. MacKay" <k35454@direct.ca>
Message-ID: <uhamdeirikgu65@corp.supernews.com>
Source record: 43228

What ever happened to the original enquirer who wanted to make a simple antenna ? VE7AFN/M.

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.372 / Virus Database: 207 - Release Date: 6/20/02

663. Re: Help finding 10.7MHz crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-23 02:04:31 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D152D42.6DB9@pop.removethistomailme.net>
Source record: 43225

Uncle Peter wrote:
>
> I've used ceramic filters in log IFs for spectrum analyzers without
> problems.

How'd you get rid of the spurious responses above the fundamental? All of the ceramics I've swept look just awful. Lots of jaggies above the passband, barely 40-50 dB down.

> I also was lead
> to understand that very sharp skirts (good shape factors) could lead
> to problems in spectrum analyzers.

Not that I'm aware of. Most commercial units have pretty sharp skirts. What sort of problems are you referring to?

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

664. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-23 02:35:43 UTC
From: 2w8ji@contesting.com
Message-ID: <3d153336.390489820@news.akorn.net>
Source record: 43226

On Sat, 22 Jun 2002 22:23:59 GMT, n7ws at arrl net (Wes Stewart)
wrote:

>Tracking this thread back as far as I can, the first comment I see
>from you was:
>
>"No, the exception is ANY line which has ANY loss - as they all do."
>
>So you didn't seem to be limiting your comment to "the original
>discussion" but making a general statement that was proven wrong.

Yep, he was clearly worng.

Adding loss to a transmission loine that is nearly perfectly matched
will increase SWR, he just doesn't grasp the concept yet.

>Futhermore, I did not use a 52 ohm line; RG-213 is a nominal 50 ohm
>line, at least in the northern hemisphere.
>
>Why don't you just 'fess up and apologize.

Probably because he likes to argue and tell others they are wrong,
even when he is the one who is actually wrong.

73 Tom

665. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-23 05:06:11 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D155743.534F21D3@clifto.com>
Source record: 43227

Wes Stewart wrote:
> Forgive me but your last comment suggests that it is nothing but
> criticism.

Sorry, unintended. I meant that 0.4 ohms is kind of a tiny consideration
given this scenario.

--
If spammers weren't stupid, they'd be the idle rich instead of spammers.
- Morely Dotes

666. Re: 100 MHz crystal

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-23 05:56:08 UTC
From: g_and_s_pearce@xtra.co.nz
Message-ID: <9089a577.0206222156.1cb292a4@posting.google.com>
Source record: 43229

As an aside quesion .. can crystals at these fequencies be used
in lattice filters .. I have a design in mind that requires conversion
to
a first if of something in the region of 70 to 150 MHz .. the
narrowest filters I have found are 30 khz from the if stages in cell
phones .. operating
about 80 MHz .. this design is for cw and ssb so ideally
would like it narrower than that .. and ideally tunable via vericap
capacitance
to alter the bandwidth

Thanks

Stephen zl1any
g_and_s_pearce@xtra.co.nz

" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
news:<LPZQ8.77450$Hn4.2712114@news1.east.cox.net>...
> I believe Ham Radio Mag. ceased publication before 1995.
>
> 100 MHz crystals usually are overtone mode.
>
> Peter
>
> "PDRUNEN" <pdrunen@aol.com> wrote in message
> news:20020620231057.29347.00000085@mb-ce.aol.com...
> > Hi Hams,
> >
> > Looking for a 100 MHz series-resonate crystal for a mixer project out of
> Ham
> > Radio Oct '95. It has to operate on the fundimental mode.
> >
> > Mostly see crystals up to 50 MHz but no 100 MHz.
> >
> > So, if anyone has a source or suggested source let me know.
> >
> > tnx de KJ4UO

667. Re: Antenna for 10 meters.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-23 06:48:11 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3D156F2B.1CD06B14@ay.com.au>
Source record: 43230

"John S. MacKay" wrote:
>
> What ever happened to the original enquirer who wanted to make a simple
> antenna ? VE7AFN/M.

Probably got sick of our petty bickering and went to r.r.a.a.

--
Alan Yates
http://www.vk2zay.net/

668. 4-pole 3.5mm jack plugs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-23 08:56:20 UTC
From: Colin Lundy <lundy@actrix.co.nz>
Message-ID: <3d158d39@news.actrix.gen.nz>
Source record: 43231

I'm just getting back into radio after an absence. In the meantime I have picked up microlight flying as another great way to enjoy oneself/spend money.
The Icom-A4 handheld I have installed in the aircraft works well but the standard Icom connections for a headset and mike are a collection of cables and cable sockets. They rattle around all over the place and are fiddly to connect up every time I want to take off. (I don't leave the radio parked in the plane) so I'm building a simple jiffy box with all the sockets in (PTT, mike, phones) and a single lead to the Icom. Maybe later I will add a switch so I can go from the av band to a 2-meter rig in flight, but that's another road .. .
Problem is I have found no supplier yet (in New Zealand) for the 4-pole 3.5mm jack plug to connect to the transceiver. (Like an audio stereo plug, with an extra stripe)

Where can I find a couple of the plugs, and somewhere on earth where the postage/freight won't cost me 10 times the plug price . . .

73 de Colin

ZL1BTH
(Flying ZKFMF)

669. Re: Need source for BF982

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-23 11:55:14 UTC
From: mnewman@clear.net.nz
Message-ID: <3d15b6de.22906750@news.clear.net.nz>
Source record: 43232

How many do you need Scott.

I may be able to help.

Mike ZL1BNB

On Mon, 17 Jun 2002 14:24:58 -0400, "Scott M."
<scottzm@netzcommander.com> wrote:

>Does anyone know of a US retail source for BF982 MosFETS? I can't seem to
>find one and the obsolete parts guys want a minimum of $100.
>
>Scott M.
>KA1MRO
>
>
>
>
>------------== Posted via Newsfeed.Com - Uncensored Usenet News ==----------
> http://www.newsfeed.com The #1 Newsgroup Service in the World!
>-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

670. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-23 12:40:20 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d15bfa2.10057726@news.cantech.net.au>
Source record: 43233

On Sat, 22 Jun 2002 22:01:07 GMT, ehsjr@bellatlantic.net wrote:

>
>
>budgie wrote:
>>
>> On Sat, 22 Jun 2002 05:11:47 GMT, ehsjr@bellatlantic.net wrote:
>>
>> >
>> >
>> >It is clear that you only wish to argue. I don't.
>>
>> Wrong again - but then again, what else should I expect?
>
>
>Ok. Since I am wrong, that means I misunderstood your
>intention, and you are willing to post the answer.

Stop being so deliberately obtuse. Wrong again means that I have no intention of feeding your argument trolls. YOU introduced the "noticeably better match". Let me repeat:

Tom stated:
"If the line is 50 ohms, and the load is mismatched, there is NO length of 50-ohm line that will cause the impedance to be a better match to 50 ohms.".

I repeat, the above statement is ONLY true in a lossless line situation.

The O/P referred to 12 feet of real line, not lossless line. Tom's para did not specify lossless line. He was replying to a real world question.

You can ask all the questions you like. I will not be baited further.

671. Re: 100 MHz crystal

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-23 12:59:14 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <af4gn2$73m$1@helle.btinternet.com>
Source record: 43234

"stephen pearce" <g_and_s_pearce@xtra.co.nz> wrote in message
news:9089a577.0206222156.1cb292a4@posting.google.com...
> As an aside quesion .. can crystals at these fequencies be used
> in lattice filters .. I have a design in mind that requires conversion
> to
> a first if of something in the region of 70 to 150 MHz .. the
> narrowest filters I have found are 30 khz from the if stages in cell
> phones .. operating
> about 80 MHz .. this design is for cw and ssb so ideally
> would like it narrower than that .. and ideally tunable via vericap
> capacitance
> to alter the bandwidth

I remember reading somewhere that overtone xtals can be used in ladder
filters. The design process is probably rather tricky. They are obviously
used in VHF lattice filters.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.com
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

672. Re: P.C. Ham Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-23 17:53:58 UTC
From: Network Dude <netdude@adelphia.net>
Message-ID: <WWnR8.1929$wD6.865654@news3.news.adelphia.net>
Source record: 43235

Kachina made a PC-HF transciever.

http://kachina-az.com/index.html

They stopped production last year though.

"nntp.bloor.phub.net.cable.rogers.com" <bob@bob.com> wrote in message
news:6reK8.176340$t8_.67065@news01.bloor.is.net.cable.rogers.com...
> Can anyone tell me if it'spossible to have a Ham Radio on a P.C.?
>
>

673. Tandem Match directional coupler

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-23 18:21:45 UTC
From: Peter <pa5ke@euronet.nl>
Message-ID: <af53lv$2ch4$1@beast.euro.net>
Source record: 43236

Dear OM,

I am intending to build the Tandem Match directional power SWR meter. I would appreciate it if somebody can help me with the following questions.

I have a question regarding the transformers in the directional coupler. In the ARRL handbook 1999, page 20.40 I read that the Amidon core is type T50-3. This core is however specified to use between 0.05 and 0.50 MHz. The Tandem Match is specified up to 54 MHz (?).

1) Is it indeed so that the T50-3 is specified or is this a typing error in the ARRL Handbook?

2) The T50-3 is difficult to find overhear T50-2 or 6 are much more common, is it possible to use one of these types in the system without changing something in the way to build the Tandem Match. (eg. the number of turns on the core).

3) I have T106-2 and 6 available. Can I use one of these together with RG213? Can you say something about the number of turns needed if this core is usable to reach the same specifications?

I hope somebody can help me with this questions.

Thanks for reading.

73, de Peter Kerklaan
PA5KE

674. WLAN

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-23 19:52:09 UTC
From: George Sarmonikas <george@sarmonikas.com>
Message-ID: <3d163d51$0$8508$ed9e5944@reading.news.pipex.net>
Source record: 43240

Does anybody built his/her own Wireless LAN 802.11b access point?

Or at least built firmware for any existing one?

Thanks

675. FS: HomeBrew 40 meter Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-23 20:22:26 UTC
From: aokd5fxt@aol.com
Message-ID: <20020623162226.29205.00000451@mb-ms.aol.com>
Source record: 43237

7.0 to 7.350 mhz. $25 plus shipping. This is a homebrew tube type receiver.
Works on wire antenna. Pics available

Bill

676. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-23 20:28:07 UTC
From: aaronhvoobner@yahoo.com
Message-ID: <5c35b3ab.0206231228.163e866@posting.google.com>
Source record: 43238
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

```
" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
news:<9jRQ8.74723$Hn4.2644092@news1.east.cox.net>...
> Skip!
>
> Where did I say TETRODE??? I said there are better CERAMIC tubes.
> A specific example would be a 3CX800 or 3CX1500, either will
> beat the 4XC250 3rd order IMD specs by several dB. (-36 and -38 dB
> respectively.)
>
> Where did I say the 4CX250 didn't meet FCC specs for IMD?
> I'd be interested in a reference to the FCC regulations specifing
> transmitter IMD perfermence requirements that you referenced. If they
> exist, then there are a lot of vintage sweep tube amps
> still in use that are far worse than the 4CX250 in terms of poor IMD
> performance.
>
> Sure, 4CX250s may be cheap, but the problems and added costs involved
> with the bias supplies, screen-regulation and protection circuits, and
> even
> finding good quality shielded-screen bypass sockets, sure make a good
> case for using more modern components. My choice would be a 4CX350--if
> I was constrained to whatever ceramic tetrode was most handy and in
> quantity in my tube bins.
>
> For reference:
>
> http://www.svetlana.com/docs/TechBulletins/technoteNo42.html
>
>
> Pete
>
>
>
> "Skipp" <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
> news:aenmpv$c4t$1@woodrow.ucdavis.edu...
> > Well Pete'e
> >
> > You imply that 4cx250b type tubes are bad news in the IMD department.
> > There are many tubes with better operational IMD specs, but the 4cx250b
> > family works just fine in linear service. IMD is not any type of problem
> > if you pay attention to the proper circuit and operational details. Basic
> > linear amplifier 101 related to a specific family of high gain tetrodes.
> >
```

> > If any of the 4cx250b family of tubes are around cheap/free, one should
> > not be scared off from using said by people posting blanket bad news IMD
> > statements on New Groups. How about you posting some comparisons of IMD
> > operational preformanc of some popular tetrodes vs the 4cx250b family and
> > we'll beat the data back and forth.
> >
> > The 4cx250b family of tubes work well in properly designed and
> > constructed linear circuits, simple enough.
> >
> > Your turn to "enlighten us" with some actual data that you have measured,
> > not something reprinted or quoted out of an older Handbook...
> >
> > 73
> > skipp
> >
> > : In rec.radio.swap Uncle Peter <radioconnectionNO@cox.netspam> wrote:
> > : Skippy,
> > : Where did I say it didn't "meet FCC requirements"? There are
> > : thousands of linear designs (albiet mostly UHF/VHF that use
> > : 4CX250s). I only pointed out
> > : that as far as IMD performance, there are much better ceramic
> > : tubes available than the 4CX250.
> > : Enlighten us.
> > : 73
> > : Pete
>
> > : "Skipp" <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
> > : news:ae894h$m90$1@woodrow.ucdavis.edu...
> > :> Bbbbbuuuuuzzzzzzzzzzzzzz.....!!!!!!!! (the error buzzer sounds)
> > :>
> > :> You don't qualify your statement... A well done 4cx250 amplifier
> easily
> > :> meets FCC requirements. It's all about how you design and build it...
> > :>
> > :> A little home work is always required....
> > :>
> > :> skipp
> > :> http://sonic.ucdavis.edu
> > :>
> > :> : In rec.radio.amateur.homebrew Uncle Peter
> > :> : <radioconnectionNO@cox.netspam> wrote:
> > :> : 4CX250 tubes aren't the best for IMD performance -- but, they are
> cheap
> > :> : and available.
> > :> : Pete
>
> > :> : "Skipp" <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
> > :> : news:adm4omoip9@woodrow.ucdavis.edu...
> > :> :>
> > :> :> In reference to another thread where someone asked questions about

> > :> :> converting an amplifier from 6LQ6 "sweep tubes" over to 4CX250B
> "ceramic"
> > :> :> tubes...
> > :> :>
> > :> :> Here's a web link to a few photos of a Dentron GLA-1000B which was
> > :> :> converted over to a pair of 4CX250's by an Italian Amateur Radio
> Operator.
> > :> :> I also have pictures of the same amplifier with some of the newer
> Russian
> > :> :> GU7 series tubes on board, but that's off topic. Anyway have a look
> if
> > :> :> your interested.
> > :> :>
> > :> :> cheers
> > :> :> skipp@pilotNOSPAMPLEASE.ucdavis.edu
> > :> :>
> > :> :> http://sonic.ucdavis.edu/dentron
> > :> :>
> > :> :>
> > :> :> The main page for the sonic server..
> > :> :>
> > :> :> http://sonic.ucdavis.edu
> > :> :> chow for now
> > :> :> skipp
> > :>
> > :>
> >
> >

What does this have to do with CB??

-Aaron-

677. Re: Make the coax 12 ft.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-23 20:54:58 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D163605.545E91EC@bellatlantic.net>
Source record: 43239

budgie wrote:
>
> On Sat, 22 Jun 2002 22:01:07 GMT, ehsjr@bellatlantic.net wrote:
>
> >
> >
> >budgie wrote:
> >>
> >> On Sat, 22 Jun 2002 05:11:47 GMT, ehsjr@bellatlantic.net wrote:
> >>
> >> >
> >> >
> >> >It is clear that you only wish to argue. I don't.
> >>
> >> Wrong again - but then again, what else should I expect?
> >
> >
> >Ok. Since I am wrong, that means I misunderstood your
> >intention, and you are willing to post the answer.
>
> Stop being so deliberately obtuse. Wrong again means that I have no
> intention of feeding your argument trolls. YOU introduced the
> "noticeably better match". Let me repeat:
>
> Tom stated:
> "If the line is 50 ohms, and the load is mismatched, there is NO
> length of 50-ohm line that will cause the impedance to be a better
> match to 50 ohms.".
>
> I repeat, the above statement is ONLY true in a lossless line
> situation.
>
> The O/P referred to 12 feet of real line, not lossless line. Tom's
> para did not specify lossless line. He was replying to a real world
> question.
>
> You can ask all the questions you like. I will not be baited further.

Good.

678. Re: 4-pole 3.5mm jack plugs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-23 22:29:49 UTC
From: Colin Lundy <lundy@actrix.co.nz>
Message-ID: <3d164be2@news.actrix.gen.nz>
Source record: 43241

Wrong set:

The Icom aviation handheld IC-A4 mentioned in my original post should be an IC-A5. Sorry about the finger trouble. The A4 has a 2.5mm and a 3.5mm socket, not a single 4-pole socket.

So I'm still looking for a source for the 3.5mm 4-pole plugs.

73 de Colin
ZL1BTH

"Colin Lundy" <lundy@actrix.co.nz> wrote in message
news:3d158d39@news.actrix.gen.nz...
>
> I'm just getting back into radio after an absence. In the meantime I have
> picked up microlight flying as another great way to enjoy oneself/spend
> money.
> The Icom-A4 handheld I have installed in the aircraft works well but

679. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-23 22:38:50 UTC
From: Scott Sixnine <scott_unit_69@yaSPAMhoo.com>
Message-ID: <3D164D78.5CFFF1C6@yaSPAMhoo.com>
Source record: 43242
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

"Aaron H. Voobner" wrote:
(crossposted, BTW)

> > >
>
> What does this have to do with CB??
>
> -Aaron-

Everything. Whether you or I like it or not, it happens everyday on the CB. Everything that occurs on CB can be discussed here. I would rather they do it correctly and safely if they are going to do it at all.

Would you go to a drug users group and whine that what they are doing is illegal? Would you prefer they have to hide from you, and because of that, they get the wrong information and die because of you? That's all you're doing here.

680. looking to start

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 00:22:07 UTC
From: Glenn <tvrthegreat@aol.com>
Message-ID: <3D16662F.70602@aol.com>
Source record: 43243

Hi all, i was reading a few ham pages and was wondering the cheapest way to start?????

QRP sounds good... does this receiv voice messages??

All help / advice greatly appreciated

Best wishes Glenn

can sontact me via email : tvrthegreat@aol.com (UK)

681. WANTED: Triad M-15 modulation transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 00:31:29 UTC
From: Chuck O'Neal <coneal@ultranet.com>
Message-ID: <af5pa4$d6$1@bob.news.rcn.net>
Source record: 43244
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

I'm still looking for one. I will pay $50, plus shipping,
for a good one if anyone has one available!
73,
Chuck...K1KW

682. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 01:50:29 UTC
From: sparky@cet.com
Message-ID: <3d167603.1472264@news.cet.com>
Source record: 43245
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

In <3D164D78.5CFFF1C6@yaSPAMhoo.com>, Scott Sixnine
<scott_unit_69@yaSPAMhoo.com> wrote:

>"Aaron H. Voobner" wrote:
>(crossposted, BTW)
>
>> > >
>>
>> What does this have to do with CB??
>>
>> -Aaron-
>
>Everything. Whether you or I like it or not, it happens
>everyday on the CB. Everything that occurs on CB can be
>discussed here. I would rather they do it correctly and
>safely if they are going to do it at all.

If they don't know how to do it safely, don't you think that will
prevent many of them from doing it at all? Probably not...

But if you are so concerned about safety, maybe you should be thinking
about these dipwads handling a full amp at a thousand or more volts.
I'm sure you are aware that it takes far less than that to be lethal.
And why haven't you posted anything bleeder resistors? Or about HV
insulation properties? How much risk is there for fire when no
consideration is made for arcing? Have you mentioned anything about
unshielded high-power RF used in close proximity? In all your posts
have you ever mentioned the "one-hand" rule? Or how about rings?

And BTW, it doesn't matter what kind of IMD figures your tube has if
the harmonics are coming from the previous stage. What are you using
for a driver? Are you using a tuned input or are you trying to skate
by with a swamping resistor? Could the harmonics land on an emergency
pool frequency?

No, Scott, you are not concerned about safety; that's just a ruse to
justify your illegal intentions.

>Would you go to a drug users group and whine that what they
>are doing is illegal? Would you prefer they have to hide
>from you, and because of that, they get the wrong information
>and die because of you?

If they foolishly mess around with stuff they don't understand but
know could be lethal, then they deserve what they get.

683. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 02:32:59 UTC
From: Ronald Oberloh <wa0kds@yahoo.com>
Message-ID: <3D1684DB.8D4EF435@yahoo.com>
Source record: 43246
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Have to believe in Hell first......

codemaan wrote:

> Did you know a person can go to Hell for taking such obscene advantage of
> unknown people like you did? :) So, how does the .45 shoot?
>
> "Murray Neece" <radioranch@cableone.net> wrote in message
> news:3D126F0B.9A5A99F9@cableone.net...
> > .....I got a nice Browning .45 for my wife, best trade I ever made!!!
> Maybe
> > you can trade too!!
> >
> > Tech wrote:
> >
> > > Why not buy her a brand new domestic appliance, that way she can't
> gripe,
> > > can she?
> > >
> > > 73
> > >
> > > "Al Bunch" <bunchah@nospam.yahoo.com> wrote in message
> > > news:K28M8.13$lS1.671806@news.cpqcorp.net...
> > > > Take out an ad:
> > > >
> > > > Addicted to ragchewing, thinking of dropping another $5K on equipment?
> I
> > > > have the solution - proven results, you won't buy another thing as
> long as
> > > > you have this. One left, hurry before she's gone. Will consider
> trades
> > > for
> > > > existing new/used equipment or other offers.
> > > >
> > > > ...or you could just be blatantly honest...
> > > >
> > > > Take my wife in exchange for your used amateur radio equipment. She
> won't
> > > > let me further my hobby so if you're getting out, she'll make sure you
> > > stay
> > > > that way. All trades completely final.
> > > >
> > > > If nobody bites, you can always dangle a high ticket item in front of
> her

> > > > that she really really wants and wait for her to start chomping at the
> bit
> > > > about getting it, then spring the compromise on her. This could get
> nasty
> > > > though when either A) she figures out what you're up to or B) she
> agrees
> > > and
> > > > that becomes the norm for all of your future purchases.
> > > >
> > > > However you proceed, please - keep us posted so those of us
> > > > luck...errr..unfortunate enough to not be married yet will know how to
> > > > handle ourselves should we ever get into the same situation.
> > > >
> > > > 73's
> > > > -Al Bunch
> > > >
> > > > "KC8SSG" <kc8ssg@qsl.net> wrote in message
> news:VXAL8.62$13.1028@news...
> > > > > I'm having a hard time getting my wife to get used to me buying
> radios
> > > and
> > > > > stuff. Any help or suggestions would be great!
> > > > >
> > > > > --
> > > > > KC8SSG
> > > > >
> > > > >
> > > > >
> > > >
> > > >
> > >
> >

684. Re: WLAN

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 04:54:44 UTC
From: "Dana H. Myers" <dana@dioxine.net>
Message-ID: <3D16A622.8030004@dioxine.net>
Source record: 43047

What are you trying to accomplish?

How many hours of development is worth $200?
You can buy really decent APs for under $200.

For me, the build vs. buy decision takes about 30 mS: buy.

Dana

George Sarmonikas wrote:
> Does anybody built his/her own Wireless LAN 802.11b access point?
>
> Or at least built firmware for any existing one?
>
> Thanks
>
>

685. Help for a friend with an ICOM IC-751 Transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 05:20:58 UTC
From: John Boyle <john.boyle@erols.com>
Message-ID: <3D16AC3A.94AC4D7B@erols.com>
Source record: 43048
Cross-posted to: alt.ham-radio.packet,free.uk.amateur-radio,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,uk.radio.amateur

A friend who doesn't have access to newsgroups asked me to post this message for him. Please forgive me if I've posted to this group in error.

Concerning the ICOM IC-751 Transceiver, my friend asks:

"...In that radio is a ram-board that contains the operating system for the radio and that's where memory channels are stored. I need the hex code for that radio. I believe the board has a total of 1024 bytes of memory. I think the first 256 bytes is for the operating system and the remainder is for user memory storage. I need the first 256 bytes.... maybe you can put this request on the news groups and some Ham out there might have the code and can send it to me at W2RB@JUNO.COM..... it would be greatly appreciated... tnx.."

If someone can help him, you can email him directly, or email me and I'll get it to him.

Thanks.

John

686. Re: P.C. Ham Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 10:19:46 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <VyCR8.4147$3J.290207@news6-win.server.ntlworld.com>
Source record: 43049

> Kachina made a PC-HF transciever.
> http://kachina-az.com/index.html
> They stopped production last year though.

> > Can anyone tell me if it'spossible to have a Ham Radio on a P.C.?

==========
Ten-Tec makes or made a similar HF transceiver 'Pegasus' , as advertised in QST .
However lately they only advertised their (new) Jupiter HF transceiver.

Does this mean that 'blind boxes' which require operation through a PC are not all that much in demand?

They obviously have a purpose when used as a remote station ,like the 'super stations ' in California (LA-Brea) where users can operate HF from a handheld VHF radio.

Frank gm0csz.kn6wh@ntlworld.com

687. Re: Help for a friend with an ICOM IC-751 Transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 11:33:15 UTC
From: radiofun <radiofun@charter.net>
Message-ID: <uhe0st1m9b7ecf@corp.supernews.com>
Source record: 43050
Cross-posted to: alt.ham-radio.packet,free.uk.amateur-radio,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,uk.radio.amateur

You should find it here http://www.icomamerica.com/support/index2.html

"John Boyle" <john.boyle@erols.com> wrote in message
news:3D16AC3A.94AC4D7B@erols.com...
> A friend who doesn't have access to newsgroups asked me to post this
> message for him. Please forgive me if I've posted to this group in
> error.
>
> Concerning the ICOM IC-751 Transceiver, my friend asks:
>
> "...In that radio is a ram-board that contains the operating
> system for the radio and that's where memory channels
> are stored. I need the hex code for that radio.
> I believe the board has a total of 1024 bytes of memory.
> I think the first 256 bytes is for the operating system and
> the remainder is for user memory storage. I need the first
> 256 bytes.... maybe you can put this request on the news groups
> and some Ham out there might have the code and can send it to
> me at W2RB@JUNO.COM..... it would be greatly appreciated...
> tnx.."
>
> If someone can help him, you can email him directly, or email me and
> I'll get it to him.
>
> Thanks.
>
> John

688. ts-180 help wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 13:00:17 UTC
From: hans <pd1abz.hans@worldonline.nl>
Message-ID: <af74llhat1@reader1.tiscali.nl>
Source record: 43051

Does anyone know how to modify the ts-180 to (also)operate at 11 meters
Hans Netherlands

689. Re: 4-pole 3.5mm jack plugs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 13:01:26 UTC
From: Guy Austin <guy.austin@unn.ac.uk>
Message-ID: <af754v$i18$1@dax.unn.ac.uk>
Source record: 43052

www.maplin.co.uk sell them part no QT65V 99p plus £3 postage in the uk
email me if you need help getting one shipped internationally, i'll put it
in the post with a normal stamp.

Lots of video/hi fi use these now and it is often eaiser to cut one of these
leads up
a major advantage is that the mechanical strength of these moulded plugs is
higher than
one that you have struggled to solder up

690. Re: 4-pole 3.5mm jack plugs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 14:07:42 UTC
From: public@KatzShu.cfr.usf.edu
Message-ID: <slrnahe9te.5c6.toivo@bandit.net.usf.edu>
Source record: 43053

Colin Lundy wrote:
> The Icom aviation handheld IC-A4 mentioned in my original post should be an
> IC-A5. Sorry about the finger trouble. The A4 has a 2.5mm and a 3.5mm
> socket, not a single 4-pole socket.
>
> So I'm still looking for a source for the 3.5mm 4-pole plugs.

Yaesu's new handhelds use these as well, as do some camcorders and walkmen. They've been occasionally sold on eBay, with the description of being for Yaesu handhelds--that's where I found mine. Beyond that, I haven't been able to find them anywhere either. I wouldn't have a clue where to start looking in NZ if you don't want to mail order... Hope the info helps, though, and good luck!

Toivo

691. Re: 100 MHz crystal

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 14:52:29 UTC
From: pdrunen@aol.com
Message-ID: <20020624105229.12802.00000788@mb-fi.aol.com>
Source record: 43054

The article is about fabricating a mixer to convert 100KHz to 60 MHz up to 100.1 to 160 MHz.

In this mode with the converter, you don't have to worry about the hundred digit. The circuit takes a 100 MHz input from a crystal.

I assumed this would be fundamental mode. Maybe it can be overtone mode.

Tnx de KJ4UO

692. Re: looking to start

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 14:54:46 UTC
From: MS Bob <msbob@hotmail.com-edy>
Message-ID: <00behuo1avughkkf3vj1skr1jbukiqs201@4ax.com>
Source record: 43055

On Mon, 24 Jun 2002 01:22:07 +0100, Glenn <tvrthegreat@aol.com> wrote:

>Hi all, i was reading a few ham pages and was wondering the cheapest way
>to start?????
>
>QRP sounds good... does this receiv voice messages??

Glenn,

Since you didn't meant a callsign or license class, I wonder if your first step is to get licensed. In the UK you might like to get a new Foundation license to get you on the air (with commercial equipment or approved kits) and then you can work towards a Full A license. The getting on the air helps you get active and gain practicall on the air experience, which I find it one of the best ways to learn.

Contact a local amateur radio club <http://www.rsgb.org.uk/clubs/clubs2.htm> or the RSGB <http://www.rsgb.org.uk/getlicensed/getlicensed2.htm> for more details about licensing in the UK.

QRP is certainly a more economical way of getting started on HF. Not so many people build/buy QRP style transceivers for VHF (e.g. 2m, 70cms) preferring typically to buy a used radio. Find a local club, and the experienced hams will be able to give you more specific advice, and might even point you to a decent used radio at a good price, after you get/are licenced.

When I started, I got equipped for about 200 quid. I was able to buy used equipment that served me well enough to get started, and since then I've spent more than a few more quid since. :-)

There are some SSB HF capable QRP rigs, but they are more complex than the bare bones CW HF rigs of course to produce and receive SSB.

There are some kits available such as the Elecraft K2, Small Wonder Labs White Mountain, Epiphyte-3, or the lovely factory built Yaesu FT-817.

693. Re: 100 MHz crystal

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 15:00:00 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <QtGR8.56424$EP.5483@sccrnsc03>
Source record: 43056

> In this mode with the converter, you don't have to worry about the hundred
> digit. The circuit takes a 100 MHz input from a crystal.
>
> I assumed this would be fundamental mode. Maybe it can be overtone mode.
>
> Tnx de KJ4UO

Any old 100 MHz clock oscillator will do that job. See Jameco catalog or if you'd like, I have a few and could send you one. The postage is about the same price as the clock.

W4ZCB

694. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 16:43:35 UTC
From: Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <af7i7ndbp1@woodrow.ucdavis.edu>
Source record: 43057
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

: In rec.radio.swap Uncle Peter <radioconnectionNO@cox.netspam> wrote:
: Where did I say TETRODE??? I said there are better CERAMIC tubes.
: A specific example would be a 3CX800 or 3CX1500, either will
: beat the 4XC250 3rd order IMD specs by several dB. (-36 and -38 dB
: respectively.)

Your trying to go off topic... stick with the original subject of using
4cx250b.

: Where did I say the 4CX250 didn't meet FCC specs for IMD?

Make this up as you go along Peetie'..?

: I'd be interested in a reference to the FCC regulations specifing
: transmitter IMD perfermence requirements that you referenced. If they
: exist, then there are a lot of vintage sweep tube amps
: still in use that are far worse than the 4CX250 in terms of poor IMD
: performance.

Both types of tubes will easily meet FCC requirements in properly designed
circuits. Anything with a FCC ID number on it should have met the defined
requirements set at the time of production...

: Sure, 4CX250s may be cheap, but the problems and added costs involved
: with the bias supplies, screen-regulation and protection circuits, and
: even finding good quality shielded-screen bypass sockets, sure make a good
: case for using more modern components. My choice would be a 4CX350--if
: I was constrained to whatever ceramic tetrode was most handy and in
: quantity in my tube bins.

One of the original people on the thread had a free batch of 4cx250b type
tubes. It is not a problem to constuct simple supplies to meet the tubes
operational requirements. The 4cx350 is similar to the 4cx250b, just a
larger Anode.

Now you wander all over the place without supplying any supporting
information that you've measured, which would back your original IMD
statement. We were talking about converting an original sweep tube layout
to use some NOS 4cx250b tubes when you piped in with your IMD blanket
statement crap, which reads like you've spent five minutes in some vintage
handbook with dated information.

: For reference:
: http://www.svetlana.com/docs/TechBulletins/technoteNo42.html
: Pete

A lot of the Svetlana tech bulletins have mistakes and flaws. One such example of a major short comming is mentioned in my Dentron GLA 1000 text http://sonic.ucdavis.edu

How about some data you've measured Peetie' stop quoting books and tech articles.

We'll be waiting
skipp

695. new-basement construction grounding suggestions wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 17:06:33 UTC
From: mcalhoun@ksu.edu
Message-ID: <af7jip$8jm@unix1.cc.ksu.edu>
Source record: 43058

In a couple of months, a contractor is going to move my house into the front yard, replace the old/cracked foundation and partial basement with a nice new full basement, and then move the house back into place.

My ham "shack" will be in one corner of the new basement. I shouldn't have trouble getting wires/cables through the new concrete walls, for we've already agreed that, instead of patching the four holes through which the house-lifting beams will go, he'll frame and cover them with wood so I can use them later for wires and cables. There'll also be three "egress window" openings in the concrete, and I've specified that he should leave a few-inch section of wood next to each window for later drilling through.

I'M LOOKING FOR SUGGESTIONS ON HOW TO PROVIDE A GOOD EARTH GROUND FOR MY SHACK. When I told my contractor that--just before he backfilled around the outer walls--I wanted to drive several ground rods here 'n there outside the footings and run heavy wire up the walls to the above-mentioned openings, he volunteered that he could even leave "sleeves" in the basement floorslab itself through which I could drive ground rods. (In other words, he's quite cooperative!)

So how many ground rods should I drive in, and how long (the bottom of the excavation will be about 7 feet below grade), and where, and should I connect them all together, and with what, and should they be spaced all around the house or mostly near the hamshack. Or, instead of driving 8-foot ground rods, maybe I should bury some copper "sheets" (like roof valley flashing?) in the soil at the outer edge of the digging? (Or will that relatively-thin stuff corrode too quickly to be of any use?)

Or ....????

Incidentally, I've been told this area is underlain by a clayey-sand for some 50 feet or so downward beneath a foot or two of good topsoil before a limestone ledge is reached. We are also about 20 feet above what becomes a river bottom in a 100-year flood.

Even though we are in Kansas, I'm NOT expecting total lightning protection. I also don't want to spend more than a few hundred dollars on this aspect of my hobby (the basement project, itself, is going to be expensive enuf!) I'm just looking for good ideas.

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

696. Re: Help for a friend with an ICOM IC-751 Transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 19:57:50 UTC
From: Skweezieweezie <noway@thistime.now>
Message-ID: <2RKR8.18889$r5.7713459@news1.epix.net>
Source record: 43059
Cross-posted to: alt.ham-radio.packet,free.uk.amateur-radio,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,uk.radio.amateur

http://www.mods.dk/

Check out the ICOM section. There are plans to build you own programmer
here.
There are also some binaries here. I don't know if they have the 751, but
the R71 is here.

--

skweezieweezie

` X o'
-----ooo-0-ooo-----
~

697. Re: Help for a friend with an ICOM IC-751 Transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 20:55:28 UTC
From: Rex <notreally@hotmail.invalid>
Message-ID: <af810f$d29$1@bob.news.rcn.net>
Source record: 43060
Cross-posted to: alt.ham-radio.packet,free.uk.amateur-radio,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,uk.radio.amateur

On Mon, 24 Jun 2002 07:33:15 -0400, "radiofun" <radiofun@charter.net> wrote:

>You should find it here http://www.icomamerica.com/support/index2.html
>

I never found a RAM image there, and looking again today I still haven't.
If it is there somewhere, the exact location would be appreciated.
They do have a backup battery replacement procedure.

>
>
>"John Boyle" <john.boyle@erols.com> wrote in message
>news:3D16AC3A.94AC4D7B@erols.com...
>> I need the hex code for that radio.
>> I believe the board has a total of 1024 bytes of memory.

It actually used a NEC uPD444 which is 1024 x 4, so 512 bytes.

>> I think the first 256 bytes is for the operating system and
>> the remainder is for user memory storage. I need the first
>> 256 bytes....

A couple years back I replaced the backup battery in my 751A, so
my radio is still alive. At the time I saw a couple replacement
boards that were available but never saw the memory image posted.

With a search today, I found this site.
http://www.geocities.com/emailsrikanth/ham/icomram/RAM.html

It looks like this has the information you are looking for.
Specifically, the file 745_751.zip.

Now I am prepared for a future radio disaster too.

-Rex, KK6MK
[rexa -TheAtSign- Next4dnai -period- (comEnding)]

698. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 22:09:46 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <KMMR8.88430$Hn4.3114673@news1.east.cox.net>
Source record: 43061
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

Well, Skippy, I posted links and some figures based on manufacturer's
data from their websites and from their databooks. I also stand by my
posts, which you continually misquote. Read what I posted and try to
comprehend. You're obviously trolling, since you have offered absolutely
nothing which refutes what I originally said "they are better **ceramic**
tubes than 4CX250s [for IMD performance] for amplifier use." You asked
for figures and data, other than from "obsolete radio amateur handbooks",
and then you continue to argue that the data taken from the manufacturers'
own
websites is flawed, based on your opinions.

I suggest that YOU trying to provide some concrete facts, based on concrete
technical that has been published. And sorry, not all external anode
tetrodes
have the same IMD performance despite the "size of their anodes". I'm
still waiting for you to quote the FCC regulations that specify transmitter
IMD
performance, which I suposedly alluded to.

73

Petey k1zjh

"
> Make this up as you go along Peetie'..?
>
> : I'd be interested in a reference to the FCC regulations specifing
> : transmitter IMD perfermence requirements that you referenced. If they
> : exist, then there are a lot of vintage sweep tube amps
> : still in use that are far worse than the 4CX250 in terms of poor IMD
> : performance.
>
> Both types of tubes will easily meet FCC requirements in properly designed
> circuits. Anything with a FCC ID number on it should have met the defined
> requirements set at the time of production...
>
> : Sure, 4CX250s may be cheap, but the problems and added costs involved
> : with the bias supplies, screen-regulation and protection circuits, and
> : even finding good quality shielded-screen bypass sockets, sure make a
good
> : case for using more modern components. My choice would be a 4CX350--if
> : I was constrained to whatever ceramic tetrode was most handy and in
> : quantity in my tube bins.
>

> One of the original people on the thread had a free batch of 4cx250b type
> tubes. It is not a problem to constuct simple supplies to meet the tubes
> operational requirements. The 4cx350 is similar to the 4cx250b, just a
> larger Anode.
>
> Now you wander all over the place without supplying any supporting
> information that you've measured, which would back your original IMD
> statement. We were talking about converting an original sweep tube layout
> to use some NOS 4cx250b tubes when you piped in with your IMD blanket
> statement crap, which reads like you've spent five minutes in some vintage
> handbook with dated information.
>
> : For reference:
> : http://www.svetlana.com/docs/TechBulletins/technoteNo42.html
> : Pete
>
> A lot of the Svetlana tech bulletins have mistakes and flaws. One such
> example of a major short comming is mentioned in my Dentron GLA 1000 text
> http://sonic.ucdavis.edu
>
> How about some data you've measured Peetie' stop quoting books and tech
> articles.
>
> We'll be waiting
> skipp

699. Re: new-basement construction grounding suggestions wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 22:10:19 UTC
From: Sylvan Butler <Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnahf66b.k6v.Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 43064

On 24 Jun 2002 12:06:33 -0500, Myron A Calhoun <mcalhoun@ksu.edu> wrote:
> around the outer walls--I wanted to drive several ground rods here 'n
> there outside the footings and run heavy wire up the walls to the above-
> mentioned openings, he volunteered that he could even leave "sleeves" in
> the basement floorslab itself through which I could drive ground rods.

I wouldn't do that.

> So how many ground rods should I drive in, and how long (the bottom of
> the excavation will be about 7 feet below grade), and where, and should
> I connect them all together, and with what, and should they be spaced
> all around the house or mostly near the hamshack. Or, instead of driving
> 8-foot ground rods, maybe I should bury some copper "sheets" (like roof
> valley flashing?) in the soil at the outer edge of the digging? (Or will
> that relatively-thin stuff corrode too quickly to be of any use?)
>
> Or ....????

No rods. See "Ufer" ground on google.

Essentially you want to connect all the rebar in the floor and walls
(preferably weld, but double-tie and extra tight is not too bad) and
leave a rebar poking out long someplace to connect to.

Then, to get even more extreme, create a "ground ring" around the
building. I'd do it outside, not thru the floor. Space it away
from the foundation, I'm not sure how far. This ring would be
composed of rods driven at every 20feet or so all around the
perimeter of the foundation. All rods should be connected together
via #4 or #2 solid copper. Use "bury approved" clamps and put the
entire thing down below grade.

Bond the Ufer and the ring at one spot with #4. Tie to that spot as
your electrical system ground and everything else that needs
grounded. (I'd prefer to start the #4 for the ring at that spot,
and when you get back to that spot continue to the rebar then to the
electrical panel. One continuous length of #4 is better than a lot
of connections.)

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. ##### change ^ to @ ##### |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Fight terrorism, arm the population!

700. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 22:26:53 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <N0NR8.88718$Hn4.3120585@news1.east.cox.net>
Source record: 43062
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

"Skipp" <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
news:af7i7ndbp1@woodrow.ucdavis.edu...
> : In rec.radio.swap Uncle Peter <radioconnectionNO@cox.netspam> wrote:
> >
> One of the original people on the thread had a free batch of 4cx250b type
> tubes. It is not a problem to constuct simple supplies to meet the tubes
> operational requirements. The 4cx350 is similar to the 4cx250b, just a
> larger Anode.

SNIP

> Now you wander all over the place without supplying any supporting
> information that you've measured, which would back your original IMD
> statement.

I supplied data for several ceramic tubes. You have a fixation on tetrode
4CX250s. Read my original post.

>We were talking about converting an original sweep tube layout
> to use some NOS 4cx250b tubes when you piped in with your IMD blanket
> statement crap, which reads like you've spent five minutes in some vintage
> handbook with dated information.

Yes, of course your right. Any sweep tube amplifier is a natural for
conversion
to external anode tetrode amplifier tubes. Small matter of pressurizing the
chassis
and meeting the plate, bias and screen voltage requirements. Skipp can
make a
4CX250 amp with as good 3rd and 5th order IMD performance as any of the
3CXxxx tubes, 'cause it says so on his webpage.

> > A lot of the Svetlana tech bulletins have mistakes and flaws. One such
> example of a major short comming is mentioned in my Dentron GLA 1000 text
> http://sonic.ucdavis.edu
>

You mean "coming"?

Now, that's good. Quote your own webpages as being the technical bible.

> How about some data you've measured Peetie' stop quoting books and tech
> articles.
>

Supplied that, but you claim published data from the manufacturers is
flawed.
Where is your DATA, and specify what sort of test equipement was used, and
by what standards the IMD levels were referenced to? (i.e. Collins, ARRL)
You can defend your data, this is my last post to the troll.
>
> skippy

701. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 22:35:27 UTC
From: Pedigree <haha@myhouse.com>
Message-ID: <P8NR8.375119$%y.28508895@bin4.nnrp.aus1.giganews.com>
Source record: 43063
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

Damn Skippy, Unc Pete is showing you why hams are the elite and Cbers are dogmeat.

" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message news:KMMR8.88430$Hn4.3114673@news1.east.cox.net...
> Well, Skippy, I posted links and some figures based on manufacturer's
> data from their websites and from their databooks. I also stand by my
> posts, which you continually misquote. Read what I posted and try to
> comprehend. You're obviously trolling, since you have offered absolutely
> nothing which refutes what I originally said "they are better **ceramic**
> tubes than 4CX250s [for IMD performance] for amplifier use." You asked
> for figures and data, other than from "obsolete radio amateur handbooks",
> and then you continue to argue that the data taken from the manufacturers'
> own
> websites is flawed, based on your opinions.
>
> I suggest that YOU trying to provide some concrete facts, based on concrete
> technical that has been published. And sorry, not all external anode
> tetrodes
> have the same IMD performance despite the "size of their anodes". I'm
> still waiting for you to quote the FCC regulations that specify transmitter
> IMD
> performance, which I suposedly alluded to.
>
> 73
>
> Petey k1zjh
>

702. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-24 23:24:28 UTC
From: 2w8ji@contesting.com
Message-ID: <3d17a5e0.550939829@news.akorn.net>
Source record: 43065
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

On Mon, 24 Jun 2002 16:43:35 +0000 (UTC), Skipp
<skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote:

>: I'd be interested in a reference to the FCC regulations specifing
>: transmitter IMD perfermence requirements that you referenced. If they
>: exist, then there are a lot of vintage sweep tube amps
>: still in use that are far worse than the 4CX250 in terms of poor IMD
>: performance.
>
>Both types of tubes will easily meet FCC requirements in properly designed
>circuits. Anything with a FCC ID number on it should have met the defined
>requirements set at the time of production...

The FCC has no test requirements for IMD, or standards, in amateur
service. they do not ask for that data in type-acceptance, and care
less about it at that end.

The only requirement is on the USER to be sure his station meets "good
engineering practices" signal quality. You are not allowed to have
any modulation products extending outside the authorized frequency
limits for your class of license of for that mode, and you are not
allowed to cause interference on adjacent channels.

Factually, nearly all radios being sold today do NOT meet FCC
standards if we consider "good engineering practices". For example,
the TS2000 is a pathetic -30 to -25 dB or so below PEP for third order
on 160-meters. Other radiaos are similar, look at reviews. Remember
also the ARRL uses dB below PEP, and NOT the industry standard dB
below one tone. The published data by them is six dB better than the
standards used by commercial people.

An old Collins KWM-2 I have is almost 30dB BETTER for IM3 than a
modern TS-2000.

With all that in mind, 4CX250's are generally better than some modern
rigs and worse than others when properly run, with well-regulated
voltages on the grids. Without regulated voltages, they are trash.

>One of the original people on the thread had a free batch of 4cx250b type
>tubes. It is not a problem to constuct simple supplies to meet the tubes
>operational requirements. The 4cx350 is similar to the 4cx250b, just a
>larger Anode.

But a good screen supply is required, and protection and metering
circuitry for the screen is an absolute requirement.

>Now you wander all over the place without supplying any supporting
>information that you've measured, which would back your original IMD
>statement. We were talking about converting an original sweep tube layout
>to use some NOS 4cx250b tubes when you piped in with your IMD blanket
>statement crap, which reads like you've spent five minutes in some vintage
>handbook with dated information.
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>: For reference:
>: http://www.svetlana.com/docs/TechBulletins/technoteNo42.html
>: Pete
>
>A lot of the Svetlana tech bulletins have mistakes and flaws. One such
>example of a major short comming is mentioned in my Dentron GLA 1000 text
>http://sonic.ucdavis.edu

Amen. Sevetlana's main goal was selling tetrodes even if it meant
stretching the truth with creative marketing.

If you need an example of this, look at measured IM performance of
PA's using their tetrodes in well-designed PA's like ten-Tec and ETO.

Despite Svetlana's jabbering about how tetrodes don't need good screen
regulation and are clean clean clean, they fail to meet those claims
when compared to simple cheap triode PA's.

NEVER depend on marketing oriented literature for reliable technical
facts.

73,

Tom

703. Re: new-basement construction grounding suggestions wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-25 00:36:03 UTC
From: rcnixon@mindspring.com
Message-ID: <3d17b974.5459455@news.mindspring.com>
Source record: 43066

Sylvan Butler <Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid>
wrote:

>On 24 Jun 2002 12:06:33 -0500, Myron A Calhoun <mcalhoun@ksu.edu> wrote:
>> around the outer walls--I wanted to drive several ground rods here 'n
>> there outside the footings and run heavy wire up the walls to the above-
>> mentioned openings, he volunteered that he could even leave "sleeves" in
>> the basement floorslab itself through which I could drive ground rods.
>
>I wouldn't do that.
>
>> So how many ground rods should I drive in, and how long (the bottom of
>> the excavation will be about 7 feet below grade), and where, and should
>> I connect them all together, and with what, and should they be spaced
>> all around the house or mostly near the hamshack. Or, instead of driving
>> 8-foot ground rods, maybe I should bury some copper "sheets" (like roof
>> valley flashing?) in the soil at the outer edge of the digging? (Or will
>> that relatively-thin stuff corrode too quickly to be of any use?)
>>
>> Or ....????
>
>No rods. See "Ufer" ground on google.
>
>Essentially you want to connect all the rebar in the floor and walls
>(preferably weld, but double-tie and extra tight is not too bad) and
>leave a rebar poking out long someplace to connect to.
>
>Then, to get even more extreme, create a "ground ring" around the
>building. I'd do it outside, not thru the floor. Space it away
>from the foundation, I'm not sure how far. This ring would be
>composed of rods driven at every 20feet or so all around the
>perimeter of the foundation. All rods should be connected together
>via #4 or #2 solid copper. Use "bury approved" clamps and put the
>entire thing down below grade.
>
>Bond the Ufer and the ring at one spot with #4. Tie to that spot as
>your electrical system ground and everything else that needs
>grounded. (I'd prefer to start the #4 for the ring at that spot,
>and when you get back to that spot continue to the rebar then to the
>electrical panel. One continuous length of #4 is better than a lot
>of connections.)
>
>sdb
I would recommend the use of copper tape instead of wire. As we know,

AC travels on the surface of conductors. Tape provides more surface area. In fact, a 3" tape provides the same surface area as a 1" diameter wire (approximately> I know abour pi). Also, bond all ground systems together with mechanical (or eutectic welds, if you can afford it!).

--
Russ
"Two-fifteen, no ambulance needed!" (G. J. Golden, ECPD)
Subtract all nines to reply

704. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-25 00:48:47 UTC
From: aaronhvoobner@yahoo.com
Message-ID: <5c35b3ab.0206241648.738377fe@posting.google.com>
Source record: 43067
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
news:<af7i7ndbp1@woodrow.ucdavis.edu>...
> : In rec.radio.swap Uncle Peter <radioconnectionNO@cox.netspam> wrote:
> : Where did I say TETRODE??? I said there are better CERAMIC tubes.
> : A specific example would be a 3CX800 or 3CX1500, either will
> : beat the 4XC250 3rd order IMD specs by several dB. (-36 and -38 dB
> : respectively.)
>
> Your trying to go off topic... stick with the original subject of using
> 4cx250b.
>
> : Where did I say the 4CX250 didn't meet FCC specs for IMD?
>
> Make this up as you go along Peetie'..?
>
> : I'd be interested in a reference to the FCC regulations specifing
> : transmitter IMD perfermence requirements that you referenced. If they
> : exist, then there are a lot of vintage sweep tube amps
> : still in use that are far worse than the 4CX250 in terms of poor IMD
> : performance.
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> Both types of tubes will easily meet FCC requirements in properly designed
> circuits. Anything with a FCC ID number on it should have met the defined
> requirements set at the time of production...
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> : Sure, 4CX250s may be cheap, but the problems and added costs involved
> : with the bias supplies, screen-regulation and protection circuits, and
> : even finding good quality shielded-screen bypass sockets, sure make a good
> : case for using more modern components. My choice would be a 4CX350--if
> : I was constrained to whatever ceramic tetrode was most handy and in
> : quantity in my tube bins.
>
> One of the original people on the thread had a free batch of 4cx250b type
> tubes. It is not a problem to constuct simple supplies to meet the tubes
> operational requirements. The 4cx350 is similar to the 4cx250b, just a
> larger Anode.
>
> Now you wander all over the place without supplying any supporting
> information that you've measured, which would back your original IMD
> statement. We were talking about converting an original sweep tube layout
> to use some NOS 4cx250b tubes when you piped in with your IMD blanket
> statement crap, which reads like you've spent five minutes in some vintage
> handbook with dated information.

>
> : For reference:
> : http://www.svetlana.com/docs/TechBulletins/technoteNo42.html
> : Pete
>
> A lot of the Svetlana tech bulletins have mistakes and flaws. One such
> example of a major short comming is mentioned in my Dentron GLA 1000 text
> http://sonic.ucdavis.edu
>
> How about some data you've measured Peetie' stop quoting books and tech
> articles.
>
> We'll be waiting
> skipp

Again...what do 4CX250s have to do with CB RADIO?

-A

705. Help W/RDS-RBDS & Computer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-25 02:22:48 UTC
From: David Goldstein <d.goldstein@worldnet.att.net>
Message-ID: <YtQR8.59542$UT.4076956@bgtnsc05-news.ops.worldnet.att.net>
Source record: 43068
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,es.rec.radio.misc

I have an ADS RDX-1187 Cadet radio ISA card with the Phillips SAA6579T chip. I would like to interface between the chip and my computer. Does anyone know how to do this with this ISA radio card? Any help or instructions are much appreciated!

706. Re: 4-pole 3.5mm jack plugs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-25 05:29:50 UTC
From: "r.crowley" <rcrowley7@xprt.net>
Message-ID: <uhfvtv7fgv9h96@corp.supernews.com>
Source record: 43069

www.mouser.com
part # 171-7435
US$ 1.53/each

rc

707. Re: Antenna for 10 meters.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-25 12:05:03 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2506020805200001@c-66-176-144-254.se.client2.attbi.com>
Source record: 43070

In article <3D156F2B.1CD06B14@ay.com.au>, Alan Yates <alany@ay.com.au> wrote:

> "John S. MacKay" wrote:
> >
> > What ever happened to the original enquirer who wanted to make a simple
> > antenna ? VE7AFN/M.
>
> Probably got sick of our petty bickering and went to r.r.a.a.

Judging from some of the other threads I've been reading here, you're probably right. Why are so many people so uptight about trivia? Ham radio should be fun or, at least, it used to be.

The 10 Mtr antenna is easy as far as I'm concerned. Go buy an 8 foot whip from Radio Shaft and cut it 'til it's matched. Works okay, but won't win awards for elegance. Probable efficiency is 0 dBi. The residual VSWR (guessing < 2.0) won't hurt even a rice box. ;-)

Steve WB4CZR

708. HP8555 parts help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-25 16:08:48 UTC
From: Mark Mansfield <mmans@aeneas.net>
Message-ID: <As1S8.716$ct3.36355@news.uswest.net>
Source record: 43071

I have a couple of attenuators from a HP8555 RF Section and I'm needing some help with hooking them up. They have some feed-thru caps on top of the units and I'm assuming those select how much atten. the unit presents. Does anyone have schematics that could be emailed? I'm only wanting to know what the input voltage is and also the pinouts of it the attenuators. I also have a A4 1st Converter that I'd like to know anything available about it.
Thanks!!!
Mark

709. Re: new-basement construction grounding suggestions wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-25 16:59:46 UTC
From: Sylvan Butler <Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnahh8c2.nee.Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 43072

On Tue, 25 Jun 2002 00:36:03 GMT, Russell C. Nixon <rcnixon@mindspring.com> wrote:
> I would recommend the use of copper tape instead of wire. As we know,

I'd be concerned with copper tape buried, unless it was fairly thick
(like a #4 or #6 wire). Also, the electrical code in your area may
or may not allow tape as the sole bond for your electrical system.
Would be good as the bond for the radio equipment to the ground.

> diameter wire (approximately> I know abour pi). Also, bond all ground
> systems together with mechanical (or eutectic welds, if you can afford

Definitely. Difference in potential between different grounds is a
good way to destroy your equipment and perhaps worse.

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. ##### change ^ to @ ##### |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Fight terrorism, arm the population!

710. Re: new-basement construction grounding suggestions wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-25 18:37:21 UTC
From: rcnixon@mindspring.com
Message-ID: <3d18b771.23655007@news.mindspring.com>
Source record: 43073

Sylvan Butler <Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid>
wrote:

>On Tue, 25 Jun 2002 00:36:03 GMT, Russell C. Nixon <rcnixon@mindspring.com> wrote:
>> I would recommend the use of copper tape instead of wire. As we know,
>
>I'd be concerned with copper tape buried, unless it was fairly thick
>(like a #4 or #6 wire). Also, the electrical code in your area may
>or may not allow tape as the sole bond for your electrical system.
>Would be good as the bond for the radio equipment to the ground.
>

I've seen insulated wire, buried, to do bonding. The screenhouse and
my pool filter in Florida were bonded to the service entrance ground
with ~#6 insulated wire???!!! For buried, thinking about it, I see
why to use wire. As for code, I don't know but code can be exceeded,
can't it? Back up the wire with strap.

>> diameter wire (approximately> I know abour pi). Also, bond all ground
>> systems together with mechanical (or eutectic welds, if you can afford
>
>Definitely. Difference in potential between different grounds is a
>good way to destroy your equipment and perhaps worse.
>
>sdb
>
>--
> | Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
> | Watch out for my e-mail address. Thank UCE. #### change ^ to @ #### |
> They that can give up essential liberty to obtain a little temporary
> safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
> Fight terrorism, arm the population!

--
Russ
"Two-fifteen, no ambulance needed!" (G. J. Golden, ECPD)
Subtract all nines to reply

711. Re: new-basement construction grounding suggestions wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-25 19:21:50 UTC
From: mcalhoun@ksu.edu
Message-ID: <afafse$11f@unix1.cc.ksu.edu>
Source record: 43074

>>I would recommend the use of copper tape instead of wire....

>I'd be concerned with copper tape buried, unless it was fairly thick
>(like a #4 or #6 wire)....

What your concern is with burried copper tape? Is it because the
relatively-thin copper tape may experience lots of corrosion in
damp clay-ey soil?

I'm considering using old coax cable (I've already torn out many, many
feet of that stuff!); the insulation may protect the copper shield,
and the shield plus center connector are, combined, pretty big.

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

712. Attenuator Design Program

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-25 20:01:32 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <afai6sjlc5@venus.btinternet.com>
Source record: 43075

New program PADMATCH.exe

For given source and load resistances this program designs T, Pi and L resistive matching pads and attenuators. It has the same facilities as program MatchPad (which it replaces) but with an extra facility to insert preferred-value resistors from the various standard tolerance ranges. The design procedure is used in reverse to predict the in-circuit attenuation (dB).

First calculate the ideal resistor values of a network. Then replace them one-by-one with the nearest preferred values and the changed attenuation will be automatically calculated.

========================
Regards from Reg G4FGQ
Free Radio Modelling Software
Go to http://www.g4fgq.com
========================

713. Re: HP8555 parts help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-25 20:12:45 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D18CF57.4A2A@pop.removethistomailme.net>
Source record: 43076

Mark Mansfield wrote:
>
> I have a couple of attenuators from a HP8555 RF Section and I'm needing some
> help with hooking them up. They have some feed-thru caps on top of the
> units and I'm assuming those select how much atten. the unit presents.
> Does anyone have schematics that could be emailed? I'm only wanting to know
> what the input voltage is and also the pinouts of it the attenuators.
> I also have a A4 1st Converter that I'd like to know anything available
> about it.

Hi, Mark --

The 8555A attenuator sections are 10-20-40 dB. You apply 12 volts of
one polarity to enable a section, and reverse the polarity to disable
it.

That's from memory. It might be +/- 15V, and I don't remember if it
requires a sustaining voltage or not... I'll check the manual when I get
home. If so, then it expects a few volts (~5) to be kept applied to
each actuator to hold it in the selected position.

Easy enough to tell which section is which... just put it in front of a
receiver with a strong signal coming in the other side, and enable each
section in turn.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

714. Re: A very simple SSB receiver ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-25 20:34:35 UTC
From: Thierry Leconte <thierry.leconte@libertysurf.fr>
Message-ID: <afajvh$4i4$1@news2adm.admin.in.none.net>
Source record: 43077

"David B. Thomas" <dt@dt.prohosting.com> a crit dans le message news: uadpos6fm.fsf@dt.prohosting.com...

> I'm working on a SSB receiver right now, and my choice is to use
> direct conversion,
>
> Basically it looks like this:
>
>
> |---------|
> /--MIXER--GAIN--| stereo |
> ANT---FILTER---SPLIT-< | codec |-----AUDIO OUT
> \--MIXER--GAIN--| and |
> | DSP |
> |---------|
>

Hi
Perhaps you will be interested in my last year project :
http://thierry.leconte.chez.tiscali.fr/demod.html

It describes a digital AM,SSB and FM digital demodulator using
an old EVM50002 dsp card.
I use it to modify a FRG-7 receiver, but it could work with your more
sofisticated design directly...

Hope this helps

Thierry Leconte

715. Re: 4-pole 3.5mm jack plugs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-25 21:34:50 UTC
From: Colin Lundy <lundy@actrix.co.nz>
Message-ID: <3d18e1fe$1@news.actrix.gen.nz>
Source record: 43078

Greetings

Thanks for all the replies and help.

I ran some 4 pole 3.5mm plugs to earth at maplin.co.uk, 99p each. Part number QT65V

73s
Colin Lundy

"r.crowley" <rcrowley7@xprt.net> wrote in message news:uhfvtv7fgv9h96@corp.supernews.com...
> www.mouser.com
> part # 171-7435
> US$ 1.53/each
>
> rc
>
>

716. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-25 22:54:30 UTC
From: "Dennis W. Ostrowski" <dwostrowski@lucent.com>
Message-ID: <3D18F4A6.8026D20B@lucent.com>
Source record: 43079
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

> "Aaron H. Voobner" wrote:
>
>
> Again...what do 4CX250s have to do with CB RADIO?
>
> -A

Aaron,

I enjoy really reading these technical debates and have always had a fascination with amplifiers of any
type, from audio to LASER.

I just searched my newsgroup provider for the text string 'amplifier' and found no matches.

If there was a rec.radio.amplifier newsgroup I would prefer to be there.

This group seems to be the next most popular for those types of discussions.

If you look at this thread, the majority of the posts have been made by licensed operators who just may
have been drawn here to this newsgroup because their interests are similar to mine.

If a new newsgroup titled rec.radio.amplifier was created, and those folks interested in having amplifier
discussions went there instead of to rec.radio.cb; would it finally satisfy you to the point were you
would......
1) Just leave us alone on that other newsgroup?
2) Stay on rec.radio.cb and continue to act as the 'conscience' of the entire newsgroup?
3) Or would you join us on that amplifier newsgroup and make some on-topic posts that would contribute to
the overall intelligence being shared?

I could embrace any one of the three......

Regards,

Dennis O.

717. GOOD GUY ALERT W2IJL

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-26 00:14:41 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3D190771.10901@charter.net>
Source record: 43081
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

GOOD GUY ALERT W2IJL
I made a road trip from NC to Waverly NY over the weekend.
Meet Allen W2IJL. What a wonderful Ham! I went to pick up an amplifier,
He meet myself and David KA4VNG at the door, welcomed us into his
home, His lovely wife rustled us up something to eat after our 12 hour
drive.
Then he proceded to show us his treasures. When It was all said and done
we loaded my van full of all sorts of goodies. Yes if you have the
pleasure to meet Allen he is a man of his word. And one heck of an
amplifier builder. Boy was it a long 28 hours, but we sure had fun!!!

--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

718. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-26 00:16:50 UTC
From: aaronhvoobner@yahoo.com
Message-ID: <5c35b3ab.0206251616.6acb5f64@posting.google.com>
Source record: 43080
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

Dennis W. Ostrowski" dwostrowski@lucent.com wrote:

>Aaron,

>I enjoy really reading these technical debates and have always had a
>fascination with amplifiers of any type, from audio to LASER.
>
>I just searched my newsgroup provider for the text string 'amplifier'
and >found no matches.

That's funny, I found matches in...

rec.radio.amateur.equipment
rec.radio.swap
rec.radio.amateur.contesting
rec.radio.amateur.homebrew

Maybe there is something wrong with your browser. Also try e-Hamnet, QRZ.com and the contest reflector. Of course, these are all topics pertaining to LEGAL use of amplifiers. If you seek topics dealing with ILLEGAL operation of amplifiers, try these forums...

Uncle Jims Radio Page
BigRadios.com board
Keydowns.com board
Lowriders CB Board
Davemade board
Noname Amps Board

...etcetera.

>If there was a rec.radio.amplifier newsgroup I would
>prefer to be there.

Fine. But as I have demonstrated, you have plenty of more appropriate choices to share your knowledge of RF amplifiers in than a "CB radio" newsgroup.

>This group seems to be the next most popular for those types of
>discussions.

Check out the list I gave you (above). I think you'll find 100x more amplifier discussions going on in there rather than in here. If quantity and number of amp discussions was your goal, you'd be somewhere other than rrcb.

>If you look at this thread, the majority of the posts have been
>made by licensed operators who just may
>have been drawn here to this newsgroup because
>their interests are similar to mine.

I have no wish to regulate your posting or regulate discussion. I am merely commenting on the fact that a CB newsgroup is being used to discuss equipment that is illegal for use on CB radio.

> If a new newsgroup titled rec.radio.amplifier was created,
>and those folks interested in having amplifier
>discussions went there instead of to rec.radio.cb;
>would it finally satisfy you to the point were you
>would......
>
>1) Just leave us alone on that other newsgroup?
>2) Stay on rec.radio.cb and continue to act as the
>'conscience' of the entire newsgroup?
>3) Or would you join us on that amplifier newsgroup and
>make some on-topic posts that would contribute to the overall
>intelligence being shared?

Regarding #2, I am merely posting my opinions. Do you have a problem with that?

Regarding #3, You need to check out all those forums I gave you that exist to discuss illegal CB. I do not post there, nor do I have a wish to. I believe that answers your question.

Regarding #1, If you found or created an official Usenet newsgroup called "rec.radio.amplifiers" you would inevitably find yourself sharing discussions with licensed amateurs. I'm sure there would be friction when they got wind of keydowns, 20K CB amps, freebanding, and the like.

-Aaron-

719. Re: HP8555 parts help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-26 01:30:35 UTC
From: Mark Mansfield <mmans@aeneas.net>
Message-ID: <gH9S8.778$ct3.98108@news.uswest.net>
Source record: 43084

Thanks John!
I'll be looking for your reply.
Mark

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message
news:3D18CF57.4A2A@pop.removethistomailme.net...
> Mark Mansfield wrote:
> >
> > I have a couple of attenuators from a HP8555 RF Section and I'm needing
some
> > help with hooking them up. They have some feed-thru caps on top of the
> > units and I'm assuming those select how much atten. the unit presents.
> > Does anyone have schematics that could be emailed? I'm only wanting to
know
> > what the input voltage is and also the pinouts of it the attenuators.
> > I also have a A4 1st Converter that I'd like to know anything available
> > about it.
>
> Hi, Mark --
>
> The 8555A attenuator sections are 10-20-40 dB. You apply 12 volts of
> one polarity to enable a section, and reverse the polarity to disable
> it.
>
> That's from memory. It might be +/- 15V, and I don't remember if it
> requires a sustaining voltage or not... I'll check the manual when I get
> home. If so, then it expects a few volts (~5) to be kept applied to
> each actuator to hold it in the selected position.
>
> Easy enough to tell which section is which... just put it in front of a
> receiver with a strong signal coming in the other side, and enable each
> section in turn.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

720. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-26 01:50:09 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <l59S8.95580$Hn4.3325017@news1.east.cox.net>
Source record: 43082
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

Aaron

I apologize to you. I was in the Rec.Radio.Amateur.Homebrew forum,
and unaware that my replies to posts included several other newsgroups in
the header.

73

Peter

"Aaron H. Voobner" <aaronhvoobner@yahoo.com> wrote in message
news:5c35b3ab.0206251616.6acb5f64@posting.google.com...
> > Fine. But as I have demonstrated, you have plenty of more appropriate
> choices to share your knowledge of RF amplifiers in than a "CB radio"
> newsgroup.
>
> >
> -Aaron-

721. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-26 02:08:40 UTC
From: aaronhvoobner@yahoo.com
Message-ID: <5c35b3ab.0206251808.198e0da1@posting.google.com>
Source record: 43083
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

Uncle Peter" radioconnectionNO@cox.netSPAM wrote:
>
>Aaron
>
>I apologize to you. I was in the Rec.Radio.Amateur.Homebrew forum,
>and unaware that my replies to posts included several other newsgroups in
>the header.

No problem. Good luck with our rec.radio.cb troll "Skipp".
73
-Aaron-

722. Re: Antenna for 10 meters. Original inquirer of antenna question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-26 03:00:43 UTC
From: dankal@email.com
Message-ID: <32a72a54.0206251900.454ead6f@posting.google.com>
Source record: 43086

"John S. MacKay" <k35454@direct.ca> wrote in message
news:<uhamdeirikgu65@corp.supernews.com>...
> What ever happened to the original enquirer who wanted to make a simple
> antenna ? VE7AFN/M.
>
Here I am,
Many thanks to all the many responses and debates about the 10M
antenna.
I did not expect this much response to my question. Since I've posted
the question, I have still been using the magnet mount cb antenna that
has been
mounted on top of my mini van. It is a radio shack type wound by a
wire almost to the top and wrapped around plastic (helical?). It comes
tuned from the factory and can not be tuned. The reception is much
better than tranmission with results being a couple of contacts in the
15 - 20 mile range locally. (NO DX yet on the mobile) Correct me if
I'm wrong, (and I'm sure someone will!) it sounds like I can set up a
tunable cb helical like a firestick,and use an antenna tuner to obtain
the best match. But now, here is another debate. Will a simple
homebrewed tuner work? (a coil with a var capacitor?)
Anyways, I had a great time this weekend with field day while I was
doing some work around the house, I took some breaks and fired up the
htx-10 for some contacts. It was my first field day since I just
started, earning my Tech in April and General in May. Only made
contacts with stations east of the Mississippi as far north as
Ontario, and as far south as Brazil! all on 25 watts. I have a
homebrewed dipole at a 45* angle. Maybe I should make another one with
thicker wire. The one I use now is about 18awg. Does thickness matter?
Oh well, so much to learn and so little time to enjoy it!

Dan Kal KB3IBT

723. Re: new-basement construction grounding suggestions wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-26 03:01:24 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d1928fb.1646770@news.peakpeak.com>
Source record: 43085

n 24 Jun 2002 12:06:33 -0500, mcalhoun@ksu.edu (Myron A Calhoun)
wrote:

>So how many ground rods should I drive in, and how long (the bottom of
>the excavation will be about 7 feet below grade), and where, and should
>I connect them all together, and with what, and should they be spaced
>all around the house or mostly near the hamshack. Or, instead of driving
>8-foot ground rods, maybe I should bury some copper "sheets" (like roof
>valley flashing?) in the soil at the outer edge of the digging? (Or will
>that relatively-thin stuff corrode too quickly to be of any use?)
>
>Or ....????

Read up on Ufer grounds before pouring the new foundation! The
National Electrical Code calls these "concrete encased electrodes". If
you can, make it a loop all the way around the new foundation. Details
are available from Polyphaser:
http://www.polyphaser.com/datasheets/PTD1030.pdf.

Since your utilities will be disrupted while the house is being
relocated, this is the time to implement a "ground window" for every
conductor coming into the house, all properly bonded to your new Ufer
ground system.

Good luck!

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

724. Re: new-basement construction grounding suggestions wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-26 03:07:16 UTC
From: gaschafer@attbi.com
Message-ID: <3d18f736.27478376@netnews.attbi.com>
Source record: 43087

On 25 Jun 2002 14:21:50 -0500, mcalhoun@ksu.edu (Myron A Calhoun)
wrote:

>>>I would recommend the use of copper tape instead of wire....
>
>>I'd be concerned with copper tape buried, unless it was fairly thick
>>(like a #4 or #6 wire)....
>
>What your concern is with burried copper tape? Is it because the
>relatively-thin copper tape may experience lots of corrosion in
>damp clay-ey soil?
>
>I'm considering using old coax cable (I've already torn out many, many
>feet of that stuff!); the insulation may protect the copper shield,
>and the shield plus center connector are, combined, pretty big.
>
>--Myron.
>--

If you are burying it to get rid of it that's one thing. If you are
burying it for a ground you don't
want insulated wire and you don't want stranded or braided wire. Only
solid wire should be
used in the ground or out in the whether.

The electrical code allows solid bare or insulated green cover wire
for connecting grounds
together. They don't care if they are buried or not. Their purpose is
tying to a buried ground
rod.

73
Gary K4FMX

725. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-26 04:04:11 UTC
From: aaronhvoobner@yahoo.com
Message-ID: <5c35b3ab.0206252004.1b69ddfe@posting.google.com>
Source record: 43088
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

"Randy" rchapman8@neo.rr.com wrote:
>Wow. What a cop out. What kind of artist are you?
>Go to an audience, and
>play to one guy with headphones
>on? What's with that?
>
>-R

It's call free choice. I don't have to post a wav if I don't want to.
But maybe I'll email you one in the near future. Shall I have Sparky
send it from cet.com like the last time?

-A

726. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-26 04:18:07 UTC
From: sparky@cet.com
Message-ID: <3d193f5b.32030941@news.cet.com>
Source record: 43089
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

In <5c35b3ab.0206252004.1b69ddfe@posting.google.com>,
aaronhvoobner@yahoo.com (Aaron H. Voobner) wrote:

>"Randy" rchapman8@neo.rr.com wrote:
>>Wow. What a cop out. What kind of artist are you?
>>Go to an audience, and
>>play to one guy with headphones
>>on? What's with that?
>>
>>-R
>
>It's call free choice. I don't have to post a wav if I don't want to.
>But maybe I'll email you one in the near future. Shall I have Sparky
>send it from cet.com like the last time?
>
>-A

Don't bother, I'm starting to use my killfile more and more, and Randy
is one of the latest additions. History shows that whenever there is
an intelligent and worthwhile discussion to be had in this newsgroup,
Randy won't be involved except to troll. Keep him drooling about your
identity if you want, but he's not worth any more of my attention.

727. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-26 05:36:51 UTC
From: Randy <rchapman8@houston.rr.com>
Message-ID: <TpcS8.10442$PJ.495709@typhoon.austin.rr.com>
Source record: 43090
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

"Sparky" <sparky@cet.com> wrote in message
news:3d193f5b.32030941@news.cet.com...
> In <5c35b3ab.0206252004.1b69ddfe@posting.google.com>,
> aaronhvoobner@yahoo.com (Aaron H. Voobner) wrote:
>
> >"Randy" rchapman8@neo.rr.com wrote:
> >>Wow. What a cop out. What kind of artist are you?
> >>Go to an audience, and
> >>play to one guy with headphones
> >>on? What's with that?
> >>
> >>-R
> >
> >It's call free choice. I don't have to post a wav if I don't want to.
> >But maybe I'll email you one in the near future. Shall I have Sparky
> >send it from cet.com like the last time?
> >
> >-A
>
> Don't bother, I'm starting to use my killfile more and more, and Randy
> is one of the latest additions. History shows that whenever there is
> an intelligent and worthwhile discussion to be had in this newsgroup,
> Randy won't be involved except to troll. Keep him drooling about your
> identity if you want, but he's not worth any more of my attention.
>

You do promise, right?

728. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-26 05:51:16 UTC
From: Randy <rchapman8@houston.rr.com>
Message-ID: <oDcS8.10509$PJ.496856@typhoon.austin.rr.com>
Source record: 43091
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

"Randy" <rchapman8@houston.rr.com> wrote in message
news:TpcS8.10442$PJ.495709@typhoon.austin.rr.com...
>
> "Sparky" <sparky@cet.com> wrote in message
> news:3d193f5b.32030941@news.cet.com...
> > In <5c35b3ab.0206252004.1b69ddfe@posting.google.com>,
> > aaronhvoobner@yahoo.com (Aaron H. Voobner) wrote:
> >
> > >"Randy" rchapman8@neo.rr.com wrote:
> > >>Wow. What a cop out. What kind of artist are you?
> > >>Go to an audience, and
> > >>play to one guy with headphones
> > >>on? What's with that?
> > >>
> > >>-R
> > >
> > >It's call free choice. I don't have to post a wav if I don't want to.
> > >But maybe I'll email you one in the near future. Shall I have Sparky
> > >send it from cet.com like the last time?
> > >
> > >-A
> >
> > Don't bother, I'm starting to use my killfile more and more, and Randy
> > is one of the latest additions. History shows that whenever there is
> > an intelligent and worthwhile

snip

The last thing sparky knows that was intelligent and worthwhile was the
condom his daddy used the time before he was conceived.

729. Re: Antenna for 10 meters. Original inquirer of antenna question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-26 07:49:15 UTC
From: KB7M <kb7m@arrl.net>
Message-ID: <%keS8.1089$ct3.132443@news.uswest.net>
Source record: 43092

"Dan Kalczuk" <dankal@email.com> wrote in message
news:32a72a54.0206251900.454ead6f@posting.google.com...
> "John S. MacKay" <k35454@direct.ca> wrote in message
news:<uhamdeirikgu65@corp.supernews.com>...
> > What ever happened to the original enquirer who wanted to make a simple
> > antenna ? VE7AFN/M.
> >
> Here I am,
> Many thanks to all the many responses and debates about the 10M
> antenna.
> I did not expect this much response to my question. Since I've posted
> the question, I have still been using the magnet mount cb antenna that
> has been
> mounted on top of my mini van. It is a radio shack type wound by a
> wire almost to the top and wrapped around plastic (helical?). It comes
> tuned from the factory and can not be tuned.
...
> Dan Kal KB3IBT

Many of these "wire wound" antennas can be tuned. They are just a
fiberglass (or plastic) pole wrapped with wire and covered with heat shrink
tubing. To tune you pull off the cap at the end to expose the wire, and
peel out a little at a time and snip. Obviously with this method you can
only go up in frequency, but going from 11m to 10m that is not a problem.

73 - KB7M

730. Advice on VFO packaging

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-26 11:31:49 UTC
From: "G. Milligan" <g.milligan@coventry.ac.uk>
Message-ID: <3D19A625.94030DE4@coventry.ac.uk>
Source record: 43093

I am currently building a HF Colpitts VFO based upon the article "A High Stabililty VFO" that appeared in Practical Wireless Oct 1987.

I am looking for advice on how to mount the PCB board and coil. Should I be looking at rubber mounts, epoxy resin or candle wax to secure the parts against physical vibration, how would these different compounds affect the dissipation of heat and thus frequency drift?

Assuming I place the entire vfo circuit in its own metal case, how does one compensate for additional inductance placed upon the coil due to the proxmity of the metal case? Is it just a case of trial and error, whiping the lid on and off and adjusting the LC?

I plan to use a 6:1 reduction drive, although I have two of these units and had originally planned to cascade them, would a 36:1 reduction be a bit overkill?

The vfo will be mainly used for CW and FSK modes, hence some degree of stability and fine tuning is required.

Any suggestions and comments would be welcome.

Thanks.

Greg Milligan
G1CPU

EMail: g.milligan@coventry.ac.uk

731. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-26 11:51:44 UTC
From: John O'Flaherty <wewelcomespam@blackhole.net>
Message-ID: <nkajhuspkqmqp7cu5iicddu7debvb4eg33@4ax.com>
Source record: 43094
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Thu, 20 Jun 2002 17:10:51 -0700, Murray Neece
<radioranch@cableone.net> wrote:

> .....I got a nice Browning .45 for my wife, best trade I ever made!!! Maybe
>you can trade too!!
>

That could mean you got a gun in trade for your wife, or you got a gun
for your wife to use, or you got a gun to use on your wife.

john

732. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-26 12:16:37 UTC
From: machfive55@yahoo.com
Message-ID: <773907de.0206260416.49891aa5@posting.google.com>
Source record: 43095
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

We give them our life and they give us hell...what a tradeoff.

"KC8SSG" <kc8ssg@qsl.net> wrote in message news:<VXAL8.62$13.1028@news>...
> I'm having a hard time getting my wife to get used to me buying radios and
> stuff. Any help or suggestions would be great!

733. Re: Advice on VFO packaging

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-26 14:29:32 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3d19cee4$0$13523@echo-01.iinet.net.au>
Source record: 43096

"G. Milligan" <g.milligan@coventry.ac.uk> wrote in message
news:3D19A625.94030DE4@coventry.ac.uk...
> I am currently building a HF Colpitts VFO based upon the article "A High
> Stabililty VFO" that appeared in Practical Wireless Oct 1987.
>
> I am looking for advice on how to mount the PCB board and coil. Should
> I be looking at rubber mounts, epoxy resin or candle wax to secure the
> parts against physical vibration, how would these different compounds
> affect the dissipation of heat and thus frequency drift?

The simplest way is to mount in a rigid sealed box eg diecast aluminium.
This increases thermal inertia also which reduces short term temp drift.

You could also stabilize the VFO with a PLL scheme
see http://www.iinet.net.au/~richardh/VK6BRO.htm

You will obviously need to look at voltage and load regulation also

>
> Assuming I place the entire vfo circuit in its own metal case, how does
> one compensate for additional inductance placed upon the coil due to the
> proxmity of the metal case? Is it just a case of trial and error,
> whiping the lid on and off and adjusting the LC?

use a trimmer accessible through a hole in the box with the lid on.

>
> I plan to use a 6:1 reduction drive, although I have two of these units
> and had originally planned to cascade them, would a 36:1 reduction be a
> bit overkill?
>
This depends on the frequency span - 10-25 KHz per revolution is probably
reasonable.
You could also do a bandspread using a small varactor across the VFO tank
with a pot for 5-10 KHz fine tuning
I have done this for a homebrew QRP HF SSB rig

Richard

> The vfo will be mainly used for CW and FSK modes, hence some degree of
> stability and fine tuning is required.
>
> Any suggestions and comments would be welcome.
>
> Thanks.
>
> Greg Milligan

> G1CPU
>
> EMail: g.milligan@coventry.ac.uk

734. Cross Needle Meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-26 17:46:04 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <tzOot+Zc3fG9Ewqh@fslife.co.uk>
Source record: 42997

Does anyone know of a manufacturer of these meters?

They are for several ATU projects.

Many thanks.
--
Philip de Cadenet G4ZOW / WLYC 1050
Transmitters 'R' Us
http://www.transmittersrus.com

735. Re: new-basement construction grounding suggestions wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-26 19:53:56 UTC
From: Sylvan Butler <Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnahk6uk.tn0.Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 42998

Grr! I had already answered this via e-mail. Please, in the future
when a note is posted and e-mailed, identify it as such!

My original response:

On 25 Jun 2002 14:21:50 -0500, Myron A Calhoun <mcalhoun@ksu.edu> wrote:
> What your concern is with burried copper tape? Is it because the
> relatively-thin copper tape may experience lots of corrosion in
> damp clay-ey soil?

Corrosion or other physical damage. All the copper tape I've seen
is thin and quite fragile compared to a #4 or #6 wire.

> I'm considering using old coax cable (I've already torn out many, many
> feet of that stuff!); the insulation may protect the copper shield,
> and the shield plus center connector are, combined, pretty big.

Might work. There is some argument on braid being high impedance to
spikes.

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. ##### change ^ to @ ##### |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Fight terrorism, arm the population!

736. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-26 21:48:14 UTC
From: "D. Stussy" <kd6lvw@bde-arc.ampr.org>
Message-ID: <Pine.LNX.4.44.0206262147420.4411-100000@exp.bde-arc.ampr.org>
Source record: 42999
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Wed, 26 Jun 2002, John O'Flaherty wrote:
>On Thu, 20 Jun 2002 17:10:51 -0700, Murray Neece
><radioranch@cableone.net> wrote:
>
>> .....I got a nice Browning .45 for my wife, best trade I ever made!!! Maybe
>>you can trade too!!
>>
>
>That could mean you got a gun in trade for your wife, or you got a gun
>for your wife to use, or you got a gun to use on your wife.

Or all three! :-) (That was probably the point)

737. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 00:29:56 UTC
From: 2w8ji@contesting.com
Message-ID: <3d1a5a43.728217948@news.akorn.net>
Source record: 43000
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Thu, 20 Jun 2002 18:22:26 +0100, "Tech" <newbury66@hotmail.com>
wrote:

>Why not buy her a brand new domestic appliance, that way she can't gripe,
>can she?

That reminds me.

I have several dozen three prong and four prong vibrators in a bunch
of new old stock tubes and parts I acquired from a local TV shop.

If anyone needs one, let me know.

738. FA: 80M & 40M xtals -good c.w. freqs.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 01:31:21 UTC
From: Tom N&#65533;JMY - AAR7FV <tfarl@IowaTelecom.net>
Message-ID: <afdptqnva1@ins22.netins.net>
Source record: 43001
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Thanks for looking. Here's the links:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1362041716

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1362041714

Tnx es vy 73,
Tom

739. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 03:27:29 UTC
From: Brenda Ann <brandad@kornet.net>
Message-ID: <afdvjs$id7$1@news1.kornet.net>
Source record: 43002
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Tom,

Hey.. you got four prong 6V vibrators? I could use at least one, maybe two,
depending on cost. Please get back to me with cost/availability.

Thanks.

Take care, and stay well.

PS I sent an e-mail, and it got bounced.. :(

"Tom W8JI" <2w8ji@contesting.com> wrote in message
news:3d1a5a43.728217948@news.akorn.net...
> On Thu, 20 Jun 2002 18:22:26 +0100, "Tech" <newbury66@hotmail.com>
> wrote:
>
> >Why not buy her a brand new domestic appliance, that way she can't gripe,
> >can she?
>
> That reminds me.
>
> I have several dozen three prong and four prong vibrators in a bunch
> of new old stock tubes and parts I acquired from a local TV shop.
>
> If anyone needs one, let me know.

740. Re: Cross Needle Meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 03:31:30 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3D1A8712.8080802@charter.net>
Source record: 43003

you can buy them from MFJ the ones in thier big tuners.
chris

Philip de Cadenet wrote:

> Does anyone know of a manufacturer of these meters?
>
> They are for several ATU projects.
>
> Many thanks.

--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

741. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 06:00:27 UTC
From: Dwight Stewart <stewart@sc.rr.com>
Message-ID: <3D1AAA51.F64E16C7@sc.rr.com>
Source record: 43004
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Tom W8JI wrote:
>
> That reminds me.
>
> I have several dozen three prong and four
> prong vibrators in a bunch of new old stock
> tubes and parts I acquired from a local TV shop.
>
> If anyone needs one, let me know.

Vibrators, like you're talking about, is an interesting thing to mention in a thread about XYLs that won't warm up. Think about it. Or is it just my mind in the gutter again?

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

742. Re: new-basement construction grounding suggestions wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 08:33:24 UTC
From: cwsouth <cwsouth@telusplanet.net>
Message-ID: <01c21db6$e99b07e0$662bb8a1@cwsouth>
Source record: 43005

Hi Sylvan:
Instead of trying to deal with wire, braid or tape. Investigate the use of 1/4" soft copper tubing to bury. I priced it out as opposed to #6 bare cable. Much cheaper in Canada.
I use it for reduced noise in sensitive ULF communication circuits.
It can be perforated to accommodate the injection of magnesium sulphate or calcium sulphate solutions to increase soil conductivity.
I would do this well away from the house, as the sulphates can cause corrosion in the concrete, unless it is type 5 sulphate resistant.

best regards
Clark Southoff
VE6 some day soon.

743. High voltage regulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 08:52:35 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <afejjj$7ki$1@nic.grnet.gr>
Source record: 43006

Dose any one know any type of High voltage regulator (up to 200V 200ma)

To be more exact , something like a 78XX series but for the the above specs..

--
deosiereas.virtualave.net

744. Re: High voltage regulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 11:32:41 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <afet4pfle1@paris.btinternet.com>
Source record: 43015

"Deos" <lineoffiretoday@yahoo.com> wrote in message
news:afejjj$7ki$1@nic.grnet.gr...
>
> Dose any one know any type of High voltage regulator (up to 200V 200ma)
>
> To be more exact , something like a 78XX series but for the the above
> specs..

I think Motorola (On Semiconductor, now) used to make one. It was different
from the 78xx.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.com
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

745. Re: new-basement construction grounding suggestions wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 11:59:35 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <J7DS8.2668$l6.776449@newsfep2-win.server.ntli.net>
Source record: 43007

> > What your concern is with burried copper tape? Is it because the
> > relatively-thin copper tape may experience lots of corrosion in
> > damp clay-ey soil?
>
> Corrosion or other physical damage. All the copper tape I've seen
> is thin and quite fragile compared to a #4 or #6 wire.

==========

Although I don't know a specific source for this material , I have seen 25 x 3 mm
(1" x 1/8") copper strip used for heavy duty earthing systems .
It is also used on the ridge of sloping roofs to combat moss which grow on roof tiles. Rain carrying traces of anorganic chemicals causes the copper to react with the compounds . The resulting traces of copper compounds dissolved in water subsequently kill the moss .
BTW For the above duty any thick (bare) copper wire /braid / strip will do the trick .

Sorry for the digression , but I thought the info might be useful for house owners pestered by moss on their house roof.

Frank gm0csz.kn6wh@ntlworld.com

746. Re: High voltage regulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 14:52:18 UTC
From: w4pqwhs@aol.com
Message-ID: <20020627105218.09193.00000497@mb-mh.aol.com>
Source record: 43008

>
>Dose any one know any type of High voltage regulator (up to 200V 200ma)

I would use a Zener diode ,the ECG 5232A is rated at 200 v @ 10 watts,,that should do it .If you will check the Radio Amateur handbook you will find hookup etc, good luck Harold W4PQW

747. Cheapo Components :)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 15:04:57 UTC
From: maxpowa <maxpowa@iwontellsorry.com>
Message-ID: <tQFS8.442$ix.193@afrodite.telenet-ops.be>
Source record: 43009

```
Hello,

Transistors -> 2N3904
Op-amps -> LM324N

If interested, check it out at http://maxpowa.telenet.be/forsale/index.htm

Steven

--
----------------------
Electronic components @ :
http://maxpowa.telenet.be/forsale/index.htm
----------------------
```

748. MFJ-1048 preselector schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 15:49:59 UTC
From: Dimitris Mylonopoulos <mylond@otenet.gr>
Message-ID: <affc2k$i95$1@usenet.otenet.gr>
Source record: 43010
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.shortwave,rec.radio.swap

Does anyone has a copy for the MFJ-1048 preselector's schematic because I
lost mine and need one.
Dimitris

749. Re: High voltage regulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 16:21:47 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <vYGS8.10321$Ca2.975724@bin2.nnrp.aus1.giganews.com>
Source record: 43011

The trouble with a high voltage zener diode is the temperature coefficient of voltage is highly positive. So the output will drift up as it warms.

A better approach would be to use a series string of low voltage diodes. This would also reduce the need for heat dissipation, as the power would be distributed over all the diodes.

The lowest uncompensated temperature coefficient of voltage occurs when the zener voltage is about 5 Volts, but a decently low drift would occur with anything below about 12 Volts.

Another approach might be a VR tube. Yes I know it's not a semiconductor but these things have low drift and are very rugged. You can combine a 150 Volt 0A2 with some zener diodes for a nice 200 Volt regulator.

How much current is needed, and what is the range of the source Voltage?

Bob

750. Re: Cross Needle Meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 16:21:48 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <wYGS8.10322$Ca2.975894@bin2.nnrp.aus1.giganews.com>
Source record: 43012

I believe Daiwa makes these. Certainly their products contain them.

Bob

751. Re: new-basement construction grounding suggestions wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 16:36:12 UTC
From: Sylvan Butler <Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnahmfnr.18f.Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 43013

On Thu, 27 Jun 2002 12:59:35 +0100, Frank Dinger <gm0csz.kn6wh@ntlworld.com> wrote:
> Although I don't know a specific source for this material , I have seen 25 x
> 3 mm
> (1" x 1/8") copper strip used for heavy duty earthing systems .

Sounds like just the thing for a slug barrier...

Please post here or e-mail to me if you see this material again.
Buying from a building or electrical supply things is usually much
cheaper than buying from a hobby radio shop. Of course, it looks
like available in your part of the world may not mean much for me.
:)

> It is also used on the ridge of sloping roofs to combat moss which grow on
> roof tiles. Rain carrying traces of anorganic chemicals causes the copper to
> react with the compounds . The resulting traces of copper compounds
> dissolved in water subsequently kill the moss .

I've seen zinc advertised for that task and it is simply zinc sheet
metal (well under 1mm), the same stuff as used for zinc flashing. I
would expect any copper for that purpose would also be sheet metal
like the copper flashing.

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. ##### change ^ to @ ##### |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Fight terrorism, arm the population!

752. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 17:27:56 UTC
From: Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <affhus$8o$1@woodrow.ucdavis.edu>
Source record: 43014
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

: In rec.radio.swap Uncle Peter <radioconnectionNO@cox.netspam> wrote:
: Well, Skippy, I posted links and some figures based on manufacturer's
: data from their websites and from their databooks.

Just as we expected you would, nothing that you actually measured. As Tom, myself and others mention... Svetlana often posts specs and technical information which is not complete or contains errors. Since you've done so much of this stuff, I expected to see your actual examples.

: I also stand by my
: posts, which you continually misquote. Read what I posted and try to
: comprehend. You're obviously trolling, since you have offered absolutely
: nothing which refutes what I originally said "they are better **ceramic**
: tubes than 4CX250s [for IMD performance] for amplifier use."

You tried to go off on a Triode diversion... It was clear in the original post, the Subject was about 4cx250 type tubes, a tetrode... a much different animal. Anyone can go through news group archives to see the original posts and your attempt to cover your behind with off topic poop.

: You asked
: for figures and data, other than from "obsolete radio amateur handbooks",
: and then you continue to argue that the data taken from the manufacturers'
: own websites is flawed, based on your opinions.

Yep, and I mention specific examples that are easily verified. You quote a web page for a web site that appears to be off the net...

: I suggest that YOU trying to provide some concrete facts, based on concrete
: technical that has been published. And sorry, not all external anode
: tetrodes have the same IMD performance despite the "size of their
: anodes". I'm still waiting for you to quote the FCC regulations that
: specify transmitter IMD performance, which I suposedly alluded to.
: 73
: Petey k1zjh

Back to Square One Peetie Pie... The guy was trying to figure out if using 4cx250 tubes would be practical... as he had more than a few extra NOS tubes laying around.

Someone piped up without supporting evidence, the 4cx250 has terible or very poor IMD preformance in Linear Amplifier service. The tubes should not be considered in Linear Operation, nor should the guy use the spare tubes he has in a possible conversion project.

I replied that that claim is not justified, the 4cx250b works well in Linear Service if a builder does the proper homework first.

You pipe in with all kinds of poop, then try to go off topic with ceramic triodes and diversions that are way off the original post. Now you back pedal without providing anything but an old Svetlana web page as your source information...

You ever build a linear 4cx250b amplifier Peetie..?

Anyway, an example of an actual (and current) RF amplifier using the 4cx250b in Linear service can be found at the CTI website, a Florida Company now making said.

Other readers wishing to look, check out www.cticom.com or www.cti.comm.com if the first url doesn't work. A www.google.com search should also find CTI without grief.

For those Boobner types that want to read FCC Regs regarding transmitter and amplifier requirements.

www.fcc.gov

They don't require your real name, so even the fake'o Aarron Voobner guy can check in with a browser.

that's pretty much it for now...
skipp

http://sonic.ucdavis.edu

753. Re: new-basement construction grounding suggestions wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 19:47:15 UTC
From: rcnixon@mindspring.com
Message-ID: <3d1b6b2d.22355017@news.mindspring.com>
Source record: 43016

Sylvan Butler <Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid>
wrote:

>On Thu, 27 Jun 2002 12:59:35 +0100, Frank Dinger <gm0csz.kn6wh@ntlworld.com> wrote:
>> Although I don't know a specific source for this material , I have seen 25 x
>> 3 mm
>> (1" x 1/8") copper strip used for heavy duty earthing systems .
>
>Sounds like just the thing for a slug barrier...
>
>Please post here or e-mail to me if you see this material again.
>Buying from a building or electrical supply things is usually much
>cheaper than buying from a hobby radio shop. Of course, it looks
>like available in your part of the world may not mean much for me.
>:)
>
>> It is also used on the ridge of sloping roofs to combat moss which grow on
>> roof tiles. Rain carrying traces of anorganic chemicals causes the copper to
>> react with the compounds . The resulting traces of copper compounds
>> dissolved in water subsequently kill the moss .
>
>I've seen zinc advertised for that task and it is simply zinc sheet
>metal (well under 1mm), the same stuff as used for zinc flashing. I
>would expect any copper for that purpose would also be sheet metal
>like the copper flashing.
>
>sdb
>
>--
> | Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
> | Watch out for my e-mail address. Thank UCE. #### change ^ to @ #### |
> They that can give up essential liberty to obtain a little temporary
> safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
> Fight terrorism, arm the population!
Sylvan,

The copper strap that PolyPhaser sells is considerably thicker
than flashing material. It is approximately 0.05" X 3" or X 6".
These will form a low-impedence path equivalen to a 1" or 2" diameter
wire, respectively.

--
Russ
"Two-fifteen, no ambulance needed!" (G. J. Golden, ECPD)
Subtract all nines to reply

754. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 20:18:58 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <SqKS8.102914$Hn4.3591818@news1.east.cox.net>
Source record: 43017
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

"Skipp" <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
news:affhus$8o$1@woodrow.ucdavis.edu...
> : > You tried to go off on a Triode diversion... It was clear in the
original
> post, the Subject was about 4cx250 type tubes, a tetrode... a much
> different animal. Anyone can go through news group archives to see the
> original posts and your attempt to cover your behind with off topic poop.
>
READ MY ORIGINAL POST, SKIPPY, AND READ IT CAREFULLY!!!

"4CX250 tubes aren't the best for IMD performance -- but, they are cheap
and available.

Pete"

NO WHERE DID I ADVISE NOT TO USE THEM. I CORRECTLY POINTED
OUT THAT THERE ARE BETTER TUBE CHOICES AVAILABLE.

> Back to Square One Peetie Pie... The guy was trying to figure out if
> using 4cx250 tubes would be practical... as he had more than a few extra
> NOS tubes laying around.
>
HAM RADIO AS RECENTLY AS THE 1980s HAD RUN 4CX250 AMP
DESIGNS.
--
someone piped up without supporting evidence, the 4cx250 has terible or
> very poor IMD preformance in Linear Amplifier service. The tubes should
> not be considered in Linear Operation, nor should the guy use the spare
> tubes he has in a possible conversion project.

WHO SAID THAT SKIPP? I SAID "4CX250 tubes aren't the best for IMD
performance -- but, they are cheap and available.

Pete"

I WOULD THINK CHEAP AND AVAILABLE IMPLIES TO USE THEM
IF NOTHING BETTER IS ON HAD.
>
> I replied that that claim is not justified, the 4cx250b works well in
> Linear Service if a builder does the proper homework first.
>
> You ever build a linear 4cx250b amplifier Peetie..?

SEVERAL. 4CX250, 4CX300 AND 4CX350 VERSIONS. HF THRU
432 MHZ. THE GENTLEMAN ASKED ABOUT REPLACING SWEEP
TUBES WITH 4CX250s. YOU DIDN'T OFFER HIM ANY ADVICE CONCERNING

SCREEN CURRENT METERING, REGULATION OR PROTECTION,
NOTHING ABOUT AIR COOLING REQUIREMENTS... REPLACING
SWEEP TUBES WITH 4cx250s IS NOT A TRIVIAL MATTER OR
FOR BEGINNERS.
>
> Anyway, an example of an actual (and current) RF amplifier using the
> 4cx250b in Linear service can be found at the CTI website, a Florida
> Company now making said.

WHAT DOES THIS PROVE??
> > For those Boobner types that want to read FCC Regs regarding
transmitter
> and amplifier requirements.
>
> www.fcc.gov
>
WHAT IS THE FCC REQUIREMENT FOR AMATEUR TRANSMITTER IMD
REQUIREMENTS?? GIVE ME A DIRECT LINK. SINCE YOU LIKE TO
QUOTE TOM, READ WHAT HE SAID ABOUT FCC REQUIREMENTS.

> browser.
>
> that's pretty much it for now...
> skipp

YEP, YOUR IN THE KILL FILE.
--

755. Re: High voltage regulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 20:35:36 UTC
From: lsb <l.s.booth@worldnet.att.net>
Message-ID: <sGKS8.57041$LC3.4376082@bgtnsc04-news.ops.worldnet.att.net>
Source record: 43018

I've used successfully a HV transistor used in TV sweep circuits. Fairly cheap at a few bucks. Used as a series pass regulator. It provides the 250vdc for my T4XC (since 1980) quite reliably. I load tested years ago and have the data and schematic around someplace if you want it.

N5LB

Deos <lineoffiretoday@yahoo.com> wrote in message news:afejjj$7ki$1@nic.grnet.gr...
>
> Dose any one know any type of High voltage regulator (up to 200V 200ma)
>
> To be more exact , something like a 78XX series but for the the above
> specs..
>
>
> --
> deosiereas.virtualave.net
>
>

756. Re: Help for a friend with an ICOM IC-751 Transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 21:08:50 UTC
From: CA <sm6pxj@hotmail.com>
Message-ID: <f8LS8.3781$t4.9614@nntpserver.swip.net>
Source record: 43019
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.shortwave,uk.radio.amateur

John Boyle wrote...
>Concerning the ICOM IC-751 Transceiver, my friend asks:
>
>"...In that radio is a ram-board that contains the operating
>system for the radio and that's where memory channels
>are stored. I need the hex code for that radio.

Here it is:
http://www.geocities.com/emailsrikanth/ham/icomram/745_751.zip

There's also a description of a programmer (and how to extend the frequency
limits of the radio)

73
Christer
SM6PXJ

757. Re: new-basement construction grounding suggestions wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 22:13:56 UTC
From: Sylvan Butler <Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnahn3go.18f.Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 43020

On Thu, 27 Jun 2002 19:47:15 GMT, Russell C. Nixon <rcnixon@mindspring.com> wrote:
> Sylvan Butler <Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid>
> wrote:
>
>>On Thu, 27 Jun 2002 12:59:35 +0100, Frank Dinger <gm0csz.kn6wh@ntlworld.com> wrote:
>>> Although I don't know a specific source for this material , I have seen 25 x
>>> 3 mm
>>> (1" x 1/8") copper strip used for heavy duty earthing systems .
>>
>>Sounds like just the thing for a slug barrier...
>>
>>Please post here or e-mail to me if you see this material again.
>>Buying from a building or electrical supply things is usually much
>>cheaper than buying from a hobby radio shop. Of course, it looks

[roof moss stopper]
>>I've seen zinc advertised for that task and it is simply zinc sheet
>>metal (well under 1mm), the same stuff as used for zinc flashing. I
>>would expect any copper for that purpose would also be sheet metal
>>like the copper flashing.

> The copper strap that PolyPhaser sells is considerably thicker
> than flashing material. It is approximately 0.05" X 3" or X 6".

That is rather heavy weight for flashing... But 0.05" is the
thickness of 18ga steel sheet, less than half as thick as the 3mm
(about 11ga) stock mentioned by Frank. I know thick isn't necessary
for low impedance at high frequencies, but thicker sure helps
physical robustness.

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. ##### change ^ to @ ##### |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Fight terrorism, arm the population!

758. Re: High voltage regulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 22:43:14 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <6yMS8.104164$Hn4.3610765@news1.east.cox.net>
Source record: 43021

There are some high voltage regulator ICs made for televisions, I am not in the
repair field but a lot through the NTE website might reveal some useable devices.

Pete

"Deos" <lineoffiretoday@yahoo.com> wrote in message
news:afejjj$7ki$1@nic.grnet.gr...
>
> Dose any one know any type of High voltage regulator (up to 200V 200ma)
>
> To be more exact , something like a 78XX series but for the the above
> specs..
>
>
> --
> deosiereas.virtualave.net
>
>

759. Re: High voltage regulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 22:54:50 UTC
From: gc@radix.net
Message-ID: <afg53qfnk1@news1.Radix.Net>
Source record: 43022

In article <afejjj$7ki$1@nic.grnet.gr>, Deos <lineoffiretoday@yahoo.com> wrote:
>
>Dose any one know any type of High voltage regulator (up to 200V 200ma)
>
>To be more exact , something like a 78XX series but for the the above
>specs..
>

I haven't tried this myself, but...

The National web site has some information that might be useful.
Check out http://www.national.com/pf/LM/LM117HV.html and download
the spec sheets and the LB-47 application notes.

According to the information there, there are at least a couple
of possibilities:

1) The LM317HV is limited to a 60V input to output drop. But it
is floating wrt ground. If you limited your unregulated input
to 260V or less you could use it directly. However, you would
not have short circuit protection.

2) The LB-47 gives some useful high voltage regulation circuits
using the LM317HV plus additional pass transistors and passive
components.

760. Re: High voltage regulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 23:15:05 UTC
From: la8ak.xnd@online.no
Message-ID: <3d1b8715.138588838@news.online.no>
Source record: 43023

On Thu, 27 Jun 2002 , ehramm@dk3uz.ampr.org (Edmund H. Ramm) wrote:

>In <vYGS8.10321$Ca2.975724@bin2.nnrp.aus1.giganews.com> "Bob" <balbert@cnmnetwork.com>
writes:
>
>> The trouble with a high voltage zener diode is the temperature coefficient
>> of voltage is highly positive. So the output will drift up as it warms.
>> [...]
>
> High voltage Zener diodes also generate considerable amounts of
>noise. This can obviate nearby receivers' sensitivity and even be
>transmitted if said Zener diode is used to stabilize e.g. a PA's
>screen grid voltage.
>
> One cure are ferrite beads over the cathode lead, assuming a
>positive voltage is to be stabilized, and a variety of capacitors,
>e.g. 1uF (electrolytic), 100nF and 100pF (ceramic), in parallel
>directly from cathode to ground.
>
it is usually better to use many lower voltage zener diodes in series,
say 24 or 47V, it is also better for cooling

73
Jan_Martin
LA8AK (EU/Loc DS80b)
N4623-Kristiansand (tel.: +47-380-87178)
Ex-German Equipment: http://www.laud.no/la6nca/la8ak/ Ideas:
http://home.online.no/~egiinge/ide/0_ide.htm
NOTE: Because of heavy spamming now applying eremove.exe, please avoid
odd titles!
--
remove ,xnd to reply

761. Re: High voltage regulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 23:15:06 UTC
From: la8ak.xnd@online.no
Message-ID: <3d1b87ca.138769916@news.online.no>
Source record: 43024

On Thu, 27 Jun 2002 20:35:36 GMT, "lsb" <l.s.booth@worldnet.att.net>
wrote:

>I've used successfully a HV transistor used in TV sweep circuits. Fairly
>cheap at a few bucks. Used as a series pass regulator. It provides the
>250vdc for my T4XC (since 1980) quite reliably. I load tested years ago and
>have the data and schematic around someplace if you want it.
>
>N5LB
>
I have made some shunt and series regulators with transistors and
valves up to 300V, and one has been in service over 25 years with no
problem for stabilizing screen-grid supply for my power amplifier -
this used a uA741 and 6AQ5/EL90/6005 valve. Voltage could be varied
150-300V.

73
Jan-Martin
LA8AK (Eu/Loc DS80b) - Collector of German WW2 Radio equipment
http://www.laud.no/la6nca/la8ak/
--
remove ,xnd to reply

762. Re: High voltage regulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-27 23:25:30 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <K9NS8.432069$%y.31160352@bin4.nnrp.aus1.giganews.com>
Source record: 43025

Here's one I use for the "pre"-preamplifier section of a rebuilt tube
amplifier: http://www.tech-diy.com/fairchild_255a.htm

>
>
> --
> deosiereas.virtualave.net
>
>

763. FS: 50 year accumulation of TUBES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 00:14:25 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <BTNS8.96103$3R2.3623687@news1.west.cox.net>
Source record: 43026

Please email w6krc@arrl.net for updated list.

764. regen front end

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 00:19:17 UTC
From: rhaub <rhaub@itc.com>
Message-ID: <3D1BAB84.A4526003@itc.com>
Source record: 43027

Hi,

I'm building a solidstate regen BC receiver and I'm pretty happy with it
but I'd like to add a simple 1 or 2 stage bipolor RF amp stage. Any body
got some URLs or schematics of some good examples?

Thanks,

Rick KC0GIX

765. Why one tubing material over another for beam antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 00:55:02 UTC
From: akwusmc@aol.com
Message-ID: <3d1bb1f0.15774813@news.tn.comcast.giganews.com>
Source record: 43028

All,

I'm a new ham, and my first radio is a dual band HT. Obviously, I'm disappointed with the perfomance from inside the house, so I'm looking on the web for homebrew antenna projects so I can hit the club repeater.

I've looked at j-poles, dipoles, and yagis from 2-7 elements. The copper tubing j-poles (http://www.arrl.org/tis/info/JPole-V.html) look the easiest, until I came across a direct-connect 2 element beam (http://www.qsl.net/w4sat/tiny2.htm). Three pieces of 1 inch aluminum tubing, and solder your feedline. but since I plunked the dollars for the HT, XYL is sensitive about the costs. I can get 2+ sticks of copper tubing for what the local Ace wants for aluminum.

What are the pros and cons of these two types of antennas, what is the significance of the diameter of tubing, and could I not substitute copper for aluminum - why or why not.

TIA, and 73

Anthony, KG4TBO

766. Re: High voltage regulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 01:18:03 UTC
From: ovrreactor@aol.com-nospam
Message-ID: <20020627211803.21872.00000611@mb-ml.aol.com>
Source record: 43029

>Dose any one know any type of High voltage regulator (up to 200V 200ma)
>
>To be more exact , something like a 78XX series but for the the above
>specs..
>
>
>--
>deosiereas.virtualave.net

Try using a Texas Instruments TL783C. It can pass up to 700 mA (TO-220). Just be sure that you don't accidentally short it out, since the maximum safe voltage across the device can't exceed 125 V.

Also try VM03 by ST Micro. It's an improved replacemnet for the now obsolete Harris HIP5600. You can put 450 V across that one, but I'm not sure if it can handle the current.

Regards,
Tom Mitchell
website - http://members.aol.com/ecc81

767. Re: Why one tubing material over another for beam antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 02:01:11 UTC
From: Dave Holford <holford@sympatico.ca>
Message-ID: <3D1BC367.EE1D7AE6@sympatico.ca>
Source record: 43030

akwusmc@aol.com wrote:
>
> All,
>
> I'm a new ham, and my first radio is a dual band HT. Obviously, I'm
> disappointed with the perfomance from inside the house, so I'm looking
> on the web for homebrew antenna projects so I can hit the club
> repeater.
>
> I've looked at j-poles, dipoles, and yagis from 2-7 elements. The
> copper tubing j-poles (http://www.arrl.org/tis/info/JPole-V.html) look
> the easiest, until I came across a direct-connect 2 element beam
> (http://www.qsl.net/w4sat/tiny2.htm). Three pieces of 1 inch aluminum
> tubing, and solder your feedline. but since I plunked the dollars for
> the HT, XYL is sensitive about the costs. I can get 2+ sticks of
> copper tubing for what the local Ace wants for aluminum.
>
> What are the pros and cons of these two types of antennas, what is the
> significance of the diameter of tubing, and could I not substitute
> copper for aluminum - why or why not.
>
> TIA, and 73
>
> Anthony, KG4TBO

There are 'lots' of j-pole designs using copper plumbing pipe.
I suggest you do a search and pick some that look likely to you.
I took a quick look but decided there were too many for me to suggest
one.

A search for "j-pole" returned 4290 hits
so I narrowed it to "j-pole+copper" and got it down to 757

There should be some there to answer your questions.

I've seen quite a few copper j-poles, and have a couple of copper pipe
dipoles myself for UHF use.

Regards,
Dave

768. Re: Why one tubing material over another for beam antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 02:24:04 UTC
From: keep-it-clean <keep-it-clean@worldnet.att.net>
Message-ID: <8NPS8.57746$LC3.4409812@bgtnsc04-news.ops.worldnet.att.net>
Source record: 43031

Aluminum is lighter in weight than an equivalent sized piece of copper ?

==========

<akwusmc@aol.com> wrote in message
news:3d1bb1f0.15774813@news.tn.comcast.giganews.com...
> All,
>
> I'm a new ham, and my first radio is a dual band HT. Obviously, I'm
> disappointed with the perfomance from inside the house, so I'm looking
> on the web for homebrew antenna projects so I can hit the club
> repeater.
>
> I've looked at j-poles, dipoles, and yagis from 2-7 elements. The
> copper tubing j-poles (http://www.arrl.org/tis/info/JPole-V.html) look
> the easiest, until I came across a direct-connect 2 element beam
> (http://www.qsl.net/w4sat/tiny2.htm). Three pieces of 1 inch aluminum
> tubing, and solder your feedline. but since I plunked the dollars for
> the HT, XYL is sensitive about the costs. I can get 2+ sticks of
> copper tubing for what the local Ace wants for aluminum.
>
> What are the pros and cons of these two types of antennas, what is the
> significance of the diameter of tubing, and could I not substitute
> copper for aluminum - why or why not.
>
> TIA, and 73
>
> Anthony, KG4TBO
>
>

769. FS: Right angle male SMA connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 02:43:08 UTC
From: Terry Perdue <k8tp@home.com>
Message-ID: <03QS8.331104$352.37732@sccrnsc02>
Source record: 43032

I have a large quantity of new right-angle male SMA connectors with a 7" length of 50 Ohm RG-188-size cable attached, prepared and tinned at the free end. The cable is just like RG-188 except blue in color with a solid center conductor. Shield is braided. The connector has a press-in insert - not screw-in.

Mouser sells similar connectors for $4.89 each in quantities of 25. I'm selling bags of 20 pieces for $10 postpaid. Email for pictures.

770. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 04:22:15 UTC
From: rob34 <rob34@infinet.com>
Message-ID: <3d1c8cc5$0$1433$4c5ecdc7@news.erinet.com>
Source record: 43044
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

Fellows don`t you think this is getting bit ridiculous?? Rob
" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
news:9jRQ8.74723$Hn4.2644092@news1.east.cox.net...
> Skip!
>
> Where did I say TETRODE??? I said there are better CERAMIC tubes.
> A specific example would be a 3CX800 or 3CX1500, either will
> beat the 4XC250 3rd order IMD specs by several dB. (-36 and -38 dB
> respectively.)
>
> Where did I say the 4CX250 didn't meet FCC specs for IMD?
> I'd be interested in a reference to the FCC regulations specifing
> transmitter IMD perfermence requirements that you referenced. If they
> exist, then there are a lot of vintage sweep tube amps
> still in use that are far worse than the 4CX250 in terms of poor IMD
> performance.
>
> Sure, 4CX250s may be cheap, but the problems and added costs involved
> with the bias supplies, screen-regulation and protection circuits, and
> even
> finding good quality shielded-screen bypass sockets, sure make a good
> case for using more modern components. My choice would be a 4CX350--if
> I was constrained to whatever ceramic tetrode was most handy and in
> quantity in my tube bins.
>
> For reference:
>
> http://www.svetlana.com/docs/TechBulletins/technoteNo42.html
>
>
> Pete
>
>
>
> "Skipp" <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
> news:aenmpv$c4t$1@woodrow.ucdavis.edu...
> > Well Pete'e
> >
> > You imply that 4cx250b type tubes are bad news in the IMD department.
> > There are many tubes with better operational IMD specs, but the 4cx250b
> > family works just fine in linear service. IMD is not any type of
problem
> > if you pay attention to the proper circuit and operational details.

Basic
> > linear amplifier 101 related to a specific family of high gain tetrodes.
> >
> > If any of the 4cx250b family of tubes are around cheap/free, one should
> > not be scared off from using said by people posting blanket bad news IMD
> > statements on New Groups. How about you posting some comparisons of IMD
> > operational preformanc of some popular tetrodes vs the 4cx250b family
and
> > we'll beat the data back and forth.
> >
> > The 4cx250b family of tubes work well in properly designed and
> > constructed linear circuits, simple enough.
> >
> > Your turn to "enlighten us" with some actual data that you have
measured,
> > not something reprinted or quoted out of an older Handbook...
> >
> > 73
> > skipp
> >
> > : In rec.radio.swap Uncle Peter <radioconnectionNO@cox.netspam> wrote:
> > : Skippy,
> > : Where did I say it didn't "meet FCC requirements"? There are
> > : thousands of linear designs (albiet mostly UHF/VHF that use
> > : 4CX250s). I only pointed out
> > : that as far as IMD performance, there are much better ceramic
> > : tubes available than the 4CX250.
> > : Enlighten us.
> > : 73
> > : Pete
> >
> > : "Skipp" <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
> > : news:ae894h$m90$1@woodrow.ucdavis.edu...
> > :> Bbbbbuuuuzzzzzzzzzzzzz.....!!!!!!!! (the error buzzer sounds)
> > :>
> > :> You don't qualify your statement... A well done 4cx250 amplifier
> easily
> > :> meets FCC requirements. It's all about how you design and build
it...
> > :>
> > :> A little home work is always required....
> > :>
> > :> skipp
> > :> http://sonic.ucdavis.edu
> > :>
> > :> : In rec.radio.amateur.homebrew Uncle Peter
> > :> : <radioconnectionNO@cox.netspam> wrote:
> > :> : 4CX250 tubes aren't the best for IMD performance -- but, they are
> cheap
> > :> : and available.

> > :> : Pete
> > :>
> > :> : "Skipp" <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
> > :> : news:adm4omoip9@woodrow.ucdavis.edu...
> > :> :>
> > :> :> In reference to another thread where someone asked questions about
> > :> :> converting an amplifier from 6LQ6 "sweep tubes" over to 4CX250B
> > : "ceramic"
> > :> :> tubes...
> > :> :>
> > :> :> Here's a web link to a few photos of a Dentron GLA-1000B which was
> > :> :> converted over to a pair of 4CX250's by an Italian Amateur Radio
> > : Operator.
> > :> :> I also have pictures of the same amplifier with some of the newer
> > : Russian
> > :> :> GU7 series tubes on board, but that's off topic. Anyway have a
look
> if
> > :> :> your interested.
> > :> :>
> > :> :> cheers
> > :> :> skipp@pilotNOSPAMPLEASE.ucdavis.edu
> > :> :>
> > :> :> http://sonic.ucdavis.edu/dentron
> > :> :>
> > :> :>
> > :> :> The main page for the sonic server..
> > :> :>
> > :> :> http://sonic.ucdavis.edu
> > :> :> chow for now
> > :> :> skipp
> > :>
> > :>
> >
> >
>
>

771. Re: regen front end

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 08:14:44 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0206280014.4d15eefb@posting.google.com>
Source record: 43033

Hi, you can find many of them. Try to start at Harry's pages
http://w1.859.telia.com/~u85920178/

73 de Ivan

772. Re: Why one tubing material over another for beam antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 10:41:25 UTC
From: john graesser <graesser@tca.net>
Message-ID: <uhof7i5ab63lf0@corp.supernews.com>
Source record: 43034

Aluminum will not corrode anywhere near as fast as copper will.

I remember years ago a Nasa contractor did a test of different antenna materials and posted to the Fido ham message group. He found that there was a slight difference in length required for elements, but without precision measuring equipment you won't see the differance. When tuned correctly the different materials he tested - copper, aluminum, bronze, stainless steel all worked as antenna elements, but due to the weight consideration he recommended aluminum as the material to use.

Use what is available and that you are comfortable working with: welding rods, copper hot water pipe, aluminum arrow blanks, etc.

I built a 6 meter jpole out of 1/2 in copper pipe and a 9 element yagi for 440 out of aluminum ground wire and heavy copper wire.
thanks, John.
KC5DWD

"keep-it-clean" <keep-it-clean@worldnet.att.net> wrote in message
news:8NPS8.57746$LC3.4409812@bgtnsc04-news.ops.worldnet.att.net...
> Aluminum is lighter in weight than an equivalent sized piece of copper ?
>
> ===========
>
>
> <akwusmc@aol.com> wrote in message
> news:3d1bb1f0.15774813@news.tn.comcast.giganews.com...
> > All,
> >
> > I'm a new ham, and my first radio is a dual band HT. Obviously, I'm
> > disappointed with the perfomance from inside the house, so I'm looking
> > on the web for homebrew antenna projects so I can hit the club
> > repeater.
> >
> > I've looked at j-poles, dipoles, and yagis from 2-7 elements. The
> > copper tubing j-poles (http://www.arrl.org/tis/info/JPole-V.html) look
> > the easiest, until I came across a direct-connect 2 element beam
> > (http://www.qsl.net/w4sat/tiny2.htm). Three pieces of 1 inch aluminum
> > tubing, and solder your feedline. but since I plunked the dollars for
> > the HT, XYL is sensitive about the costs. I can get 2+ sticks of
> > copper tubing for what the local Ace wants for aluminum.
> >
> > What are the pros and cons of these two types of antennas, what is the
> > significance of the diameter of tubing, and could I not substitute
> > copper for aluminum - why or why not.

> >
> > TIA, and 73
> >
> > Anthony, KG4TBO
> >
> >
>
>

773. Re: Advice on VFO packaging

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 10:43:22 UTC
From: "G. Milligan" <g.milligan@coventry.ac.uk>
Message-ID: <3D1C3DCA.9AE2E471@coventry.ac.uk>
Source record: 43035

Richard,

Thank you for your comments, I will print out your comments here and the
web pages that you mentioned and study them carefully.

Greg.

Richard Hosking wrote:
>
> "G. Milligan" <g.milligan@coventry.ac.uk> wrote in message
> news:3D19A625.94030DE4@coventry.ac.uk...
> > I am currently building a HF Colpitts VFO based upon the article "A High
> > Stabililty VFO" that appeared in Practical Wireless Oct 1987.
> >
> > I am looking for advice on how to mount the PCB board and coil. Should
> > I be looking at rubber mounts, epoxy resin or candle wax to secure the
> > parts against physical vibration, how would these different compounds
> > affect the dissipation of heat and thus frequency drift?
>
> The simplest way is to mount in a rigid sealed box eg diecast aluminium.
> This increases thermal inertia also which reduces short term temp drift.
>
> You could also stabilize the VFO with a PLL scheme
> see http://www.iinet.net.au/~richardh/VK6BRO.htm
>
> You will obviously need to look at voltage and load regulation also
>
> >
> > Assuming I place the entire vfo circuit in its own metal case, how does
> > one compensate for additional inductance placed upon the coil due to the
> > proxmity of the metal case? Is it just a case of trial and error,
> > whiping the lid on and off and adjusting the LC?
>
> use a trimmer accessible through a hole in the box with the lid on.
>
> >
> > I plan to use a 6:1 reduction drive, although I have two of these units
> > and had originally planned to cascade them, would a 36:1 reduction be a
> > bit overkill?
> >
> This depends on the frequency span - 10-25 KHz per revolution is probably
> reasonable.
> You could also do a bandspread using a small varactor across the VFO tank
> with a pot for 5-10 KHz fine tuning
> I have done this for a homebrew QRP HF SSB rig

>
> Richard
>
> > The vfo will be mainly used for CW and FSK modes, hence some degree of
> > stability and fine tuning is required.
> >
> > Any suggestions and comments would be welcome.
> >
> > Thanks.
> >
> > Greg Milligan
> > G1CPU
> >
> > EMail: g.milligan@coventry.ac.uk

774. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 11:34:44 UTC
From: CitySlicker <nospam@ameritech.net>
Message-ID: <oRXS8.654$Ur3.349664@newssrv26.news.prodigy.com>
Source record: 43036
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

Dennis, Aaron's best put in the kilfile and ignored. These are open forums and everyone has the right to participate in a thread or not. Too many people are wasting to much time responding to these @$$O's and the topics get distorted. So I say KilFile them and move on!

"Dennis W. Ostrowski" <dwostrowski@lucent.com> wrote in message news:3D18F4A6.8026D20B@lucent.com...
> > "Aaron H. Voobner" wrote:
> >
> >
> > Again...what do 4CX250s have to do with CB RADIO?
> >
> > -A
>
> Aaron,
>
> I enjoy really reading these technical debates and have always had a fascination with amplifiers of any
> type, from audio to LASER.
>
> I just searched my newsgroup provider for the text string 'amplifier' and found no matches.
>
> If there was a rec.radio.amplifier newsgroup I would prefer to be there.
>
> This group seems to be the next most popular for those types of discussions.
>
> If you look at this thread, the majority of the posts have been made by licensed operators who just may
> have been drawn here to this newsgroup because their interests are similar to mine.
>
> If a new newsgroup titled rec.radio.amplifier was created, and those folks interested in having amplifier
> discussions went there instead of to rec.radio.cb; would it finally satisfy you to the point were you
> would......
> 1) Just leave us alone on that other newsgroup?
> 2) Stay on rec.radio.cb and continue to act as the 'conscience' of the entire newsgroup?
> 3) Or would you join us on that amplifier newsgroup and make some on-topic posts that would contribute to

> the overall intelligence being shared?
>
> I could embrace any one of the three......
>
> Regards,
>
> Dennis O.
>

775. 18V@60 AMP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 11:45:11 UTC
From: rob34 <rob34@infinet.com>
Message-ID: <3d1cf490$0$3569$4c5ecdc7@news.erinet.com>
Source record: 42952

This is a very big transformer for a major power supply!! If you need pictures , e-mail me. I am asking $40 and you pay shipping. Rob WB8VWI

776. Re: Why one tubing material over another for beam antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 12:52:39 UTC
From: troglodite@aol.com
Message-ID: <20020628085239.13994.00000788@mb-fc.aol.com>
Source record: 43038

>
>What are the pros and cons of these two types of antennas, what is the
>significance of the diameter of tubing, and could I not substitute
>copper for aluminum - why or why not.
>

Firstly, the reference standard here is the simple ground plane antenna. It has a gain of unity. Both the J-pole and the beam have gains greater than unity. The difference is: The J-pole is omnidirectional and doesn't require a rotator, but does not have as much gain as a beam. If you are only intending to work the local repeater, either antenna will do. You will have to justify the increased cost of a rotator etc. which would be needed with a beam.

As for material, copper pipe is great for a J-pole. It solders up easily and is fairly sturdy. You should tape the coax connections and spray or paint the works with some kind of sealer to reduce corrosion. Aluminum is less corrosive, but you can't solder it so you need to bolt it, and it takes the same anti-corrosion treatment unless it is anodized. (In which case you have to grind, scrape or file it to make an electrical connection.)

Hope that helps.

Doug Moore KB9TMY

777. Re: FS: Right angle male SMA connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 13:05:01 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3D1C5D59.A4FAA340@gte.net>
Source record: 43039

Terry Perdue wrote:

> I have a large quantity of new right-angle male SMA connectors with a 7"
> length of 50 Ohm RG-188-size cable attached, prepared and tinned at the free
> end. The cable is just like RG-188 except blue in color with a solid center
> conductor. Shield is braided. The connector has a press-in insert - not
> screw-in.
>
> Mouser sells similar connectors for $4.89 each in quantities of 25. I'm
> selling bags of 20 pieces for $10 postpaid. Email for pictures.

Your E-Mail bounces- I would like to purchase some connectors.

Dale W4OP

778. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 13:34:26 UTC
From: sparky@cet.com
Message-ID: <3d1c5d68.1461114@news.cet.com>
Source record: 43037
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

In <oRXS8.654$Ur3.349664@newssrv26.news.prodigy.com>, "CitySlicker" <nospam@ameritech.net> wrote:

>Dennis, Aaron's best put in the kilfile and ignored. These are open forums >and everyone has the right to participate in a thread or not. Too many >people are wasting to much time responding to these @$$O's and the topics >get distorted. So I say KilFile them and move on!

Aaron will never be killfiled by many of the keyclowns because he speaks the truth, and truth is what most of them fear. IOW, anyone sitting on the fence is reading both sides of any argument, and can tell the difference between keyclown BS and the truth. That's why the keyclowns must keep shoveling more and more BS to try and cover up the truth as revealed by Voobner (and others).

And why would they do that? The obvious reason is that illegal operators depend upon each other to validate their illegal activities. Just like any other form of organized crime (or religion), it is social support that justifies their behavior. Things such as "logic" and "facts" diminish the persuasive effects of such anti-social reinforcement, and must therefore be contradicted.

Another reason is that some of them make a lot of money scamming people by convincing them to buy illegal amps and "export" radios. Opposition to these people has led to many, many threats of violence against Voobner, myself, and other defenders of honorable intentions. But many of us don't scare very easily, and will continue to educate people about the reality of radio communication (life is not an RF drag race).

Killfile Voobner? Ain't gonna happen. Deal with it.

779. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 13:59:18 UTC
From: JRPF <jrpf@yahoo.com>
Message-ID: <WYZS8.118543$zh2.25786911@twister.neo.rr.com>
Source record: 43040
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

"Sparky" <sparky@cet.com> wrote in message
news:3d1c5d68.1461114@news.cet.com...
> In <oRXS8.654$Ur3.349664@newssrv26.news.prodigy.com>, "CitySlicker"
> <nospam@ameritech.net> wrote:
>
> >Dennis, Aaron's best put in the kilfile and ignored. These are open
forums
> >and everyone has the right to participate in a thread or not. Too many
> >people are wasting to much time responding to these @$$O's and the topics
> >get distorted. So I say KilFile them and move on!
>
> Aaron will never be killfiled by many of the keyclowns because he
> speaks the truth, and truth is what most of them fear. IOW, anyone
> sitting on the fence is reading both sides of any argument, and can
> tell the difference between keyclown BS and the truth. That's why the
> keyclowns must keep shoveling more and more BS to try and cover up the
> truth as revealed by Voobner (and others).
>
> And why would they do that? The obvious reason is that illegal
> operators depend upon each other to validate their illegal activities.
> Just like any other form of organized crime (or religion), it is
> social support that justifies their behavior. Things such as "logic"
> and "facts" diminish the persuasive effects of such anti-social
> reinforcement, and must therefore be contradicted.
>
> Another reason is that some of them make a lot of money scamming
> people by convincing them to buy illegal amps and "export" radios.
> Opposition to these people has led to many, many threats of violence
> against Voobner, myself, and other defenders of honorable intentions.
> But many of us don't scare very easily, and will continue to educate
> people about the reality of radio communication (life is not an RF
> drag race).
>
> Killfile Voobner? Ain't gonna happen. Deal with it.

Sparky = Frank = Aaron Voobner

The FrankinVoob...

780. Re: FS: Right angle male SMA connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 14:48:48 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <kH_S8.214832$6m5.176330@rwcrnsc51.ops.asp.att.net>
Source record: 43041

I'm
> > selling bags of 20 pieces for $10 postpaid. Email for pictures.
>
> Your E-Mail bounces- I would like to purchase some connectors.
>
> Dale W4OP
>
Same problem, but your description confuses me. Sounds like SNC's. A picture
please.

W4ZCB

781. Re: Why one tubing material over another for beam antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 14:55:14 UTC
From: wb3fup@webtv.net
Message-ID: <10513-3D1C78D2-7@storefull-2335.public.lawson.webtv.net>
Source record: 43042

Re: Why one tubing material over another for beam antenna?

Group: rec.radio.amateur.homebrew Date: Thu, Jun 27, 2002, 10:01pm From: holford@sympatico.ca (Dave Holford)
akwusmc@aol.com wrote:
All,
I'm a new ham, and my first radio is a dual band HT. Obviously, I'm disappointed with the perfomance from inside the house, so I'm looking on the web for homebrew antenna projects so I can hit the club repeater. I've looked at j-poles, dipoles, and yagis from 2-7 elements. The copper tubing j-poles (http://www.arrl.org/tis/info/JPole-V.html) look the easiest, until I came across a direct-connect 2 element beam (http://www.qsl.net/w4sat/tiny2.htm). Three pieces of 1 inch aluminum tubing, and solder your feedline. but since I plunked the dollars for the HT, XYL is sensitive about the costs. I can get 2+ sticks of copper tubing for what the local Ace wants for aluminum.
What are the pros and cons of these two types of antennas, what is the significance of the diameter of tubing, and could I not substitute copper for aluminum - why or why not.
TIA, and 73
Anthony, KG4TBO
There are 'lots' of j-pole designs using copper plumbing pipe. I suggest you do a search and pick some that look likely to you. I took a quick look but decided there were too many for me to suggest one.
A search for "j-pole" returned 4290 hits so I narrowed it to "j-pole+copper" and got it down to 757
There should be some there to answer your questions.
I've seen quite a few copper j-poles, and have a couple of copper pipe dipoles myself for UHF use.
Regards,
Dave
==========
You can also build a J-pole out of 300 ohm TV twinlead, or 450 ohm "ladder line". They will not have the bandwidth of one assembled from copper pipe, but should be usable over entire band. Enclosed in PVC pipe they are suitable for permanent mounting. I am a scouter, and my walking stick antenna was very popular at the '93 National Jamboree, Where I was part of the K2BSA staff.

I also own a 2 meter dipole made from 2 19" lengths of 1/2" copper pipe. The center "insulator" is a PVC T. The copper sections are mounted in suitable (READ REALLY TIGHT) reducing flanges that is glued into opposite ends of the "T". I use rope in trees in scout camps to mount mine when in use, so I do not bother with the mounting possibilities, but the unused section of the T provides a way to more permanently mount

the antenna, with a little thought it should be easy enough to provide
for easy changes from vertical to horizontal polarization if desired.

73 es cul

wb3fup
a salty bear

782. Re: High voltage regulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 15:00:32 UTC
From: Peter John Lawton <peter_john.lawton@virgin.net>
Message-ID: <3D1C7A10.4014@virgin.net>
Source record: 43043

OvrReactor wrote:
>
> >Dose any one know any type of High voltage regulator (up to 200V 200ma)
> >
> >To be more exact , something like a 78XX series but for the the above
> >specs..
> >
> >
> >--
> >deosiereas.virtualave.net
>
> Try using a Texas Instruments TL783C. It can pass up to 700 mA (TO-220). Just
> be sure that you don't accidentally short it out, since the maximum safe
> voltage across the device can't exceed 125 V.

I second that. Perfect regulation, no ripple. But I've got through 5 or
so of them by accidental shorts. Might be some way to protect it.
Pete Lawton

783. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 18:04:36 UTC
From: "Dr. Detroit" <dr@housecall.com>
Message-ID: <Uy1T8.493004$Oa1.33154298@bin8.nnrp.aus1.giganews.com>
Source record: 43045
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

"JRPF" <jrpf@yahoo.com> wrote in message
news:WYZS8.118543$zh2.25786911@twister.neo.rr.com...
> Sparky = Frank = Aaron Voobner

jrpf = Phil Covington N8VB = Troll

784. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 18:12:33 UTC
From: JRPF <jrpf@yahoo.com>
Message-ID: <IG1T8.118613$zh2.25936586@twister.neo.rr.com>
Source record: 43046
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

"Dr. Detroit" <dr@housecall.com> wrote in message
news:Uy1T8.493004$Oa1.33154298@bin8.nnrp.aus1.giganews.com...
>
> "JRPF" <jrpf@yahoo.com> wrote in message
> news:WYZS8.118543$zh2.25786911@twister.neo.rr.com...
> > Sparky = Frank = Aaron Voobner
>
> jrpf = Phil Covington N8VB = Troll

Dr. Detroit = George Busch WA3MOJ = Moron

785. Re: 10-meter amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 18:29:53 UTC
From: "Dr. Detroit" <dr@housecall.com>
Message-ID: <BW1T8.32553$Ca2.1893113@bin2.nnrp.aus1.giganews.com>
Source record: 42947
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb

"Tom W8JI" <2w8ji@contesting.com> wrote in message
news:3d107009.78334105@news.akorn.net...
> On 18 Jun 2002 17:55:04 GMT, timnebo@aol.com187 (www.TimNebo.com)
> wrote:
>
> >station. the original poster would just be best off buying either a texas
star
> >400 that runs a qaud set of 2sc2290's or a texas star that runs a dual
set of
> >2sc2879's. either one of these boxes will work fine and are used by many
hams
> >world wide for mobile dx'ing.
>
> I would certainly hope NOT.
>
> There is a danger in purchasing totally illegal non-type-accepted
> amplifiers, like the illegal CB amplfiers manufactured by Texas Star.
>
> They operate class C, and have poor or no filtering. That means they
> splatter and trash up the ten meter band, and will even cause TVI and
> you might also run the risk of interfering with other licensed
> services. In fairness, they would be suitable for FM and CW use if you
> added a low-pass filter.
>
> I've actually measured some Texas Star amplifiers, and they were in
> the area of -15dB IM3 below one tone, and had harmonics suppressed
> only 20 dB!
>
> To put it bluntly they belong only on the CB band with illegal
> operators, not on the amateur bands! Ten meters is bad enough with CB
> QRM, we don't need a bunch of hams trashing the band with CB amps.

Tom, Old Tim is your typical don't follow the rules freebander/ham wannabe,
just go take a look at his website to see the type of individual your
dealing with. Guns, Drugs, and Hoes you will find.Why would he care about a
trivial Federal Rule?

786. Re: Why one tubing material over another for beam antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 20:45:14 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D1CCADA.4000205@eznec.com>
Source record: 42948

Troglodite wrote:
>
> Firstly, the reference standard here is the simple ground plane antenna. It has
> a gain of unity. Both the J-pole and the beam have gains greater than unity. . .

Hm. How much gain does a J-pole have over a ground plane?

Roy Lewallen, W7EL

787. Re: Sweep tubes to ceramic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 21:02:42 UTC
From: "Dr. Detroit" <dr@housecall.com>
Message-ID: <S94T8.430543$Gs.31790792@bin5.nnrp.aus1.giganews.com>
Source record: 42949
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

"JRPF" <jrpf@yahoo.com> wrote in message
news:lG1T8.118613$zh2.25936586@twister.neo.rr.com...

> > jrpf = Phil Covington N8VB = Troll
>
> Dr. Detroit = George Busch WA3MOJ = Moron

Phil Covington = Asshole= N8VB=Poem Pusy writer = family radio owner =
asshole =PhilCovington=N8VB

788. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 22:44:57 UTC
From: wiml@underhill.hhhh.org
Message-ID: <afiot9$qe4$1@underhill.hhhh.org>
Source record: 42973
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

In article <3D1AAA51.F64E16C7@sc.rr.com>,
Dwight Stewart <stewart@sc.rr.com> wrote:
>Tom W8JI wrote:
>> I have several dozen three prong and four
>> prong vibrators in a bunch of new old stock
>> tubes and parts I acquired from a local TV shop.
>>
>> If anyone needs one, let me know.
>
> Vibrators, like you're talking about, is an interesting thing to
>mention in a thread about XYLs that won't warm up. Think about it. Or is
>it just my mind in the gutter again?

You're not the only one. But I'm having a hard time imagining the
circuit topology to use with a 4-prong vibrator. Maybe I've just led
a sheltered life.

--
Wim Lewis <wiml@hhhh.org>, Seattle, WA, USA. PGP keyID 27F772C1

789. Experience with charging Ni-MH batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 23:06:34 UTC
From: derek_toeppen@agilent.com
Message-ID: <2219e080.0206281506.39496894@posting.google.com>
Source record: 42950

I am looking for experiences people have had with rapid
charging (C/2 to C) Ni-MH batteries using the negative
delta voltage charge termination technique. I have studied
the panasonic technical notes on this technique
(www.panasonic.com). I have confirmed the charge profile by
reading the data sheets for Maxim charger IC's
(see www.maxim-ic.com search MAX713). It all seemed straight
forward enough. In fact, I have been using this technique
on Ni-Cd batteries for years. It was just a matter of
adjusting the delta voltage detection and max and min voltage
limits.

However, I am having trouble getting the batteries to produce
a voltage drop. I have tried charging two seperate batteries.
One 3 cell pack. One 6 cell pack. First I tried at C/2. The
battery voltage ramped up nicely but then just leveled off.
No drop was observed on a voltage meter monitoring the process.
I manually terminated the 3 cell charge because I thought
they were getting too hot. When I tried C/2 on the 6 cell pack
the voltage ramped up and leveled as with the 3 cell pack. But
then too my supprise one of the cells in the pack vented before
a drop was detected. At C/2 the max specified time is 3 hours.
Venting occured at 2.25 hour. Just when I was expecting the voltage
to drop.
After discharging the 6 cell pack to 1 volt/cell, I tryed charging
it a C. This time I did get a nice detectable drop, but one
cell vented again.

Any inputs?

Derek Toeppen WA0ZTI
derek_toeppen@att.net

790. wrong!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-28 23:51:39 UTC
From: ratoutillegalauctions@yahoo.com
Message-ID: <8e19f630.0206281551.347d8657@posting.google.com>
Source record: 42951
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

```
"JRPF" <jrpf@yahoo.com> wrote in message
news:<lG1T8.118613$zh2.25936586@twister.neo.rr.com>...
> "Dr. Detroit" <dr@housecall.com> wrote in message
> news:Uy1T8.493004$Oa1.33154298@bin8.nnrp.aus1.giganews.com...
> >
> > "JRPF" <jrpf@yahoo.com> wrote in message
> > news:WYZS8.118543$zh2.25786911@twister.neo.rr.com...
> > > Sparky = Frank = Aaron Voobner
> >
> > jrpf = Phil Covington N8VB = Troll
>
Dr. Detroit = George Busch WA3MOJ = Moron Nope, its Chukkee K8CPA
```

791. Re: new-basement construction grounding suggestions wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-29 00:33:40 UTC
From: Idontwantspam@net
Message-ID: <3d1cffa5.7419644@news.bellatlantic.net>
Source record: 42953

On Thu, 27 Jun 2002 10:36:12 -0600, Sylvan Butler
<Znospam+noZs_0206@hpb13799Z.Zboi.hpZ.com.invalid> wrote:

>On Thu, 27 Jun 2002 12:59:35 +0100, Frank Dinger <gm0csz.kn6wh@ntlworld.com> wrote:
>> Although I don't know a specific source for this material , I have seen 25 x
>> 3 mm
>> (1" x 1/8") copper strip used for heavy duty earthing systems .
>
>Sounds like just the thing for a slug barrier...
>
>Please post here or e-mail to me if you see this material again.
>Buying from a building or electrical supply things is usually much
>cheaper than buying from a hobby radio shop. Of course, it looks
>like available in your part of the world may not mean much for me.
>:)
>
In the US, there is an outfit called McMaster-Carr, which sells all
sorts of interesting things in small quantities. They have copper bar
stock in many different sizes and alloys.

See www.mcmaster.com and look under raw materials/metals/copper.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

792. Re: High voltage regulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-29 00:37:31 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D1D018C.90A00102@bellatlantic.net>
Source record: 42954

Nice job!

john walton wrote:
>
> Here's one I use for the "pre"-preamplifier section of a rebuilt tube
> amplifier: http://www.tech-diy.com/fairchild_255a.htm
>
> >
> >
> > --
> > deosiereas.virtualave.net
> >
> >

793. Re: High voltage regulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-29 01:25:34 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <afj258pef1@nic.grnet.gr>
Source record: 42955

100-200V 150mA
"Bob" <balbert@cnmnetwork.com> wrote in message
news:vYGS8.10321$Ca2.975724@bin2.nnrp.aus1.giganews.com...

> How much current is needed, and what is the range of the source Voltage?
>
> Bob
>
>

794. Re: Why one tubing material over another for beam antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-29 01:30:06 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D1D0DD5.A6874636@bellatlantic.net>
Source record: 42956

akwusmc@aol.com wrote:
>
> All,
>
> I'm a new ham, and my first radio is a dual band HT. Obviously, I'm
> disappointed with the perfomance from inside the house, so I'm looking
> on the web for homebrew antenna projects so I can hit the club
> repeater.
>
> I've looked at j-poles, dipoles, and yagis from 2-7 elements. The
> copper tubing j-poles (http://www.arrl.org/tis/info/JPole-V.html) look
> the easiest, until I came across a direct-connect 2 element beam
> (http://www.qsl.net/w4sat/tiny2.htm). Three pieces of 1 inch aluminum
> tubing, and solder your feedline. but since I plunked the dollars for
> the HT, XYL is sensitive about the costs. I can get 2+ sticks of
> copper tubing for what the local Ace wants for aluminum.
>
> What are the pros and cons of these two types of antennas, what is the
> significance of the diameter of tubing, and could I not substitute
> copper for aluminum - why or why not.
>
> TIA, and 73
>
> Anthony, KG4TBO

As someone else mentioned, you can't solder aluminum.
If you use aluminum - a great choice, by the way - use
stainless steel hardware. If you use regular screws &
nuts they'll rust and corrode. Even zinc plated hardware
will rust in time. Stainless costs more, but is worth
every penny if you want your antenna to last.

795. Re: wrong!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-29 02:11:41 UTC
From: John P Vassel <john@vassel.net>
Message-ID: <3d1d175d$0$1423$2c3e98f8@news.voyager.net>
Source record: 42957
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

ratoutillegalauctions@yahoo.com (AntiKeyclowns Rule the NG) wrote in
news:8e19f630.0206281551.347d8657@posting.google.com:

> "JRPF" <jrpf@yahoo.com> wrote in message
> news:<lG1T8.118613$zh2.25936586@twister.neo.rr.com>...
>> "Dr. Detroit" <dr@housecall.com> wrote in message
>> news:Uy1T8.493004$Oa1.33154298@bin8.nnrp.aus1.giganews.com...
>> >
>> > "JRPF" <jrpf@yahoo.com> wrote in message
>> > news:WYZS8.118543$zh2.25786911@twister.neo.rr.com...
>> > > Sparky = Frank = Aaron Voobner
>> >
>> > jrpf = Phil Covington N8VB = Troll
>>
> Dr. Detroit = George Busch WA3MOJ = Moron Nope, its Chukkee K8CPA
>

Bruces son is still wandering about?

--
John Vassel
KC8SKE
RTFD Volunteer Firefighter

796. Re: wrong!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-29 05:54:33 UTC
From: k8cpa@arrl.net
Message-ID: <3d1d4afc.2608024@news.mi.comcast.giganews.com>
Source record: 42958
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

On 29 Jun 2002 02:11:41 GMT, John P Vassel <john@vassel.net> wrote:

>> Dr. Detroit = George Busch WA3MOJ = Moron Nope, its Chukkee K8CPA
>>
>
>Bruces son is still wandering about?
>
>--
>John Vassel
>KC8SKE
>RTFD Volunteer Firefighter

Fuck you asshole... and if I ever fucking see you face to face bitch,
I'll kick your ass. If face, I might come to Mulliken and stomp your
ass...

Bruces son, you're lucky you don't live down here...

797. Wanted IC TC5080P

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-29 09:10:59 UTC
From: David - VK4GL <PleaseSeeText@ToReply.com>
Message-ID: <3d1d8682$0$28007$afc38c87@news.optusnet.com.au>
Source record: 42959

Hi,

I'm repairing an old ICOM IC22S.
The TC5080P (16 pin DIP) has died.
Any ideas of a source please ?

TIA

David - VK4GL
davidgem at optusnet dot com dot au
dah di dah

798. Re: Cross Needle Meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-29 10:36:04 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <hwNbdKJU2YH9EwzI@fslife.co.uk>
Source record: 42970

Thanks for all replies.

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

799. Re: wrong!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-29 10:41:34 UTC
From: John P Vassel <john@vassel.net>
Message-ID: <3d1d8edd$0$1430$2c3e98f8@news.voyager.net>
Source record: 42960
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

k8cpa@arrl.net (chuck) wrote in
news:3d1d4afc.2608024@news.mi.comcast.giganews.com:

> On 29 Jun 2002 02:11:41 GMT, John P Vassel <john@vassel.net> wrote:
>
>
>>> Dr. Detroit = George Busch WA3MOJ = Moron Nope, its Chukkee K8CPA
>>>
>>
>>Bruces son is still wandering about?
>>
>>--
>>John Vassel
>>KC8SKE
>>RTFD Volunteer Firefighter
>
>
> Fuck you a**hole... and if I ever f**king see you face to face bitch,
> I'll kick your ass. If face, I might come to Mulliken and stomp your
> a**...
>
> Bruces son, you're lucky you don't live down here...
>
>
>
>

Excuse me?.. I merely asked if this was the same chuckee that was around
when I lived down in the detroit area.
By the way, I'm happy to not be living 'down there' and it's wonderful
here in mulliken. Feel free to visit anytime.

--
John Vassel
KC8SKE
RTFD Volunteer Firefighter

800. Re: wrong!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-29 10:49:00 UTC
From: John P Vassel <john@vassel.net>
Message-ID: <3d1d909c$0$1428$2c3e98f8@news.voyager.net>
Source record: 42961
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

k8cpa@arrl.net (chuck) wrote in
news:3d1d4afc.2608024@news.mi.comcast.giganews.com:

> On 29 Jun 2002 02:11:41 GMT, John P Vassel <john@vassel.net> wrote:
>
>
>>> Dr. Detroit = George Busch WA3MOJ = Moron Nope, its Chukkee K8CPA
>>>
>>
>>Bruces son is still wandering about?
>>
>>--
>>John Vassel
>>KC8SKE
>>RTFD Volunteer Firefighter
>
>
> Fuck you asshole... and if I ever fucking see you face to face bitch,
> I'll kick your ass. If face, I might come to Mulliken and stomp your
> ass...
>
> Bruces son, you're lucky you don't live down here...
>
>
>
>

By the way, I realize now that you're charlies son. Just took me awhile to
remember back that long. It wasnt intended as an insult. But as usual,
you're still running around angry at the world.
Come up and visit some time!

--
John Vassel
KC8SKE
RTFD Volunteer Firefighter

801. Re: Experience with charging Ni-MH batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-29 10:49:22 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <afk3bhhsq1@paris.btinternet.com>
Source record: 42962

"Derek Toeppen" <derek_toeppen@agilent.com> wrote in message
news:2219e080.0206281506.39496894@posting.google.com...
> I am looking for experiences people have had with rapid
> charging (C/2 to C) Ni-MH batteries using the negative
> delta voltage charge termination technique.

[deleted]

I'd be inclined to do this type of experimentation with a single cell
initially, to get a better feel for what is going on. Then use two cells,
and so on. You probably have differences between the cells that is affecting
the voltage measurement.

Leon
--
Leon Heller, G1HSM leon_heller@hotmail.com
http://www.geocities.com/leon_heller
Low-cost Altera Flex design kit: http://www.leonheller.com

802. Re: wrong!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-29 10:50:22 UTC
From: tnom@mucks.net
Message-ID: <i64rhu802l2st36oqc9nmo2etec5t1p5tr@4ax.com>
Source record: 42963
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

>Dr. Detroit = George Busch WA3MOJ = Moron Nope, its Chukkee K8CPA

Wrong.....Dr.Detroit is Leland

803. Re: wrong!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-29 14:42:52 UTC
From: "Dr. Detroit" <dr@housecall.com>
Message-ID: <MHjT8.189103$_j6.9723884@bin3.nnrp.aus1.giganews.com>
Source record: 42964
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

<tnom@mucks.net> wrote in message
news:i64rhu802l2st36oqc9nmo2etec5t1p5tr@4ax.com...
>
> >Dr. Detroit = George Busch WA3MOJ = Moron Nope, its Chukkee K8CPA
>
> Wrong.....Dr.Detroit is Leland

He is when did you find this startling revelation??

804. Re: wrong!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-29 15:11:05 UTC
From: Randy <rchapman8@houston.rr.com>
Message-ID: <d6kT8.5356$p85.238257@twister.austin.rr.com>
Source record: 42965
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

"Dr. Detroit" <dr@housecall.com> wrote in message
news:MHjT8.189103$_j6.9723884@bin3.nnrp.aus1.giganews.com...
>
> <tnom@mucks.net> wrote in message
> news:i64rhu802l2st36oqc9nmo2etec5t1p5tr@4ax.com...
> >
> > >Dr. Detroit = George Busch WA3MOJ = Moron Nope, its Chukkee K8CPA
> >
> > Wrong.....Dr.Detroit is Leland
>
> He is when did you find this startling revelation??
>
>
>

Damn George! Sounds like you're a little depressed that someone else may get
the credit you crave.

805. Re: Experience with charging Ni-MH batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-29 15:21:10 UTC
From: Michael Neverdosky <michaeln@cfl.rr.com>
Message-ID: <3D1DD012.53B83B09@cfl.rr.com>
Source record: 42966

Derek Toeppen wrote:
>
> I am looking for experiences people have had with rapid
> charging (C/2 to C) Ni-MH batteries using the negative
> delta voltage charge termination technique.

My experience is that the Ni-MH batteries should have charge stopped
when the voltage stops rising. Do not wait for a drop.
There are a number of chargers that can be set this way.

It is also a good idea to have a temp sensor on the pack to
stop charging if the temperature rises too high.

I am switching to Ni-MH in everything where I use rechargeables.

For items requiring long standby and reliable operation (emergency
lights)
I use lithium primary cells.

michael N6CHV

806. Re: wrong!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-29 15:34:18 UTC
From: "Dr. Detroit" <dr@housecall.com>
Message-ID: <ZrkT8.459912$%y.32477754@bin4.nnrp.aus1.giganews.com>
Source record: 42967
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

"Randy" <rchapman8@houston.rr.com> wrote in message
news:d6kT8.5356$p85.238257@twister.austin.rr.com...

> Damn George! Sounds like you're a little depressed that someone else may
get
> the credit you crave.

Randy, If anyone knows you should know who Dr.Detroit is.
Why blame Leland when we both know its not him.

807. Re: wrong!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-29 15:56:49 UTC
From: JJ <radiobuff0@mailcity.net>
Message-ID: <3D1DBB30.43FF7DFA@mailcity.net>
Source record: 42968
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

chuck wrote:

>
> Fuck you asshole... and if I ever fucking see you face to face bitch,
> I'll kick your ass. If face, I might come to Mulliken and stomp your
> ass...
>
> Bruces son, you're lucky you don't live down here...

Don't you mean "In fact" instead of "In face"? You really should
calm down when you post chuckie.

808. Re: Experience with charging Ni-MH batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-29 17:28:17 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D1DEE31.75F2609@clifto.com>
Source record: 42969

Derek Toeppen wrote:
> However, I am having trouble getting the batteries to produce
> a voltage drop.

My experience with NiMH is limited, but it matches yours. I haven't seen a voltage dip at the end of charge; I have seen the voltage hit a plateau and sit very precisely (according to my Fluke 77 without changing by as much as the 10 mV resolution of the scale I used.

I don't much like the negative-delta method anyway. I've found that older cells, especially weak ones, can get noisy during the charge cycle and make the voltage fluctuate; the fluctuation is easily enough to shut off a delta-V charger, long before the cell or pack is charged.

--
.signature in flux

809. Re: wrong!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-30 01:57:30 UTC
From: tnom@mucks.net
Message-ID: <28pshukau8crtnhco71fskr7scmecbp7q2@4ax.com>
Source record: 42971
Cross-posted to: rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.swap

>Randy, If anyone knows you should know who Dr.Detroit is.
>Why blame Leland when we both know its not him.
>
>
It?..............You mean "you" are not Leland.

Tell me another story.

810. WTB small plate xfmr

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-30 07:36:54 UTC
From: Paul Cooper <plcooper@starband.net>
Message-ID: <3D1EB527.5020902@starband.net>
Source record: 42972

WTB small plate xfmr 115 pri. 1000-1200 sec., no ct needed, @ 250 ma.

Paul

plcooper@starband.net

811. Re: Wanted IC TC5080P

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-30 12:10:37 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-3006020810560001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42974

In article <3d1d8682$0$28007$afc38c87@news.optusnet.com.au>, "David - VK4GL" <PleaseSeeText@ToReply.com> wrote:

> Hi,
>
> I'm repairing an old ICOM IC22S.
> The TC5080P (16 pin DIP) has died.
> Any ideas of a source please ?
>
> TIA
>
> David - VK4GL
> davidgem at optusnet dot com dot au
> dah di dah

Have you tried to get an ECG1207 or other equivalent part? I don't find it listed in the NTE catalog, but you can try Questlink.com for the TC5080, but it may be so old that the CMOS part is no longer made. There could be a newer version part which has the same pin outs and would work fine in this application. Packaging may be the greatest problem, however, as the newer part may not come as a dip so you may have to solder on leads. I hope you have steady hands and a microscope. :-)

73,

Steve Carlton WB4CZR
Plantation, FL

.../-.-

812. FA: xtals w/gud 80 & 40 cw freqs. -ends in a couple hours

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-30 12:39:49 UTC
From: Tom N&#65533;JMY - AAR7FV <tfarl@IowaTelecom.net>
Message-ID: <afmu75$nn8$1@ins22.netins.net>
Source record: 42975
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Ending Sunday @ 8:18 am PDT (1518Z).

Thanks for looking. Here's the links:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1362041716

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1362041714

Tnx es vy 73,
Tom

813. Re: Wanted IC TC5080P

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-30 13:38:44 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <3D1F09E4.5000303@oceanfree.net>
Source record: 42976

>>Hi,
>>
>>I'm repairing an old ICOM IC22S.
>>The TC5080P (16 pin DIP) has died.
>>Any ideas of a source please ?
>>
>>TIA

IIRC, the TC5080 was used in the PLL circuit of the
Sharp 40 channel CR rigs. Some of the CB parts suppliers
might be able to help.

73, Ed. EI9GQ.

--
Remove 'X' to reply.
http://homepage.eircom.net/~ei9gq
Linux 2.4.18

814. Building an RF Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-30 18:19:55 UTC
From: amdx <amdx@att.net>
Message-ID: <fZHT8.69110$UT.4792464@bgtnsc05-news.ops.worldnet.att.net>
Source record: 42977

I want to build an RF switch to turn my TV cable signal on and off.
I want to install this were the cable enters the house, and be able to
switch it on and off from inside the house by +5v or +12v.
I'd like to have fairly low attenuation, (I'm already splitting the cable
signal).
I don't know if I need to use diodes, FET switches or relays.
I suspect I may need to build a stripline PC board.
Any suggestions?

Mike

815. Re: Building an RF Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-30 19:17:45 UTC
From: jcplpsm@aol.communicate
Message-ID: <20020630151745.04656.00000778@mb-mn.aol.com>
Source record: 42978

>I want to build an RF switch to turn my TV cable signal on and off.

Hi Mike, Can I ask why you are trying to switch it on and off?

Scott M.

816. Amrad Pre-amp and antenna found in QST September 2001

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-30 22:29:57 UTC
From: Jim <jbollit@ix.netcom.com>
Message-ID: <afo0nt$4ol$1@slb3.atl.mindspring.net>
Source record: 42979

Can someone scan in the Amrad antenna article (with pre-amp) found in the September 2001 issue of QST and e-mail it to me?

Or can someone point me to a web site that has the article?

I am interested in the amp, especially the specs for the 2 order and 3 order intercept point.

Tnx in advance

Jim

817. Re: Help XYL won't warm up

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-06-30 23:44:07 UTC
From: Dwight Stewart <stewart@sc.rr.com>
Message-ID: <3D1F981D.DAA9BCCF@sc.rr.com>
Source record: 42980
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Wim Lewis wrote:
>
> You're not the only one. But I'm having a
> hard time imagining the circuit topology
> to use with a 4-prong vibrator. Maybe I've
> just led a sheltered life.

Oh, I know I'm not the only one. Four other persons, perhaps too
chicken to say anything here, sent their comments by email. That's fine.
As I told them, I was really too chicken to say more than what I
actually did say, even though I obviously wanted to say more. ;)

And, yes, you may have lived a sheltered life. You see, one of the
prongs is... Wait. You said circuit, didn't you? Never mind. ;)

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

818. WTB Service Manuals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-01 00:10:27 UTC
From: Fred Allen <fallen-idc@worldnet.att.net>
Message-ID: <T5NT8.62107$LC3.4736862@bgtnsc04-news.ops.worldnet.att.net>
Source record: 42981

I want to buy the service manuals for the Sony ICF-Pro80, (including the
Frequency Converter), and the Service Manual for the Sony Air8 Receiver.
Please e-mail price to:
fallen-idc@worldnet.att.net

819. duplexers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-01 00:48:46 UTC
From: Rod <rivservice@bigpond.com>
Message-ID: <OFNT8.379129$o66.1023188@news-server.bigpond.net.au>
Source record: 42982

Gday all
just wondering if anyone has plans for home brew duplexers uhf primarily or
does anyone have some info or webpages i could take a look at
thanks rjroy@silchip.com.au

820. Re: Building an RF Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-01 02:57:34 UTC
From: john graesser <graesser@tca.net>
Message-ID: <uhvh5fd16m6q8b@corp.supernews.com>
Source record: 42983

"SAM" <jcplpsm@aol.communicate> wrote in message
news:20020630151745.04656.00000778@mb-mn.aol.com...
> >I want to build an RF switch to turn my TV cable signal on and off.
>
> Hi Mike, Can I ask why you are trying to switch it on and off?
>
> Scott M.

Perhaps he has an illegal cable hookup and needs to shut it off quick if the cable police come around? Around here it is a felony if you are caught with an illegal cable hookup.

If it is a matter of rf getting back into the tv, I find it easier to just shut off the tv while using the hf rig. Though I guess someone might be watching the vcr, rf in thru the cable still shouldn't affect the tv then.
thanks, John.
KC5DWD

821. Re: Experience with charging Ni-MH batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-01 05:35:35 UTC
From: "Dana H. Myers" <dana@dioxine.net>
Message-ID: <3D1FEA2E.4010507@dioxine.net>
Source record: 42984

Clifton T. Sharp Jr. wrote:

> I don't much like the negative-delta method anyway. I've found that older
> cells, especially weak ones, can get noisy during the charge cycle and
> make the voltage fluctuate; the fluctuation is easily enough to shut off
> a delta-V charger, long before the cell or pack is charged.

Sounds almost like the battery is starting to outgas during charging
which causes the noise.

Dana

822. Porblems with VXO, TX birdies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-01 08:11:53 UTC
From: n2cqr@clix.pt
Message-ID: <3d200e74.765899266@news.clix.pt>
Source record: 42985

I liked the recent VXO thread on QRP-L, and hope I can tap the same sources of wisdom in my effort to resolve a problem I've been having with my 17 meter SSB TX. I first mentioned this problem a couple of months ago in a message entitled "A tale of two Crystals." Put on your thinking caps guys, 'cause this ones a tough one.

Here's the deal: Carrier oscillator at 5.173 to balanced modulator to Crystal filter to NE602 mixer. VXO hetrodyne oscillator (Colpitts, with rock, coil and cap in series).

I have two fundamental crystals from the same manufacturer. One at 23.323 Mhz, the other at 23.303 Mhz. My plan was to use the first for around 18.130 - 18.150 and the other for the lower portion of the 17 meter phone band.

Both rocks work fine in the VXO circuit. I can pull the 23.323 rock about 23 Khz, and the 23.303 rock pulls about 15 khz. Both sound clean when I listen at the 23 mhz freqs. So I don't think the problem is in the VXO.

But when I put the 23.303 rock in the circuit and listen at 18 Mhz, all kinds of spurs and birdies pop up around the operating frequency. They are very close to the op frequency. When I set the RX to a freq in the operating range, and then turn the tuning cap on the TX, instead of the one nice clean signal ("whoop") that I hope to hear, I get multiple signals ("whoop, whoop, whoop"). I can't even tell which one is the strongest. At several points I can hear simultaneous oscillations at freqs within a few hundred cycles.

Strange thing is that this does not happen with the 23.323 rock. That one produces the desired clean signal.

Remember, both rocks sound clean in the VXO -- the problem arises only when the mixer and the rest of the TX circuits are brought in.

Important clue: I tried changing the carrier oscillator rocks. I pulled out the 5176.8 rock (USB) and put in a 5173.5 rock (LSB). Birdies disappeared! "Aha! Bad carrier freq rock!" I thought. I figured I could just pull the "good" carrier freq rock to the desired freq. But when I did so, the birdies returned!

So my conclusion is that somewhere in there energy from the VXO hetrodyne oscillator is interacting with energy from the carrier oscillator to produce the birdies. And it seems that this interaction happens when the VXO is using the 23.303 rock, but not when it uses the 23.323 rock. Does this sound correct?

I've tried reducing the voltage at which the VXO operates. No change.
I've checked the signal level going into the NE602. Correct.

Any theories on what is going on here? Any ideas on possible
solutions? Help! I'm stranded in on the upper portion of 17 phone!

Thanks,

73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 25.7 W
http://planeta.clix.pt/n2cqr

823. Re: Building an RF Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-01 12:22:44 UTC
From: amdx <amdx@att.net>
Message-ID: <oQXT8.62875$LC3.4791481@bgtnsc04-news.ops.worldnet.att.net>
Source record: 42986

Sure, it's just a way to keep the kids from spending all day
watching Cartoon Network or Nick. If the cable's not working
they might go out and ride their bike, play in the woods, read
a book, maybe even knock another tooth out sword fighting with lengths of
PVC pipe. Mike

P.S. The permenant tooth came in just fine.

> Hi Mike, Can I ask why you are trying to switch it on and off?
>
> Scott M.

824. Re: duplexers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-01 13:17:39 UTC
From: Clinton <clinton@_nospam_netidea.com>
Message-ID: <afph9d0soa@enews4.newsguy.com>
Source record: 42987

The 16th Edition of the ARRL Antenna Book has plans.

Clinton Peebles VE7KNL
Salmo, B.C. Canada
Remove _nospam_ to reply

"Rod" <rivservice@bigpond.com> wrote in message
news:OFNT8.379129$o66.1023188@news-server.bigpond.net.au...
> Gday all
> just wondering if anyone has plans for home brew duplexers uhf primarily
or
> does anyone have some info or webpages i could take a look at
> thanks rjroy@silchip.com.au
>
>

825. Re: Porblems with VXO, TX birdies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-01 14:55:33 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnai0rb4.c56.QSB@animas.frontier.net>
Source record: 42988

On Mon, 01 Jul 2002 08:11:53 GMT, Bill Meara scribbled:
> Here's the deal: Carrier oscillator at 5.173 to balanced modulator to
> Crystal filter to NE602 mixer. VXO hetrodyne oscillator (Colpitts,
> with rock, coil and cap in series).
>
> I have two fundamental crystals from the same manufacturer. One at
> 23.323 Mhz, the other at 23.303 Mhz. My plan was to use the first for
> around 18.130 - 18.150 and the other for the lower portion of the 17
> meter phone band.
>
> Both rocks work fine in the VXO circuit. I can pull the 23.323 rock
> about 23 Khz, and the 23.303 rock pulls about 15 khz. Both sound
> clean when I listen at the 23 mhz freqs. So I don't think the problem
> is in the VXO.
>
> But when I put the 23.303 rock in the circuit and listen at 18 Mhz,
> all kinds of spurs and birdies pop up around the operating frequency.
> They are very close to the op frequency. When I set the RX to a freq
> in the operating range, and then turn the tuning cap on the TX,
> instead of the one nice clean signal ("whoop") that I hope to hear, I
> get multiple signals ("whoop, whoop, whoop"). I can't even tell which
> one is the strongest. At several points I can hear simultaneous
> oscillations at freqs within a few hundred cycles.
>
> Strange thing is that this does not happen with the 23.323 rock. That
> one produces the desired clean signal.
>
> Remember, both rocks sound clean in the VXO -- the problem arises only
> when the mixer and the rest of the TX circuits are brought in.
>
> Important clue: I tried changing the carrier oscillator rocks. I
> pulled out the 5176.8 rock (USB) and put in a 5173.5 rock (LSB).
> Birdies disappeared! "Aha! Bad carrier freq rock!" I thought. I
> figured I could just pull the "good" carrier freq rock to the desired
> freq. But when I did so, the birdies returned!
>
> So my conclusion is that somewhere in there energy from the VXO
> hetrodyne oscillator is interacting with energy from the carrier
> oscillator to produce the birdies. And it seems that this interaction
> happens when the VXO is using the 23.303 rock, but not when it uses
> the 23.323 rock. Does this sound correct?
>
> I've tried reducing the voltage at which the VXO operates. No change.
> I've checked the signal level going into the NE602. Correct.

>
> Any theories on what is going on here? Any ideas on possible
> solutions? Help! I'm stranded in on the upper portion of 17 phone!

hmmmmmm....
The (8 x 5.173) - 23.303 looks suspicious in your application.
But, then, so does:
(8 x 5.173) - 23.323 .....

I think the problem may lie in some 'unique' set(s) of mixing
combinations such as this. That's what I deduce from your
xtal swapping experiments.
Locate an intermod calculation program
(it's application ain't *exactly* for this purpose, but....),
and see what it tells you.

HTH es 73
Jonesy W3DHJ
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

826. 1mH coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-01 18:38:12 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <afq7d9$1no$1@nic.grnet.gr>
Source record: 42989

ok I know this mite sound a bit stupid......
has any one ever made a 1mH coil? and if yes can you share a bit of you knowledge (wire turns, coil diameter,)

--
deosiereas.virtualave.net

827. Re: 1mH coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-01 18:58:40 UTC
From: Monaco <ihaveno@email.com>
Message-ID: <Xns923ED54E7A44Eihavenoemailcom@195.121.6.67>
Source record: 42990

"Deos" <lineoffiretoday@yahoo.com> wrote in news:afq7d9$1no$1@nic.grnet.gr:

> ok I know this mite sound a bit stupid......
> has any one ever made a 1mH coil? and if yes can you share a bit of you
> knowledge (wire turns, coil diameter,)
>
>
>
> --
> deosiereas.virtualave.net
>
>
>

I have a program that is calculleting how many turns,for the right
value.
May I sent it to this email adres?
lineoffiretoday@yahoo.com

828. Re: Experience with charging Ni-MH batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-01 19:04:06 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D20A7A6.253A2F25@clifto.com>
Source record: 42991

Dana H. Myers wrote:
> Clifton T. Sharp Jr. wrote:
> > I don't much like the negative-delta method anyway. I've found that older
> > cells, especially weak ones, can get noisy during the charge cycle and
> > make the voltage fluctuate; the fluctuation is easily enough to shut off
> > a delta-V charger, long before the cell or pack is charged.
>
> Sounds almost like the battery is starting to outgas during charging
> which causes the noise.

Hm. The noise I refer to usually happens somewhere in the middle of the
charging cycle, long before the cell is significantly above 1.2V with current
applied (I find most NiCD cells go to at least 1.40V before showing the
negative delta-V). I wouldn't have expected outgassing without overcharge.

--
.signature in flux

829. Ferrite toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-01 19:22:49 UTC
From: SB <susantv69_uk@btinternet.com>
Message-ID: <afqa68$315$1@helle.btinternet.com>
Source record: 42992

Can anyone please direct me to a supplier in the UK for ferrite toroid formers of the type T-130-2, T-200-6 and subsequent types in this series.

Simon G7CPN.

830. Re: Porblems with VXO, TX birdies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-01 19:25:05 UTC
From: Alan Melia <Alan.Melia@btinternet.com>
Message-ID: <afqaaf$69d$1@paris.btinternet.com>
Source record: 42993

Hi Bill, This is one of the reasons a spec analyser is quite useful. Not all crystals are 'equal'. I suspect that if you look at that second crystal (23.303) carefully you will find the are parasitic resonances at significant levels. What may be happening is that the osc is not stopping bit jumping to a parasitic resonance and back. This may also explain why it will not pull as far. The main frequency is FMed by the hopping rate so you get a comb of frequencies. The parasitic and the 'hop rate' may be outside the IF bandwith so it may not be heard, (the signal at any one time sound T9) but should show on a sensitive SA.

I had a 1MHz in a BC221 many years ago that had 'modulation' on it !! It was jumping every millsec or so. Of course all these frequencies are present so all the birdies when you use it as het source. It it was an IMD problem you would get it with both rocks. Solution ....get a new rock ...I am afraid.

Cheers de Alan G3NYK

Bill Meara wrote in message <3d200e74.765899266@news.clix.pt>...
>I liked the recent VXO thread on QRP-L, and hope I can tap the same
>sources of wisdom in my effort to resolve a problem I've been having
>with my 17 meter SSB TX. I first mentioned this problem a couple of
>months ago in a message entitled "A tale of two Crystals." Put on your
>thinking caps guys, 'cause this ones a tough one.
>
>Here's the deal: Carrier oscillator at 5.173 to balanced modulator to
>Crystal filter to NE602 mixer. VXO hetrodyne oscillator (Colpitts,
>with rock, coil and cap in series).
>
>I have two fundamental crystals from the same manufacturer. One at
>23.323 Mhz, the other at 23.303 Mhz. My plan was to use the first for
>around 18.130 - 18.150 and the other for the lower portion of the 17
>meter phone band.
>
>Both rocks work fine in the VXO circuit. I can pull the 23.323 rock
>about 23 Khz, and the 23.303 rock pulls about 15 khz. Both sound
>clean when I listen at the 23 mhz freqs. So I don't think the problem
>is in the VXO.
>
>But when I put the 23.303 rock in the circuit and listen at 18 Mhz,
>all kinds of spurs and birdies pop up around the operating frequency.
>They are very close to the op frequency. When I set the RX to a freq
>in the operating range, and then turn the tuning cap on the TX,
>instead of the one nice clean signal ("whoop") that I hope to hear, I
>get multiple signals ("whoop, whoop, whoop"). I can't even tell which

>one is the strongest. At several points I can hear simultaneous
>oscillations at freqs within a few hundred cycles.
>
>Strange thing is that this does not happen with the 23.323 rock. That
>one produces the desired clean signal.
>
>Remember, both rocks sound clean in the VXO -- the problem arises only
>when the mixer and the rest of the TX circuits are brought in.
>
>Important clue: I tried changing the carrier oscillator rocks. I
>pulled out the 5176.8 rock (USB) and put in a 5173.5 rock (LSB).
>Birdies disappeared! "Aha! Bad carrier freq rock!" I thought. I
>figured I could just pull the "good" carrier freq rock to the desired
>freq. But when I did so, the birdies returned!
>
>So my conclusion is that somewhere in there energy from the VXO
>hetrodyne oscillator is interacting with energy from the carrier
>oscillator to produce the birdies. And it seems that this interaction
>happens when the VXO is using the 23.303 rock, but not when it uses
>the 23.323 rock. Does this sound correct?
>
>I've tried reducing the voltage at which the VXO operates. No change.
>I've checked the signal level going into the NE602. Correct.
>
>Any theories on what is going on here? Any ideas on possible
>solutions? Help! I'm stranded in on the upper portion of 17 phone!
>
>Thanks,
>
>
>73 de Bill CU2JL N2CQR
>Sao Miguel Island, The Azores, Portugal
>37.7 N 25.7 W
>http://planeta.clix.pt/n2cqr

831. Re: 1mH coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-01 19:33:21 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <ra2U8.2927$Y_.101583@newsfep1-win.server.ntli.net>
Source record: 42995

> ok I know this mite sound a bit stupid......
> has any one ever made a 1mH coil? and if yes can you share a bit of you
> knowledge (wire turns, coil diameter,)
========
There are hardly any stupid questions on this NG , this one IMO definitely
isn't.

An inductor of 1 mH can be readily wound on a toroid ,provided the toroid
material is suitable for the intended freq. range . For MF or lower HF freqs
a ferrite (antenna) bar as used in a portable medium wave receiver might be
suitable .
Could you be more specific for which freq range you intend using the
inductor ?
Also , is there any RF power involved in the inductor's circuit.
A 1 mH inductor on a former without a ferrous core would mean a fairly large
number of windings.

Frank gm0csz.kn6wh@ntlworld.com

832. Re: 1mH coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-01 19:34:52 UTC
From: amdx <amdx@att.net>
Message-ID: <w92U8.63338$LC3.4827331@bgtnsc04-news.ops.worldnet.att.net>
Source record: 42994

I recently made 334mh coil, a 42mh coil and a 2.5mh coil.
What frequency range are you working with?

For the 2.5 mh coil I used a pot core 3F3 material with an
A sub L of 6,770.
So... sqrt(2.5/6770)x1000 = 19.21 turns.
As I recall I had to pull a couple of turns off to get the correct
inductance.

> has any one ever made a 1mH coil? and if yes can you share a bit of you
> knowledge (wire turns, coil diameter,)
>
>
>
> --
> deosiereas.virtualave.net
>
>

833. Re: Ferrite toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-01 21:56:17 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <afqj61$fn4$1@venus.btinternet.com>
Source record: 42996

"SB" <susantv69_uk@btinternet.com> wrote in message
news:afqa68$315$1@helle.btinternet.com...
> Can anyone please direct me to a supplier in the UK for ferrite toroid
> formers of the type T-130-2, T-200-6 and subsequent types in this series.
>
> Simon G7CPN.
>
>

These look more like iron dust toroids than ferrite.

73, Leon

834. Re: Where do I start

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-01 23:43:55 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <3d20e84d$1_2@newsa.ev1.net>
Source record: 42897

You will start as a Technican, provided you pass the test first.
Radio Shack has the ham radio starter kit. Then you need to find out when &
where the next testing session will be in your area. Then bring $6 to the
session, a photo ID, and pencil.
Good luck.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Kelvin Barnes" <KBARNES@NOSPAMMINGsi.rr.com> wrote in message
news:YM4U8.57874$QD2.14831191@twister.nyc.rr.com...
> I want to get started as a Ham hobbyist doing things the right way (ie no
> illegal transmissions and all that nonsense).
>
> I'm a bit confused as to the license I should start with.
> Also are there any good books on the market that I can study to pass the
> exams?
>
> So far I have not found any FCC sponsored or sanctioned study guides.
>
>
>

835. Silkscreen in PCB tools, (Ultiboard in particular)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 01:14:58 UTC
From: "Clyde R. Shappee" <clydes@world.std.com>
Message-ID: <3D20FE92.C5E7B35F@world.std.com>
Source record: 42898

Hi,

Can anyone here comment about silk-screen in PCB tools?

I am using Ultiboard for the first time (I have used predecessors) and in this new design I am noticing that some silk-screen on the bottom of my board is "Normal", i. e. readable from the top. Others are reverse, as I would expect.

I have figured out how to reverse the silk-screen that appears "normal", but I just want to be sure I am getting this correct. I don't have a Gerber viewer, and although Ultiboard may have one, right now I don't know what to trust.

Any advice? Most important is the answer on how the silk-screen from the backside should appear.

Clyde

KA1CRV

836. Re: Silkscreen in PCB tools, (Ultiboard in particular)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 01:44:15 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <Pz7U8.79895$Ca2.4678996@bin2.nnrp.aus1.giganews.com>
Source record: 42899

You have the option of "printing" the top and bottom layers, just run through a couple pieces of paper to see what they look like.

"Clyde R. Shappee" <clydes@world.std.com> wrote in message news:3D20FE92.C5E7B35F@world.std.com...
> Hi,
>
> Can anyone here comment about silk-screen in PCB tools?
>
> I am using Ultiboard for the first time (I have used predecessors) and
> in this new design I am noticing that some silk-screen on the bottom of
> my board is "Normal", i. e. readable from the top. Others are reverse,
> as I would expect.
>
> I have figured out how to reverse the silk-screen that appears "normal",
> but I just want to be sure I am getting this correct. I don't have a
> Gerber viewer, and although Ultiboard may have one, right now I don't
> know what to trust.
>
> Any advice? Most important is the answer on how the silk-screen from
> the backside should appear.
>
> Clyde
>
> KA1CRV
>

837. Ten-Tec 1254 review *****New posting*****

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 02:05:43 UTC
From: itzack@hotmail.com
Message-ID: <457c1251.0207011805.61656043@posting.google.com>
Source record: 42900

www.geocities.com/itzack

73, john

838. Re: duplexers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 02:11:04 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0107022211240001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42901

In article <afph9d0soa@enews4.newsguy.com>, "Clinton"
<clinton@_nospam_netidea.com> wrote:

> The 16th Edition of the ARRL Antenna Book has plans.
> ---
> Clinton Peebles VE7KNL
> Salmo, B.C. Canada
> Remove _nospam_ to reply
>
> "Rod" <rivservice@bigpond.com> wrote in message
> news:OFNT8.379129$o66.1023188@news-server.bigpond.net.au...
> > Gday all
> > just wondering if anyone has plans for home brew duplexers uhf primarily
> or
> > does anyone have some info or webpages i could take a look at
> > thanks rjroy@silchip.com.au
> >
> >

Having done a duplexer myself for a medical radio on UHF, I would advise that this is a non-trivial task. It will require great patience, perseverence and mechanical skill as well as a great deal of research if you have never done one. Good luck. I hope you do it and learn a great deal more than those who only buy appliances and don't dabble.

73,

Steve Carlton WB4CZR
Plantation, FL (That's my 10-20. HI HI)

839. Re: Ferrite toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 02:13:53 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0107022214140001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42902

In article <afqj61$fn4$1@venus.btinternet.com>, "Leon Heller"
<leon_heller@hotmail.com> wrote:

> "SB" <susantv69_uk@btinternet.com> wrote in message
> news:afqa68$315$1@helle.btinternet.com...
> > Can anyone please direct me to a supplier in the UK for ferrite toroid
> > formers of the type T-130-2, T-200-6 and subsequent types in this series.
> >
> > Simon G7CPN.
> >
> >
>
> These look more like iron dust toroids than ferrite.
>
> 73, Leon

They may be, but the numbers look like they come from Amidon. Anyone out
there with a URL?

Steve Carlton WB4CZR

840. Re: Silkscreen in PCB tools, (Ultiboard in particular)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 02:17:29 UTC
From: "Clyde R. Shappee" <clydes@world.std.com>
Message-ID: <3D210D39.5733FF49@world.std.com>
Source record: 42903

Yes, and on my bottom layer I am getting some both ways!

Clyde

john walton wrote:

> You have the option of "printing" the top and bottom layers, just run
> through a couple pieces of paper to see what they look like.
>
> "Clyde R. Shappee" <clydes@world.std.com> wrote in message
> news:3D20FE92.C5E7B35F@world.std.com...
> > Hi,
> >
> > Can anyone here comment about silk-screen in PCB tools?
> >
> > I am using Ultiboard for the first time (I have used predecessors) and
> > in this new design I am noticing that some silk-screen on the bottom of
> > my board is "Normal", i. e. readable from the top. Others are reverse,
> > as I would expect.
> >
> > I have figured out how to reverse the silk-screen that appears "normal",
> > but I just want to be sure I am getting this correct. I don't have a
> > Gerber viewer, and although Ultiboard may have one, right now I don't
> > know what to trust.
> >
> > Any advice? Most important is the answer on how the silk-screen from
> > the backside should appear.
> >
> > Clyde
> >
> > KA1CRV
> >

841. Re: Ferrite toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 02:32:13 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D2110AD.DEF273B3@netscape.net>
Source record: 42904

carltons wrote:

>
> They may be, but the numbers look like they come from Amidon. Anyone out
> there with a URL?
>
> Steve Carlton WB4CZR

http://www.cwsbytemark.com/f_ham.htm

842. Re: Where do I start

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 02:34:39 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0107022235000001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42905

> "Kelvin Barnes" <KBARNES@NOSPAMMINGsi.rr.com> wrote in message
> news:YM4U8.57874$QD2.14831191@twister.nyc.rr.com...
> > I want to get started as a Ham hobbyist doing things the right way (ie no
> > illegal transmissions and all that nonsense).
> >
> > I'm a bit confused as to the license I should start with.
> > Also are there any good books on the market that I can study to pass the
> > exams?
> >
> > So far I have not found any FCC sponsored or sanctioned study guides.
> >
> >
> >

I would ask firstly if you're sure you want to get into the hobby. It isn't cheap and requires some degree of dedication to complete. If you're gung ho, go for the gold and get a general or better. If you're uncertain, then do what many people do and go for tech or novice. You can have fun as a ham, but let it happen and don't try to force it. It's a hobby! Have fun!

BTW, the FCC just wants you to stay on frequency and not interfer with your neighbor. They don't write or endorse books, etc. I will also say that they are one the best run government agencies (please don't flame me, guys) that I've dealt with, considering their scope and lack of budget.

Disclaimer: I have only dealt with the FCC as a professional RF engineer and have never been an employee. :-)

Happy Trails,

Steve Carlton WB4CZR
Plantation, FL

RF is a pain.

843. Re: Ferrite toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 02:43:26 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0107022243460001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42906

In article <3D2110AD.DEF273B3@netscape.net>, ":-) Bill"
<therealexray@netscape.net> wrote:

> carltons wrote:
>
> >
> > They may be, but the numbers look like they come from Amidon. Anyone out
> > there with a URL?
> >
> > Steve Carlton WB4CZR
>
>
> http://www.cwsbytemark.com/f_ham.htm

Gee, that was quick.

Steve

844. Re: Ferrite toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 03:31:00 UTC
From: Dan Richardson <k6mhe@arrl.net>
Message-ID: <ah72iuktftmbar9gspoe0gdf1qskh47fhe@4ax.com>
Source record: 42908

Those are MicroMetal numbers and Amidon does sell them. Try a search
on MicroMetal and you'll find them listed there.

Danny

On Tue, 02 Jul 2002 02:13:53 GMT, motsteve@attbi.com (carltons) wrote:

>In article <afqj61$fn4$1@venus.btinternet.com>, "Leon Heller"
><leon_heller@hotmail.com> wrote:
>
>> "SB" <susantv69_uk@btinternet.com> wrote in message
>> news:afqa68$315$1@helle.btinternet.com...
>> > Can anyone please direct me to a supplier in the UK for ferrite toroid
>> > formers of the type T-130-2, T-200-6 and subsequent types in this series.
>> >
>> > Simon G7CPN.
>> >
>> >
>>
>> These look more like iron dust toroids than ferrite.
>>
>> 73, Leon
>
>They may be, but the numbers look like they come from Amidon. Anyone out
>there with a URL?
>
>
>Steve Carlton WB4CZR

845. Re: Porblems with VXO, TX birdies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 03:40:56 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3d211fcf$0$25598@echo-01.iinet.net.au>
Source record: 42907

It could be a low freq oscillation (eg in the TX final or some other stage)
modulating the signal. If an amp has a sharp response around the frequency
that the oscillation occurs that could be the problem.
You could try:
low freq bypasses (eg 10uF tantalums) in the relevant
places.
Power supply regulation if not already done
Detuning a stage to see if that gets rid of the problem
Substitute another signal source (eg sig gen) for the Xtal
oscillator
Another oscillator circuit or some small L in series with
the crystal

Yeah a spectrum analyser would help.... :-)

Richard

"Bill Meara" <n2cqr@clix.pt> wrote in message
news:3d200e74.765899266@news.clix.pt...
> I liked the recent VXO thread on QRP-L, and hope I can tap the same
> sources of wisdom in my effort to resolve a problem I've been having
> with my 17 meter SSB TX. I first mentioned this problem a couple of
> months ago in a message entitled "A tale of two Crystals." Put on your
> thinking caps guys, 'cause this ones a tough one.
>
> Here's the deal: Carrier oscillator at 5.173 to balanced modulator to
> Crystal filter to NE602 mixer. VXO hetrodyne oscillator (Colpitts,
> with rock, coil and cap in series).
>
> I have two fundamental crystals from the same manufacturer. One at
> 23.323 Mhz, the other at 23.303 Mhz. My plan was to use the first for
> around 18.130 - 18.150 and the other for the lower portion of the 17
> meter phone band.
>
> Both rocks work fine in the VXO circuit. I can pull the 23.323 rock
> about 23 Khz, and the 23.303 rock pulls about 15 khz. Both sound
> clean when I listen at the 23 mhz freqs. So I don't think the problem
> is in the VXO.
>
> But when I put the 23.303 rock in the circuit and listen at 18 Mhz,
> all kinds of spurs and birdies pop up around the operating frequency.
> They are very close to the op frequency. When I set the RX to a freq
> in the operating range, and then turn the tuning cap on the TX,
> instead of the one nice clean signal ("whoop") that I hope to hear, I
> get multiple signals ("whoop, whoop, whoop"). I can't even tell which

> one is the strongest. At several points I can hear simultaneous
> oscillations at freqs within a few hundred cycles.
>
> Strange thing is that this does not happen with the 23.323 rock. That
> one produces the desired clean signal.
>
> Remember, both rocks sound clean in the VXO -- the problem arises only
> when the mixer and the rest of the TX circuits are brought in.
>
> Important clue: I tried changing the carrier oscillator rocks. I
> pulled out the 5176.8 rock (USB) and put in a 5173.5 rock (LSB).
> Birdies disappeared! "Aha! Bad carrier freq rock!" I thought. I
> figured I could just pull the "good" carrier freq rock to the desired
> freq. But when I did so, the birdies returned!
>
> So my conclusion is that somewhere in there energy from the VXO
> hetrodyne oscillator is interacting with energy from the carrier
> oscillator to produce the birdies. And it seems that this interaction
> happens when the VXO is using the 23.303 rock, but not when it uses
> the 23.323 rock. Does this sound correct?
>
> I've tried reducing the voltage at which the VXO operates. No change.
> I've checked the signal level going into the NE602. Correct.
>
> Any theories on what is going on here? Any ideas on possible
> solutions? Help! I'm stranded in on the upper portion of 17 phone!
>
> Thanks,
>
>
> 73 de Bill CU2JL N2CQR
> Sao Miguel Island, The Azores, Portugal
> 37.7 N 25.7 W
> http://planeta.clix.pt/n2cqr

846. Re: 1mH coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 03:53:40 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <7t9U8.82443$Ca2.4779383@bin2.nnrp.aus1.giganews.com>
Source record: 42909

You will need to supply other parameters. Required Q and the frequency of interest, current and voltage ratings, for instance. Do you want air core? If you want a ferrous core you will have to specify the value of any steady current through it, as it's the incremental inductance that is usually of interest.

What is the application?

73, Bob

847. Re: Experience with charging Ni-MH batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 04:17:06 UTC
From: derek_toeppen@agilent.com
Message-ID: <2219e080.0207012017.4edcb20b@posting.google.com>
Source record: 42910

"Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message
news:<3D20A7A6.253A2F25@clifto.com>...

I would like to thank everyone that responded to my note. I have a
couple of comments and then I can share an interesting experience.

Leon. I understand what your saying. That was the approach
I took when I built my first Ni-Cd charger. I charaterized the
charging and discharging charateristics of one cell. Then several.
Verifying, in the process, that there was a big enough negative delta
to detect. Then I built the charger and carefully monitored it until
I was sure it was working. I have been using it for years.
But when it was all said and done, I only verified what I had been
reading about in application notes and articles. So with the Ni-MH,
I thought I would jump right in without all the charaterization.
If I had done it your way, I may have picked up on what I discovered
today.

Michael. The zero dv/dt method is another common charge technique. I
am considering changing the software to use it rather than negative
delta. It will detect the charge completion a little sooner.

Clifton. If your not using negative delta voltage, what charge
method have you settled on?

Dana. I think the noise Clifton was talking about is electical
noise. That is, randon changes in the battery voltage that make the
charger think the battery voltage droped and it is fully charged.
I think your thinking of audio noise. And your correct. I clearly
heard the battery vent before I opened the pack and saw that it had.

After posting my note I called a friend that playes around a lot
with batteries. I did not know if he had been using Ni-MH, but
I gave it a shot. Turns out, he has been using them for R/C airplanes
for about a year. When I explained my problem he said he had heard this
complaint a lot. But he has no problem using the negative delta method
of charge termination. He then said that I must condition a new
battery by trickle charging before I rapid or fast charge it. In fact,
he felt strongly that I should leave it on the trickle charger for a
time equal to a 2 or 3C charge. Once that is done, he said, I would see
a voltage dip. Keep in mind, I tried fast charging the pack twice
with venting occuring each time.
So I trickled charged the pack twice. I only charged it for 24 to 27
hours. Could not bring myself to charge it for as long as he suggested.
Tonight I did a C/2 fast charge with the negative delta voltage charger.
And sure enough I got a clean, sharp drop in the voltage and the charge

terminated right on schedule with no venting. The batteries have been
providing 990 ma-hr after each of the trickle charges. I used 540ma as
the fast charge current. That is a little over C/2 but close enough. The
charge terminated at 2 hours give or take a few minutes. That would
be 10% over the expected charge time (1080/990). Very interesting.
I have a second Ni-MH pack. The place I ordered from messed up
and shipped my order twice (yes, they billed me twice too). So I am
going to try this on the new pack. Nothing I have read about charging
Ni-MH batteries has said anything about conditioning them before
fast charging them.

Derek Toeppen, WA0ZTI

> Dana H. Myers wrote:
> > Clifton T. Sharp Jr. wrote:
> > > I don't much like the negative-delta method anyway. I've found that older
> > > cells, especially weak ones, can get noisy during the charge cycle and
> > > make the voltage fluctuate; the fluctuation is easily enough to shut off
> > > a delta-V charger, long before the cell or pack is charged.
> >
> > Sounds almost like the battery is starting to outgas during charging
> > which causes the noise.
>
> Hm. The noise I refer to usually happens somewhere in the middle of the
> charging cycle, long before the cell is significantly above 1.2V with current
> applied (I find most NiCD cells go to at least 1.40V before showing the
> negative delta-V). I wouldn't have expected outgassing without overcharge.

848. Re: Where do I start

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 04:53:53 UTC
From: rhaub <rhaub@itc.com>
Message-ID: <3D2131E1.BF3F537F@itc.com>
Source record: 42911

carltons wrote:

> > "Kelvin Barnes" <KBARNES@NOSPAMMINGsi.rr.com> wrote in message
> > news:YM4U8.57874$QD2.14831191@twister.nyc.rr.com...
> > > I want to get started as a Ham hobbyist doing things the right way (ie no
> > > illegal transmissions and all that nonsense).
> > >
> > > I'm a bit confused as to the license I should start with.
> > > Also are there any good books on the market that I can study to pass the
> > > exams?
> > >
> > > So far I have not found any FCC sponsored or sanctioned study guides.
> > >
> > >
> > >
>
> I would ask firstly if you're sure you want to get into the hobby. It
> isn't cheap and requires some degree of dedication to complete.

Whow, whow, whow, Slow up there Steve. I started out about 3 years ago and I will admit that it takes a lot of dedication to get a general and I also agree that getting a general is a good way to go. But, I've spent about $200.00 on my station and I have an excellent HB receiver and a very nice 100W HB transmitter. I'll admit that not every one is going to want to build a totaly 100% HB station but it can be done and it can be done cheeply. But you need to rely heavly on the dedication part. Lots of study and lots of experimenting, much more study than needed for the test that is for sure.

Oh, and to the original poster you can find lots of stuff for the beginner at Radio Shack and you can find lots more for all levels at

http://arrl.org

I got most of my study material for the test from the internet for free and most of my ideas and designs from my local University library's collection of QST magazines and ARRL Radio Amatuer Handbooks. Although the internets seems to have become the defacto source of infomation, one should not ignore the local library.

Good luck and don't forget that a good radio should glow.

Rick KC0GIX

> If you're
> gung ho, go for the gold and get a general or better. If you're
> uncertain, then do what many people do and go for tech or novice. You can
> have fun as a ham, but let it happen and don't try to force it. It's a
> hobby! Have fun!

>
> BTW, the FCC just wants you to stay on frequency and not interfer with
> your neighbor. They don't write or endorse books, etc. I will also say
> that they are one the best run government agencies (please don't flame me,
> guys) that I've dealt with, considering their scope and lack of budget.
>
> Disclaimer: I have only dealt with the FCC as a professional RF engineer
> and have never been an employee. :-)
>
> Happy Trails,
>
> Steve Carlton WB4CZR
> Plantation, FL
>
> RF is a pain.

849. Re: Experience with charging Ni-MH batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 05:41:43 UTC
From: "Dana H. Myers" <dana@dioxine.net>
Message-ID: <3D213D20.4030507@dioxine.net>
Source record: 42912

Derek Toeppen wrote:

> Dana. I think the noise Clifton was talking about is electical
> noise. That is, randon changes in the battery voltage that make the
> charger think the battery voltage droped and it is fully charged.
> I think your thinking of audio noise. And your correct. I clearly
> heard the battery vent before I opened the pack and saw that it had.

No, I'm thinking of electrical noise due to bubbles forming
in the electrolyte, which likely happens long before outgassing
takes place. Bubbles would probably reduce the area of cathode
and anode in contact with electrolyte for a short period of time,
thus creating variations in the electrical characteristics of the
cell. I'm just speculating.

If the cell popped, that indicates it was way over-stressed in
any event.

> I have a second Ni-MH pack. The place I ordered from messed up
> and shipped my order twice (yes, they billed me twice too). So I am
> going to try this on the new pack. Nothing I have read about charging
> Ni-MH batteries has said anything about conditioning them before
> fast charging them.

I'm a little surprised to hear that the battery pack outgassed
twice and still came back to life. Betcha it doesn't last as
many cycles as the other pack.

Interesting about slow-charging for the first cycle. It sort of
makes sense, but I don't really know the internal workings of
these cells. Your experience suggests it's a good idea, though.

Dana

850. Re: 1mH coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 06:44:15 UTC
From: la8ak.xnd@online.no
Message-ID: <3d20cd7a.117859034@news.online.no>
Source record: 42913

On Mon, 1 Jul 2002 21:38:12 +0300, "Deos" <lineoffiretoday@yahoo.com>
wrote:

>ok I know this mite sound a bit stupid......
>has any one ever made a 1mH coil? and if yes can you share a bit of you
>knowledge (wire turns, coil diameter,)
>
yes, but the problem is that it is many turns and too often the result
is poor. What is your requirement?
Found some surplus coils on 1.5mH (Q=660 on 150kHz) and use them as I
don't believe it is easy for me to make anything similar, but you may
study books for Philips cores, believe Amidon doesn't have suitable
cores for inductors in tuned circuits

73
LA8AK
--
remove ,xnd to reply

851. Re: Where do I start

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 10:01:24 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <W3fU8.1527$Mw4.48803@newsfep1-win.server.ntli.net>
Source record: 42914

> You will start as a Technican, provided you pass the test first.
> Radio Shack has the ham radio starter kit. Then you need to find out when
&
> where the next testing session will be in your area. Then bring $6 to the
> session, a photo ID, and pencil.
> Good luck.
==========
FCC approved test fee has been $ 10.- for some time.

Frank gm0csz.kn6wh@ntlworld.com

852. Re: Ferrite toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 10:49:50 UTC
From: Guy Austin <guy.austin@unn.ac.uk>
Message-ID: <afs0dv$59t$1@dax.unn.ac.uk>
Source record: 42915

"SB" <susantv69_uk@btinternet.com> wrote in message
news:afqa68$315$1@helle.btinternet.com...
> Can anyone please direct me to a supplier in the UK for ferrite toroid
> formers of the type T-130-2, T-200-6 and subsequent types in this series.
>
> Simon G7CPN.
>
I just placed an order with palomar in the US , the order was here 2 days
later
and only $4 postage which is cheaper than most local firms

853. Re: 1mH coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 12:57:17 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <afs7vd$aa6$1@knossos.btinternet.com>
Source record: 42916

In just a few seconds download program SOLNOID to design single-layer solenoids. Run immediately. User friendly.

But for a 1 milli-henry air-core coil you will need a lot of turns of fine wire.

Download from website below.

========================
Regards from Reg G4FGQ
Free Radio Modelling Software
Go to http://www.g4fgq.com
========================

854. 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 13:59:01 UTC
From: hamish@cloud.net.au
Message-ID: <3d21b1a5$0$28003$afc38c87@news.optusnet.com.au>
Source record: 42917

Hi all,

I want to build a 28V 20-25A supply to power a ~300W HF amplifier
(which will be my next project). I intend the supply to be linear
due to a complete lack of switch mode experience on my part.

700+ VA transformers seem to be difficult to come by here in
Australia, and they have quite high output voltages too
(starting at 40V), which means a lot of power will be wasted
in the transistors. On the other hand, 500VA transformers are
reasonably priced, available, and come as low as 25-30V out.
However I think I would need two of them, or a 500VA and
a 300VA or similar.

What's the best way to make use of two transformers? I
guess that actually putting them in parallel is out of
the question due to differences in secondary voltage. I
see two other options:

1. Build two 14V 20-25A supplies and put them in series; or
2. Build two 28V 10-12A supplies and put them in parallel.

Option #2 looks better due to the minimum 25V out of a
suitable VA transformer.

Any advice welcome.

thanks,
Hamish

--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

855. Free Ham Radio manuals & schematics - all brands&vintage

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 14:27:28 UTC
From: Charles Johnston <ctj92@hotmail.com>
Message-ID: <df78f9f072389498b7bbfa3e6a5993e3.100795@mygate.mailgate.org>
Source record: 42918

Links to many free and downloadable Ham Radio manuals and schematics at this URL....

1. http://www.ab7sl.com/index.html?row1col2=links.html

Includes Alinco, Kenwood, Yaesu, Heathkit, Collins, Swan, Icom, Heathkit, MFJ-Ameritron, Radio Shack and several others.

Also links for many "vintage" rigs manuals and schematics too such as Hallicrafters, Hammarlund,Drake,Johnson,Kenwood-Trio,Lafayette, Eico and over 125 more vintage rig manuals... 73'

--
Posted via Mailgate.ORG Server - http://www.Mailgate.ORG

856. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 15:13:00 UTC
From: Pekka Koski <koski+ryyte@ugly.blerp.org>
Message-ID: <k5g3iu4v6ktb2lnhu4i2sptfm9b9oj85nm@193.143.77.12>
Source record: 42919

On 02 Jul 2002 13:59:01 GMT, hamish@cloud.net.au wrote:

>700+ VA transformers seem to be difficult to come by here in
>Australia, and they have quite high output voltages too
>(starting at 40V), which means a lot of power will be wasted
>in the transistors.

If you are able to find dead/semi-dead UPS'es in <600W
class, you _might_ find transformers with 33-36V(AC)
output. I found my 34VAC/600VA trafo's this way.
But, UPS'es come in so many flavors and colours that your
mileage might vary :)

GH,
--
oh8hts

857. Re: Silkscreen in PCB tools, (Ultiboard in particular)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 17:12:53 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <afsmuk$mt3$1@helle.btinternet.com>
Source record: 42920

"Clyde R. Shappee" <clydes@world.std.com> wrote in message
news:3D20FE92.C5E7B35F@world.std.com...
> Hi,
>
> Can anyone here comment about silk-screen in PCB tools?
>
> I am using Ultiboard for the first time (I have used predecessors) and
> in this new design I am noticing that some silk-screen on the bottom of
> my board is "Normal", i. e. readable from the top. Others are reverse,
> as I would expect.
>
> I have figured out how to reverse the silk-screen that appears "normal",
> but I just want to be sure I am getting this correct. I don't have a
> Gerber viewer, and although Ultiboard may have one, right now I don't
> know what to trust.
>
> Any advice? Most important is the answer on how the silk-screen from
> the backside should appear.

GC-Prevue is a free Gerber viewer you can download. Try a web search for it.

Leon

858. 813 amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 17:46:45 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3D21E705.7010301@charter.net>
Source record: 42921

I have a very nice 2 tube 813 amplifier it is currently tapped for
15-80 meters there is still one spot on the band switch if you wanted
to add 160 or ten meters.
It is a really strong workhorse solid performer. easily does 1 kw on 75
meters can do more ......
It has oil fill caps a really nice heavy duty transformer that is variac
controlled.
She is on wheels so you can move her around. It is not too heavy any
ways. 32" BUD cabinet.
Has 2 - 4 inch muffins fans inside to keep things cool. It has new tubes
i have gone over it and been running it everyday now for about 2 weeks.
everything checks out fine. it runs off 234 volts. Pushing it to the
limit on 75 meters with 130 watts drive she did legal limit .
She runs smooth as a kitten.
Now is the time if you have been looking for a nice floor model amp here
it is. Like i said before all the components are heavy duty military
spec. Take a look at surplus sales of nebraska and check out the prices
on some of the components....
I would like to sell it or maybe trade for some type of hf gear of equal
value
, radios , amps what do you have? I am asking 650.00 for this beautiful
amp.
Oh you ask why would i sell it. I have several other amp projects on the
work bench right now and really need to make room.
here is a link for a pic. If it does not work email me and i have more pics.
this is a pic up only item in Taylorsville North Carolina....about 60
miles north of Charlotte.
thanks for taking the time to check it out.
http://www.angelfire.com/nb/ni4l/forsale.html

--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

859. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 19:51:28 UTC
From: Hugh Colborn <don'tspamstockden@tiscali.co.uk>
Message-ID: <3d22041f_1@mk-nntp-1.news.uk.worldonline.com>
Source record: 42922

Hi Hamish,

I have seen a number of published designs that use your suggestion to get over transformer limitations and either method (parallel the transformers or parallel the DC supplies) will work. If you are paralleling the supplies you can do it either before or after any stabilisation depending what components you have available. There is no need to limit yourself to 2 transformers etc. If you can get three 8A transformers for less than two 12A ones then use 3 in parallel. The key is to use identical transformers or supplies, that way you have a better chance of avoiding problems.

As far as transformer voltage is concerned you need to take into account the various losses in rectifiers (0.7v for biphase, 1.4v for a bridge) etc and leave enough voltage across the stabiliser circuit to ensure that it works. A good rule of thumb is that a 13.8v PSU requires a 17v transformer. That suggests that, for a 28v DC output, you are going to want a transformer with an output of not less than 31v at its rated load.

I hope that helps.

Regards,
Hugh

<hamish@cloud.net.au> wrote in message
news:3d21b1a5$0$28003$afc38c87@news.optusnet.com.au...
> Hi all,
>
> I want to build a 28V 20-25A supply to power a ~300W HF amplifier
> (which will be my next project). I intend the supply to be linear
> due to a complete lack of switch mode experience on my part.
>
> 700+ VA transformers seem to be difficult to come by here in
> Australia, and they have quite high output voltages too
> (starting at 40V), which means a lot of power will be wasted
> in the transistors. On the other hand, 500VA transformers are
> reasonably priced, available, and come as low as 25-30V out.
> However I think I would need two of them, or a 500VA and
> a 300VA or similar.
>
> What's the best way to make use of two transformers? I
> guess that actually putting them in parallel is out of
> the question due to differences in secondary voltage. I
> see two other options:
>
> 1. Build two 14V 20-25A supplies and put them in series; or
> 2. Build two 28V 10-12A supplies and put them in parallel.

>
> Option #2 looks better due to the minimum 25V out of a
> suitable VA transformer.
>
> Any advice welcome.
>
> thanks,
> Hamish
>
> --
> Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

860. Re: Ferrite toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 20:39:04 UTC
From: SB <susantv69_uk@btinternet.com>
Message-ID: <aft318$l3h$1@knossos.btinternet.com>
Source record: 42923

Thankyou to everyone for your answers either by e-mail or the ng. I will check-out the suggestions.

Simon G7CPN.

SB <susantv69_uk@btinternet.com> wrote in message news:afqa68$315$1@helle.btinternet.com...
> Can anyone please direct me to a supplier in the UK for ferrite toroid
> formers of the type T-130-2, T-200-6 and subsequent types in this series.
>
> Simon G7CPN.
>
>

861. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 20:55:55 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <9woU8.6483$Mw4.162686@newsfep1-win.server.ntli.net>
Source record: 42925

> What's the best way to make use of two transformers? I
> guess that actually putting them in parallel is out of
> the question due to differences in secondary voltage. I
> see two other options:
> 1. Build two 14V 20-25A supplies and put them in series; or
> 2. Build two 28V 10-12A supplies and put them in parallel.
> Option #2 looks better due to the minimum 25V out of a
> suitable VA transformer.
> Any advice welcome.
==========
Hamish , You might wish to consider using power MOSFETS instead of bi-polar
pass transistors.
Their 'on' resistance is in the milliOhms range ,hence they offer a low
voltage drop at high current.

Frank gm0csz.kn6wh@ntlworld.com

862. FS: Variacs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 21:01:08 UTC
From: Walter Treftz <penguino@atlantic.net>
Message-ID: <3D221494.782E75F3@atlantic.net>
Source record: 42924

General Radio Model M2-S25 110V input coil size
1-1/4" x 3-1/4"d, double slider.

General Radio 110v, case size 4.5" x 4.5"d, with knob
& 0-135v dial plate & large knob.

Standard Electric Products Co., Model 6541, 0-135vac
7.5a (1 kw max), coil side: 3" x 4"d

General Radio, 0-135vac, case size: 2.5" x 3"d, with
0-135v dial plate and large knob.
Digital pix available on the above upon request ---
penguino@atlantic.net.yoyo (ignore the yoyo --
I hate spam)
Walt (N4GL)

863. Re: 1mH coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-02 21:54:07 UTC
From: la8ak.xnd@online.no
Message-ID: <3d221f87.14644063@news.online.no>
Source record: 42926

On Tue, 2 Jul 2002 12:57:17 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>In just a few seconds download program SOLNOID to design single-layer
>solenoids. Run immediately. User friendly.
>
>But for a 1 milli-henry air-core coil you will need a lot of turns of fine
>wire.
>
>Download from website below.
...and start winding tonite....
--
remove ,xnd to reply

864. Re: Silkscreen in PCB tools, (Ultiboard in particular)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 01:37:48 UTC
From: "Clyde R. Shappee" <clydes@world.std.com>
Message-ID: <3D22556B.43C2D750@world.std.com>
Source record: 42928

ok, I can do that, but Which way should the letters be?

I need to know which ones are right and which are wrong.

Clyde

Leon Heller wrote:

> "Clyde R. Shappee" <clydes@world.std.com> wrote in message
> news:3D20FE92.C5E7B35F@world.std.com...
> > Hi,
> >
> > Can anyone here comment about silk-screen in PCB tools?
> >
> > I am using Ultiboard for the first time (I have used predecessors) and
> > in this new design I am noticing that some silk-screen on the bottom of
> > my board is "Normal", i. e. readable from the top. Others are reverse,
> > as I would expect.
> >
> > I have figured out how to reverse the silk-screen that appears "normal",
> > but I just want to be sure I am getting this correct. I don't have a
> > Gerber viewer, and although Ultiboard may have one, right now I don't
> > know what to trust.
> >
> > Any advice? Most important is the answer on how the silk-screen from
> > the backside should appear.
>
> GC-Prevue is a free Gerber viewer you can download. Try a web search for it.
>
> Leon

865. Re: 813 amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 01:38:53 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2254fc.3500498@news.akorn.net>
Source record: 42927

On Tue, 02 Jul 2002 13:46:45 -0400, NI4L <ni4l@charter.net> wrote:

>spec. Take a look at surplus sales of nebraska and check out the prices
>on some of the components....

Not that this has anything to do with the value of your amp, it might be worth mentioning Surplus Sales sells many parts for more than new wholesale price.

It seems to work for them, but Fair Radio and others are much better to buy from.

866. Re: Porblems with VXO, TX birdies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 01:58:07 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d22579f.42973422@news.peakpeak.com>
Source record: 42929

On Tue, 2 Jul 2002 11:40:56 +0800, "Richard Hosking"
<zaprichardh@iinet.net.au(remove the zap)> wrote:
> But when I put the 23.303 rock in the circuit and listen at 18 Mhz,
> all kinds of spurs and birdies pop up around the operating frequency.
> They are very close to the op frequency. When I set the RX to a freq
> in the operating range, and then turn the tuning cap on the TX,
> instead of the one nice clean signal ("whoop") that I hope to hear, I
> get multiple signals ("whoop, whoop, whoop"). I can't even tell which
> one is the strongest. At several points I can hear simultaneous
> oscillations at freqs within a few hundred cycles.
>
> Important clue: I tried changing the carrier oscillator rocks. I
> pulled out the 5176.8 rock (USB) and put in a 5173.5 rock (LSB).
> Birdies disappeared! "Aha! Bad carrier freq rock!" I thought. I
> figured I could just pull the "good" carrier freq rock to the desired
> freq. But when I did so, the birdies returned!

The two crystals are almost exactly a 9:2 frequency ratio, so the
oscillators may be pulling each other. To test this, run only the
oscillator stages. Listen around the two oscillator frequencues, to
see if either of them is unstable without the high level RF.

If that works properly, try the same test with increasing amounts of
power (perhaps adding one stage of RF amplification at a time). If the
problem is power dependent, you probably have RF feedback. You'll need
to find the leakage path and correct it.

Good luck!

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

867. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 02:07:54 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d225a70.43694624@news.peakpeak.com>
Source record: 42930

On 02 Jul 2002 13:59:01 GMT, hamish@cloud.net.au wrote:

>What's the best way to make use of two transformers? I
>guess that actually putting them in parallel is out of
>the question due to differences in secondary voltage. I
>see two other options:
>
>1. Build two 14V 20-25A supplies and put them in series; or
>2. Build two 28V 10-12A supplies and put them in parallel.
>
>Option #2 looks better due to the minimum 25V out of a
>suitable VA transformer.

You need a load balancing circuit to get the parallel power supplies working properly. Otherwise, the one with a slightly higher voltage will run up to its current limit while the lower voltage unit loafs. There are commercial ICs to do this job, or you can roll your own with a couple of spare op-amps if you prefer.

Total heat will probably be lower with the 28V supplies, instead of series 14V units. You avoid having the extra diode drops, current sense resistors, etc. being in series.

Plan on using transformer with rated VA about two times the rectified DC power--the power factor of capacitor input filters is pretty poor. The factor of two is based on my experience with units around 750VA rating.

--73--
KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

868. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 03:15:27 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <j%tU8.524939$%y.35332230@bin4.nnrp.aus1.giganews.com>
Source record: 42931

Well, instead of using a regular EI transformer's primary, why not use a regular EI transformer and put the AC line source into the secondary, i.e. making the secondary winding the primary. The VA rating of an old-fashioned color TV transformer, unfortunately, isn't going to carry this load.

As a second suggestion, if you have the nerve, consider building an off-line switcher. The a.c. line is rectified, filtered and interrupted via a chip like the International Rectifier IRIS series to drive a step-down transfomer. You can use outboard HEXFET's to drive more current through the transformer. Feedback to the IRIS chip can be via a secondary winding, or opto-coupler. International has an application note on winding transformers for their IRIS PWM chips on their website www.irf.com with references to various transformer and core suppliers. To be honest, I have built a number of switching supplies, but have never tempted fate with an "off-line" switcher.

Thirdly, I think that it was January 2000 when QST had a high power switcher. I'll have to go take a look in the dungeon.

<tmgroat at peakpeak dot com (Tim Groat)> wrote in message news:3d225a70.43694624@news.peakpeak.com...
> On 02 Jul 2002 13:59:01 GMT, hamish@cloud.net.au wrote:
>
> >What's the best way to make use of two transformers? I
> >guess that actually putting them in parallel is out of
> >the question due to differences in secondary voltage. I
> >see two other options:
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> >1. Build two 14V 20-25A supplies and put them in series; or
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> >suitable VA transformer.
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> You need a load balancing circuit to get the parallel power supplies
> working properly. Otherwise, the one with a slightly higher voltage
> will run up to its current limit while the lower voltage unit loafs.
> There are commercial ICs to do this job, or you can roll your own with
> a couple of spare op-amps if you prefer.
>
> Total heat will probably be lower with the 28V supplies, instead of
> series 14V units. You avoid having the extra diode drops, current
> sense resistors, etc. being in series.
>
> Plan on using transformer with rated VA about two times the rectified

> DC power--the power factor of capacitor input filters is pretty poor.
> The factor of two is based on my experience with units around 750VA
> rating.
>
> --73--
> KR0U
>
> -- Tim Groat
>
> To reply by e-mail, change the quoted words to
> the corresponding punctuation marks.

869. Re: Experience with charging Ni-MH batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 03:41:04 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0207022341240001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42932

In article <3D213D20.4030507@dioxine.net>, dana@dioxine.net wrote:

> Derek Toeppen wrote:
>
> > Dana. I think the noise Clifton was talking about is electical
> > noise. That is, randon changes in the battery voltage that make the
> > charger think the battery voltage droped and it is fully charged.
> > I think your thinking of audio noise. And your correct. I clearly
> > heard the battery vent before I opened the pack and saw that it had.
>
> No, I'm thinking of electrical noise due to bubbles forming
> in the electrolyte, which likely happens long before outgassing
> takes place. Bubbles would probably reduce the area of cathode
> and anode in contact with electrolyte for a short period of time,
> thus creating variations in the electrical characteristics of the
> cell. I'm just speculating.
>
> If the cell popped, that indicates it was way over-stressed in
> any event.
>
> > I have a second Ni-MH pack. The place I ordered from messed up
> > and shipped my order twice (yes, they billed me twice too). So I am
> > going to try this on the new pack. Nothing I have read about charging
> > Ni-MH batteries has said anything about conditioning them before
> > fast charging them.
>
> I'm a little surprised to hear that the battery pack outgassed
> twice and still came back to life. Betcha it doesn't last as
> many cycles as the other pack.
>
> Interesting about slow-charging for the first cycle. It sort of
> makes sense, but I don't really know the internal workings of
> these cells. Your experience suggests it's a good idea, though.
>
> Dana

Does anyone know about "burb charging"? This is a short discharge before regular charge. It gets rid of the bubbles which impede charging. It works. I don't know about whether or not it's patented. I don't want to stomp on someone's parade if it is.

BTW, why do people care about using a radio with its battery charging? When I was doing full time engineering, this was a concern. Why? I don't know. I just made the system work even when people were using the xcvr in the charger with a dead battery using a remote speaker/mike wrapped around

the helical antenna and that is no lie. :-)

Steve WB4CZR

RF is for the birds.

870. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 07:12:49 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <5d65iuk8m9ihtbmej6jhjvlfmoua6fkksu@4ax.com>
Source record: 42933

On 02 Jul 2002 13:59:01 GMT, hamish@cloud.net.au wrote:

>What's the best way to make use of two transformers? I
>guess that actually putting them in parallel is out of
>the question due to differences in secondary voltage. I
>see two other options:
>
>1. Build two 14V 20-25A supplies and put them in series; or
>2. Build two 28V 10-12A supplies and put them in parallel.
>
>Option #2 looks better due to the minimum 25V out of a
>suitable VA transformer.

If the transformers are not identical, there might be some problems.

One way to connect transformers in parallel is to put some inductance between the hot ends of the transformer secondaries. A third transformer, with a high current, low voltage (1-5 V) centre tapped secondary might be useful. Connect the hot ends of the main transformer secondaries to each end of the secondary at the third transformer. Take the output from the centre tap of that secondary, the primary of the third transformer is unused.

An other method would be to use separate transformers and rectifiers and a common capacitor and regulator. Small resistors or preferably small inductances would be needed between each rectifier and the capacitor.

If you have 3 phase mains available at your site, why not use a 3 phase transformer or tree single phase transformers connected in a star or in a delta. The size of the capacitor can be greatly reduced and still the voltage fluctuates very little during the AC cycle, thus the required voltage drop across the series regulator can be greatly reduced, greatly reducing power dissipation in the regulator. You might even run the transmitter directly from the capacitor voltage.

Three transformers with maybe 15 V secondaries should be able to produce about 29 Vdc with 1.25 Vrms ripple _without_ a capacitor. Other rectifier configurations with 25-30 V centre tapped transformers should also be able to generate suitable DC voltages.

Paul OH3LWR

871. Re: 1mH coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 09:13:59 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <afuf37ojl1@nic.grnet.gr>
Source record: 42934

as you can see there a three coils ....
take a look.
http://www.qsl.net/n6ev/57-174S.jpg

i am goinig to convert the output coils so it can cover up to 30 mhz
based on this shematic
http://www.qsl.net/n6ev/57-202S.jpg

but the problem with the 1mhs coil remains

"Deos" <lineoffiretoday@yahoo.com> wrote in message
news:afq7d9$1no$1@nic.grnet.gr...
> ok I know this mite sound a bit stupid......
> has any one ever made a 1mH coil? and if yes can you share a bit of you
> knowledge (wire turns, coil diameter,)
>
>
>
> --
> deosiereas.virtualave.net
>
>

872. to John, G0JJZ

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 09:21:50 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d22c1a5.6578491@news.freeserve.net>
Source record: 42935
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

John, I've lost your E-mail address so I hope you see this.

Many thanks for the 7010 Diagram recieved this AM

atb Mike W, G8NXD aka M3MSM qthr

873. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 09:37:10 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <afugenpfo1@nic.grnet.gr>
Source record: 42936

The truth is when making a homebrew project it is not allways possible to find a ready made transformer at the specs you want (Murphy's law) the thing I do in these situation is order a customized transformer from a transformer maker to the specs I need. It mite be a bit more expencesive but in the end there is no compromising with the quality of the outcome.Find a transformer maker in Australia and order one to the specs you need (you will be happy with the results)

<hamish@cloud.net.au> wrote in message
news:3d21b1a5$0$28003$afc38c87@news.optusnet.com.au...
> Hi all,
>
> I want to build a 28V 20-25A supply to power a ~300W HF amplifier
> (which will be my next project). I intend the supply to be linear
> due to a complete lack of switch mode experience on my part.
>
> 700+ VA transformers seem to be difficult to come by here in
> Australia, and they have quite high output voltages too
> (starting at 40V), which means a lot of power will be wasted
> in the transistors. On the other hand, 500VA transformers are
> reasonably priced, available, and come as low as 25-30V out.
> However I think I would need two of them, or a 500VA and
> a 300VA or similar.
>
> What's the best way to make use of two transformers? I
> guess that actually putting them in parallel is out of
> the question due to differences in secondary voltage. I
> see two other options:
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> 1. Build two 14V 20-25A supplies and put them in series; or
> 2. Build two 28V 10-12A supplies and put them in parallel.
>
> Option #2 looks better due to the minimum 25V out of a
> suitable VA transformer.
>
> Any advice welcome.
>
> thanks,
> Hamish
>
> --
> Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

874. Re: 1mH coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 10:51:33 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <afukvk$ip3$1@helle.btinternet.com>
Source record: 42937

The 1mH coil is a choke. It can be anywhere between 0.5 and 1.5 mH.

Construction is 4 or 5 separate pi-wound coils along a dowel, 3" long by
1/2" diameter.

Problem is high voltage between turns. Do not attempt to make one yourself.
Buy one.

875. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 12:38:33 UTC
From: hamish@cloud.net.au
Message-ID: <3d22f049$0$14693$afc38c87@news.optusnet.com.au>
Source record: 42938

Tim Groat <tmgroat"at"peakpeak"dot"com> wrote:
> You need a load balancing circuit to get the parallel power supplies
> working properly. Otherwise, the one with a slightly higher voltage
> will run up to its current limit while the lower voltage unit loafs.
> There are commercial ICs to do this job, or you can roll your own with
> a couple of spare op-amps if you prefer.

What would the load balancing circuit look like, roughly?

Typically these linear designs seem to have a few pass transistors
in parallel with the emitters connected together via a small
series resistor per transistor. I assume this compensates
for different gains in the transistors. Is it acceptable to
add additional pass transistors with a seperate power supply
and simply connect their emitters in the same way?

Thanks everyone for the suggestions. I'm also wondering whether
I should go for 50V DC instead; I want to power a ~300W HF
solid state amp, and it looks like 50V might be a better
choice. More options for upgrading to 600W later too.

Regards,
Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

876. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 13:07:49 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ui5tqd6vhq0gd8@corp.supernews.com>
Source record: 42940

Someone else suggested MOSFETS. There are a number of cheap MOSFETS that would get you into the 300-600 watt range off a 12 volt supply. Most will operate up in the 60 volt range or higher, but a 60 or 100 amp MOSFET would give you plenty of power in push-pull even with 12 volts. In any event, it certainly gives you more flexibility in the transformer department.

I suspect that bipolars in the neighborhood you are thinking aren't going to come cheap. 60 amp MOSFETS fast enough for HF can be had for just over a buck a piece this side of the Pacific, they can't be all that much more expensive in VK land.

Of course, whenever you are talking about 600 watts from a pair of transistors in linear service, getting the heat away from those puppies will be quite a project in itself.

..

<hamish@cloud.net.au> wrote in message
news:3d22f049$0$14693$afc38c87@news.optusnet.com.au...
> Tim Groat <tmgroat"at"peakpeak"dot"com> wrote:
> > You need a load balancing circuit to get the parallel power supplies
> > working properly. Otherwise, the one with a slightly higher voltage
> > will run up to its current limit while the lower voltage unit loafs.
> > There are commercial ICs to do this job, or you can roll your own with
> > a couple of spare op-amps if you prefer.
>
> What would the load balancing circuit look like, roughly?
>
> Typically these linear designs seem to have a few pass transistors
> in parallel with the emitters connected together via a small
> series resistor per transistor. I assume this compensates
> for different gains in the transistors. Is it acceptable to
> add additional pass transistors with a seperate power supply
> and simply connect their emitters in the same way?
>
> Thanks everyone for the suggestions. I'm also wondering whether
> I should go for 50V DC instead; I want to power a ~300W HF
> solid state amp, and it looks like 50V might be a better
> choice. More options for upgrading to 600W later too.
>
>
> Regards,
> Hamish
> --
> Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

877. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 13:24:39 UTC
From: fred bartoli <toto@hotmail.toto>
Message-ID: <3d22faf5$0$555$626a54ce@news.free.fr>
Source record: 42941

Hamish,
If you don't want to bother with the design of a SMPS, and still want avoid huge power waste, you have another choice : a mixed design.

Have your main transformer/bridge/cap bring you down to what ever you want or can (above the 28V target), then have a buck stepdown switcher that will get you to the targetted 28V.
Buck structure is simple, don't have to manage high voltage, transformer... and other "weird" things.
You will very easily find the components, and a well designed one will be robust and "happily welcome almost any abuse" you can think of.
For a homebrew regulated high power supply this may be the best heat/size/cost/time/efficiency... ratio.

Fred.

<hamish@cloud.net.au> a crit dans le message :
3d21b1a5$0$28003$afc38c87@news.optusnet.com.au...
> Hi all,
>
> I want to build a 28V 20-25A supply to power a ~300W HF amplifier
> (which will be my next project). I intend the supply to be linear
> due to a complete lack of switch mode experience on my part.
>
> 700+ VA transformers seem to be difficult to come by here in
> Australia, and they have quite high output voltages too
> (starting at 40V), which means a lot of power will be wasted
> in the transistors. On the other hand, 500VA transformers are
> reasonably priced, available, and come as low as 25-30V out.
> However I think I would need two of them, or a 500VA and
> a 300VA or similar.
>
> What's the best way to make use of two transformers? I
> guess that actually putting them in parallel is out of
> the question due to differences in secondary voltage. I
> see two other options:
>
> 1. Build two 14V 20-25A supplies and put them in series; or
> 2. Build two 28V 10-12A supplies and put them in parallel.
>
> Option #2 looks better due to the minimum 25V out of a
> suitable VA transformer.
>
> Any advice welcome.

>
> thanks,
> Hamish
>
> --
> Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

878. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 13:33:28 UTC
From: fred bartoli <toto@hotmail.toto>
Message-ID: <3d22fd06$0$592$626a54ce@news.free.fr>
Source record: 42942

No, milliOhms RDson is totally useless here since the transistor is working
in its linear region.

Be careful with these levels of voltage/current as bipolars (second
breakdown) are at least a bit susceptible.
And you can't simply parallel mosfets to achieve the required rated power :
in linear mode they have a big thermal positive feedback that make mandatory
to use some balancing source resistors, which is not welcomed with those
high currents.

Fred.

Frank Dinger <gm0csz.kn6wh@ntlworld.com> a crit dans le message :
9woU8.6483$Mw4.162686@newsfep1-win.server.ntli.net...
>
> > What's the best way to make use of two transformers? I
> > guess that actually putting them in parallel is out of
> > the question due to differences in secondary voltage. I
> > see two other options:
> > 1. Build two 14V 20-25A supplies and put them in series; or
> > 2. Build two 28V 10-12A supplies and put them in parallel.
> > Option #2 looks better due to the minimum 25V out of a
> > suitable VA transformer.
> > Any advice welcome.
> ==========
> Hamish , You might wish to consider using power MOSFETS instead of
bi-polar
> pass transistors.
> Their 'on' resistance is in the milliOhms range ,hence they offer a low
> voltage drop at high current.
>
> Frank gm0csz.kn6wh@ntlworld.com
>
>
>
>

879. Re: Problems with VXO, TX birdies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 14:03:40 UTC
From: n2cqr@clix.pt
Message-ID: <3d23040a.959869819@news.clix.pt>
Source record: 42939

t 11:40 AM 7/2/02 -0700, Glen wrote:
>Bill,
> Interesting problem. Your troubleshooting ideas are very good.
>I noticed that your VXO is very close to 4.5 times the I.F. Am trying
>to work out what interactions might be happening...
>9X 5.174 = 46.566
>2X 23.3 = 46.6

Glen: That's got to be it. Here's the confirmation:
The carrier oscillator is actually running at 5.176 (producing LSB
which
turns into USB after the mixer).
5.176 x 9 46.584
With the 23.303 rock, the VXO runs from 23.306 - 23.291
23.291 x 2 46.582

Further confirmation comes from the observation that the problem gets
worse
as I go lower in freq, as I get closer to 23.291 (and as I said, this
is not
a problem with the higher freq 23.323 rock).

So I'm almost certain this is a 9x 2x interaction problem. Now I have
to
find out where it is happening and how to surpress it. Last night I
tried a
series 46.582 LC trap at the output of the VXO. Didn't have any
effect.
Tonight I'll try shutting down RF amp stages to see where the birdies
stop
singing. Stay tuned!

73 de Bill CU2JL N2CQR
Sao Miguel Island, Azores, Portugal
900 miles West of Lisbon 37.7N 25.67W
http://planeta.clix.pt/n2cqr

73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 25.7 W
http://planeta.clix.pt/n2cqr

880. Re: Silkscreen in PCB tools, (Ultiboard in particular)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 14:50:55 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <afv30e$5pm$1@helle.btinternet.com>
Source record: 42943

"Clyde R. Shappee" <clydes@world.std.com> wrote in message
news:3D22556B.43C2D750@world.std.com...
> ok, I can do that, but Which way should the letters be?
>
> I need to know which ones are right and which are wrong.
>

They should appear mirrored, looking through the board from the top, on the display. I'm fairly sure this right, because I often put text in copper on the solder/copper side of PCBs I make at home.

Leon

881. Collins 300G Plate transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 17:24:46 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3D23335E.2060507@charter.net>
Source record: 42944
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

```
part # 672-1360-00
Pr) 0-105-110-115-120-125 vac 60 hz 1 ph
S1)1200 vct @ 0.283 ccs
DM) Ht= 7.000 Wt = 7.500 Dt = 6.500
weight aprox 35 lbs
checks out fine
100.00 + shipping
--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/
```

882. Re: Where do I start

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 17:25:57 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D2333FC.C134C95B@bellatlantic.net>
Source record: 42945

rhaub wrote:
>
> carltons wrote:
>
> > > "Kelvin Barnes" <KBARNES@NOSPAMMINGsi.rr.com> wrote in message
> > > news:YM4U8.57874$QD2.14831191@twister.nyc.rr.com...
> > > > I want to get started as a Ham hobbyist doing things the right way (ie no
> > > > illegal transmissions and all that nonsense).
> > > >
> > > > I'm a bit confused as to the license I should start with.
> > > > Also are there any good books on the market that I can study to pass the
> > > > exams?
> > > >
> > > > So far I have not found any FCC sponsored or sanctioned study guides.
> > > >
> > > >
> > > >
> > >
> > I would ask firstly if you're sure you want to get into the hobby. It
> > isn't cheap and requires some degree of dedication to complete.
>
> Whow, whow, whow, Slow up there Steve. I started out about 3 years ago and I will
> admit that it takes a lot of dedication to get a general and I also agree that
> getting a general is a good way to go. But, I've spent about $200.00 on my
> station and I have an excellent HB receiver and a very nice 100W HB transmitter.
> I'll admit that not every one is going to want to build a totaly 100% HB station
> but it can be done and it can be done cheeply. But you need to rely heavly on the
> dedication part. Lots of study and lots of experimenting, much more study than
> needed for the test that is for sure.
>
> Oh, and to the original poster you can find lots of stuff for the beginner at
> Radio Shack and you can find lots more for all levels at
>
> http://arrl.org
>
> I got most of my study material for the test from the internet for free and most
> of my ideas and designs from my local University library's collection of QST
> magazines and ARRL Radio Amatuer Handbooks. Although the internets seems to have
> become the defacto source of infomation, one should not ignore the local library.
>
> Good luck and don't forget that a good radio should glow.
>
> Rick KC0GIX
>

Whoa, Whoa, Whoa, slow up there, Rick.

Steve is exactly on target. You are an exception - a
very rare exception. MOST new hams will not be able
to put together a station that includes an excellent HF
receiver and a very nice 100W HF transmitter for 200 bucks,
even buying an old transceiver.

Most new hams won't be able to build an excellent receiver,
at any price. Heck, most new hams can't even build a
100 W transmitter. There are a few exceptions, of course. You
are one of them.

You are right on target with dedication. If one is truly
interested, he can develop the skill and knowledge to
brew a nice station, often starting with single band
QRP, CW and working up from there. But MOST hams (not
restricting it to newcomers) cannot build an excellent
receiver, unless its from a kit. A very small percentage
have the experience and expertise to do that.

883. coil calculating program on my site

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 19:32:18 UTC
From: Monaco <ihaveno@email.com>
Message-ID: <Xns9240DB03E64F6ihavenoemailcom@195.121.6.84>
Source record: 42946

on my site:
http://beam.to/homemade
you will find a program for coil calculating
(orange text)

884. Re: Problems with VXO, TX birdies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 20:26:59 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D235EB4.4779@pop.removethistomailme.net>
Source record: 42847

Bill Meara wrote:
>
> So I'm almost certain this is a 9x 2x interaction problem. Now I have
> to
> find out where it is happening and how to surpress it.

More buffering. An attenuator followed by a gain stage that compensates
for the attenuator's loss is a great way to improve load isolation.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

885. Hi-Gain 12-AVQ dims

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 20:34:56 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d235d12.759285@news.freeserve.net>
Source record: 42848

Hi Folks,
I've just aquired a Hi-Gain 12-AVQ 20/15/10m trapped vertical but
without any destruction sheet. Can anyone help with the relevant
dimentions. I assume it requires a counterpoise/groundplane, should
this be cut for 20m or should there be a GP for each band?.
most comments welcome ;=)
thanks Mike W, G8NXD aka M3MSM qthr

886. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 20:40:23 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <3D236137.FBA8451D@one.net>
Source record: 42849

I don't understand this suggestion.

In a linear regulator with bipolar transistors, the transistors are used
to drop a certain amount of voltage at the desired current. They must
dissipate that V*I, which usually requires a substantial heat sink. If
a MOSFET is called upon to do the same regulation, it also has to
dissipate the same V*I, doesn't it?

MOSFET's shine when you don't want a voltage drop. The low RdsON that
some provide gives you both low voltage drop (I*RdsON) and low power
dissipation (I*I*RdsON). But, in a power supply, how can you use that
to advantage unless you're pulsing the MOSFET's? And wouldn't doing
that then require HUGE capacitors to smooth things out?

... Rich

xpyttl wrote:
>
> Someone else suggested MOSFETS. There are a number of cheap MOSFETS that
> would get you into the 300-600 watt range off a 12 volt supply. Most will
> operate up in the 60 volt range or higher, but a 60 or 100 amp MOSFET would
> give you plenty of power in push-pull even with 12 volts. In any event, it
> certainly gives you more flexibility in the transformer department.
>
> I suspect that bipolars in the neighborhood you are thinking aren't going to
> come cheap. 60 amp MOSFETS fast enough for HF can be had for just over a
> buck a piece this side of the Pacific, they can't be all that much more
> expensive in VK land.
>
> Of course, whenever you are talking about 600 watts from a pair of
> transistors in linear service, getting the heat away from those puppies will
> be quite a project in itself.
>
> ..
>
> <hamish@cloud.net.au> wrote in message
> news:3d22f049$0$14693$afc38c87@news.optusnet.com.au...
> > Tim Groat <tmgroat"at"peakpeak"dot"com> wrote:
> > > You need a load balancing circuit to get the parallel power supplies
> > > working properly. Otherwise, the one with a slightly higher voltage
> > > will run up to its current limit while the lower voltage unit loafs.
> > > There are commercial ICs to do this job, or you can roll your own with
> > > a couple of spare op-amps if you prefer.
> >
> > What would the load balancing circuit look like, roughly?

> >
> > Typically these linear designs seem to have a few pass transistors
> > in parallel with the emitters connected together via a small
> > series resistor per transistor. I assume this compensates
> > for different gains in the transistors. Is it acceptable to
> > add additional pass transistors with a seperate power supply
> > and simply connect their emitters in the same way?
> >
> > Thanks everyone for the suggestions. I'm also wondering whether
> > I should go for 50V DC instead; I want to power a ~300W HF
> > solid state amp, and it looks like 50V might be a better
> > choice. More options for upgrading to 600W later too.
> >
> >
> > Regards,
> > Hamish
> > --
> > Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

887. Re: Experience with charging Ni-MH batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 21:12:04 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D2368A4.610B1159@clifto.com>
Source record: 42850

Derek Toeppen wrote:
> Clifton. If your not using negative delta voltage, what charge
> method have you settled on?

You might call it "manual negative delta-V". I hook it up to a current source and watch the voltmeter for the delta-V trend at the end. Pain in the rear, but it charges packs that won't charge otherwise.

--
.signature in flux

888. 2.4GHz amplification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 21:56:57 UTC
From: kd6ozk@hotmail.com
Message-ID: <e2ff41a.0207031356.7e4a7b12@posting.google.com>
Source record: 42851

Hi all. I've been reading a discussion in a computer security mailing list, and the current thread surrounds wireless LAN cards. These puppies run at 2.4GHz and usually are limited to a few hundred feet because of antenna design and power output.

And it occurred to me that it may be possible to amplify the signals and extend the range. I don't know how legal a 2.4GHz TX amp would be, but I assume an RX amp would be allowed. I also assume that using a dish or a good hi-gain yagi could extend a LOS connection to a kilometer or more.

It also occurred that the Amateur Radio community might be the best resource for this side of the discussion. Alas I have very little knowledge WRT microwave amplification (or much other amplification, for that matter), so I am asking of the readers here for any thoughts.

I don't need any details, but they are welcome. I still have my own research to do, such as checking regulations that cover the band, but if anyone has any thoughts or is aware of any existing equipment, I would certainly appreciate hearing from you. Emails are fine, I will summarize.

Thanks,
Larry

889. MC3362 MC2833

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 22:14:38 UTC
From: Peter O <peter.o@lennik.org>
Message-ID: <3D23774E.BC15B046@lennik.org>
Source record: 42852

Does anyone here have experience with building a 2 meter FM transceiver (or transmitter or receiver only) based on the MC3362 and/or MC2833 chips manufactured by Motorola ?

According to the specs of these IC's it should be possible but I can only find designs for 10 to 80 meters or so.

Any designs and/or hints would be very appreciated as I'm trying to establish the feasibility of such an undertaking.

73 ON1DTM Peter

890. Re: 1mH coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 22:16:05 UTC
From: la8ak.xnd@online.no
Message-ID: <3d2376cf.102537312@news.online.no>
Source record: 42853

On Wed, 3 Jul 2002 10:51:33 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>The 1mH coil is a choke. It can be anywhere between 0.5 and 1.5 mH.
>
>Construction is 4 or 5 separate pi-wound coils along a dowel, 3" long by
>1/2" diameter.
>
>Problem is high voltage between turns. Do not attempt to make one yourself.
>Buy one.
>
>
suppose 1MH is much more than you need, 80uH would be self resonnant
around 80m(?)
--
remove ,xnd to reply

891. KBARNES@si.rr.com

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-03 23:33:25 UTC
From: Matthew Hodges <mudges3@chartermi.net>
Message-ID: <ui729iebn3go2e@corp.supernews.com>
Source record: 42854

Kelvin,

I always like hearing about persons interested in a great hobby. There are hundreds of things within amateur radio that you can do. Like most of the responses on the newsgroup, you probably will look at obtaining a Technician class license first.

The ARRL: www.arrl.org has a wealth of information for newcomers to the hobby. It will probably be overwhelming as it was for me when I first started studying for my license over 10 years ago.

You won't find any books "sanctioned" or "approved" by the FCC because that is not in their mandate. You can freely download the FCC question pool from a number of websites. I would recommend using a study guide though, as it covers more than just the FCC regulations.

I used the "Now you're talking" text from ARRL. I'm buying a copy for my sister who has expressed an interest lately. It takes you through all you need to know including operating procedures, all kinds of background information on the hobby as well as the "why's" behind most of the regulations put forth by the FCC. There is some wrote memorization (ie: frequency limits & power levels) but most of the questions follow common sense principals. There is some electrical theory that is very basic and easy to learn and understand, but not a lot of complex concepts.

I studied for three weeks while in college (studying for about 30 minutes/day) and passed the test with a perfect score. It isn't hard to pass the test, but you can't just walk in and expect to pass.

I then had to wait about 6 weeks for my license to come in the mail. They didn't have the websites where you can look up your license back then. I saved up and purchased a dual-band HT. Still have that HT and use it regularly. I also have a dual-band mobile.

I originally didn't think I'd want to learn or use morse code and it isn't necessary for the Technician class license, but after 10 years in the hobby, and looking at renewing my license, I decided to upgrade to General. I used the ARRL morse code CD's and General Class Study Guide. This time I spent almost 3 months working on the code and theory. Passed my test on the first try- even copied well over 1 minute of code!

I saved up and purchased a new rig for HF and now am starting to actually use CW on the air. It's a lot of fun and very satisfying!

I hope you take the little time needed to pass your Technician class license, you won't regret it!

Please feel free to contact me via e-mail if you have any additional questions.

Sincerely,
Matthew Hodges, N8UVF

Go ahead and look me up at: www.qrz.com entering my callsign in the box in the upper left corner of the page.

> I want to get started as a Ham hobbyist doing things the right way (ie no
> illegal transmissions and all that nonsense).
>
> I'm a bit confused as to the license I should start with.
> Also are there any good books on the market that I can study to pass the
> exams?
>
> So far I have not found any FCC sponsored or sanctioned study guides.

892. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 00:17:29 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ui751rt32jdbeb@corp.supernews.com>
Source record: 42855

I was referring to the transistors in the amp, not the supply.

By having the choice of lots of amps, one could come up with a 300 or 600 W amp with a different voltage supply. Originally, Hamish was struggling with the availability of transformers to come up with the 28 volts he needed to get 300 watts out of an amp based on bipolars. By choosing MOSFETS, high current RF transistors can be had pretty cheap. It's tougher to come up with bipolars for that service you can afford. I wasn't so much suggesting MOSFETS for the supply, the transformer problem remains if you still need 28 volts.

..

"Rich Griffiths" <richgrif@one.net> wrote in message
news:3D236137.FBA8451D@one.net...
> I don't understand this suggestion.
>
> In a linear regulator with bipolar transistors, the transistors are used
> to drop a certain amount of voltage at the desired current. They must
> dissipate that V*I, which usually requires a substantial heat sink. If
> a MOSFET is called upon to do the same regulation, it also has to
> dissipate the same V*I, doesn't it?

893. Re: 1mH coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 01:11:48 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0307022112100001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42856

In article <3d2376cf.102537312@news.online.no>, LA8AK,xnd@Online.NO wrote:

> On Wed, 3 Jul 2002 10:51:33 +0000 (UTC), "Reg Edwards"
> <g4fgq.regp@btinternet.com> wrote:
>
> >The 1mH coil is a choke. It can be anywhere between 0.5 and 1.5 mH.
> >
> >Construction is 4 or 5 separate pi-wound coils along a dowel, 3" long by
> >1/2" diameter.
> >
> >Problem is high voltage between turns. Do not attempt to make one yourself.
> >Buy one.

If HV is an issue, I would recommend a ceramic or glass core and an application of dope to passivate the surface and windings.

> suppose 1MH is much more than you need, 80uH would be self resonnant
> around 80m(?)

I agree with the "?" above. SRF is highly dependent on construction in any value's case. The low frequency value of inductance is not important, but it would be nice if you are near SRF without crossover. For example, it does no good if the value at 1 MHz is 1.5 mH if the impedance at the operating frequency is 20 ohms of capacitive reactance and 20 ohms of resistance. That's why RF is a pain and requires loads of test equipment which is beyond the budget of most hams. I hope your project comes out well, no matter what. Please keep trying and have fun while learning.

Steve WB4CZR

894. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 02:24:58 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <_IOU8.391566$352.51363@sccrnsc02>
Source record: 42857

Actually a 50 V power supply (or 48 volt) is easier. Telecom industry
uses - 48 VDC so the surplus market should have a number of items available.

The power transformer is standard 2:1 based on 120 VAC to 60 VAC, if you are
running 240 VAC, then it is a 4:1 drop - but still a number of options
available in the market.

w9gb

<hamish@cloud.net.au> wrote in message
news:3d22f049$0$14693$afc38c87@news.optusnet.com.au...
> Tim Groat <tmgroat"at"peakpeak"dot"com> wrote:
> > You need a load balancing circuit to get the parallel power supplies
> > working properly. Otherwise, the one with a slightly higher voltage
> > will run up to its current limit while the lower voltage unit loafs.
> > There are commercial ICs to do this job, or you can roll your own with
> > a couple of spare op-amps if you prefer.
>
> What would the load balancing circuit look like, roughly?
>
> Typically these linear designs seem to have a few pass transistors
> in parallel with the emitters connected together via a small
> series resistor per transistor. I assume this compensates
> for different gains in the transistors. Is it acceptable to
> add additional pass transistors with a seperate power supply
> and simply connect their emitters in the same way?
>
> Thanks everyone for the suggestions. I'm also wondering whether
> I should go for 50V DC instead; I want to power a ~300W HF
> solid state amp, and it looks like 50V might be a better
> choice. More options for upgrading to 600W later too.
>
>
> Regards,
> Hamish
> --
> Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

895. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 03:40:28 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d23c0cc.18139563@news.peakpeak.com>
Source record: 42858

On 03 Jul 2002 12:38:33 GMT, hamish@cloud.net.au wrote:

My comment assumed you were making two completely separate power supplies and hooking them at the output, in series or parallel. I'm sorry if that interpretation was wrong!

The most common load balancing circuit works by having a load control wire between the two units. Each supply drives that line with a voltage porportional to load current. The driver has a series diode, so the highest vote (current) determines the signal level. Then both supplies compare that signal to their own load, creating an "load share error" signal. The error signal increases the output voltage of the low current unit to reduce the error, which balances the current. The Unitrode/Texas Instruments) UC3907 (or is it 3906?) performs this function, and their data sheet describes the operation much better than I can!

But all this assumes two complete stand-alone supplies (which is commercial thinking, not amateur!). Plan "B" puts all the parts into one chassis. Each transformer has its own rectifier, filter, and pass transistors. The transistors have their own emitter ballast resistors, as you mentioned. Then you drive all the bases (gates) with the same control IC, and you have nice load balance with a much simpler circuit. You just need a bigger, stronger box to hold it all ;<)

Good luck with your amplifier project,

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

896. Help with silk screen lettering

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 03:53:59 UTC
From: GaryH <webpub@fastmail.ca>
Message-ID: <4CPU8.30653$wj4.2584839@e3500-atl2.usenetserver.com>
Source record: 42859

Since I don't have the capabilities of creating silk screens, what is there that I can use for small letering on a project? I also have some existing gear that has damaged silk screen lettering that I want to repair. Any ideas on how to make this happen? Is there a source for dry transfers with a variety of sizes and fonts? What do you homebrew experts suggest?

Thanks

897. Re: MC3362 MC2833

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 04:12:16 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0207032012.64ebf754@posting.google.com>
Source record: 42860

Peter O <peter.o@lennik.org> wrote in message news:<3D23774E.BC15B046@lennik.org>...
> Does anyone here have experience with building a 2 meter FM transceiver
> (or transmitter or receiver only) based on the MC3362 and/or MC2833
> chips manufactured by Motorola ?
>
> According to the specs of these IC's it should be possible but I can
> only find designs for 10 to 80 meters or so.
>
> Any designs and/or hints would be very appreciated as I'm trying to
> establish the feasibility of such an undertaking.
>
> 73 ON1DTM Peter

The MC3362 dual-conversion receiver IC should be useable since the data sheet says it's good to 200MHz. Maybe there's an application note that provides more information than the data sheet provides. I have a vague memory of seeing a 2M FM receiver using an IC in QST, an issue that I only saw in passing, and I suspect it used either that IC, or one of Motorola's similar ones.

I've never quite understood the purpose of the MC2833 FM transmitter IC. It makes such a simple transmitter, low power and lacking much for multipliers, that by the time all the external circuitry is in place, the active components to provide the same functions aren't going to complicate things much. There was an article in QST maybe 1988 or so (?) about the IC, but it was hardly a construction article. The data sheet shows components for a 2M transmitter, but if you look closely, it uses a 12MHz crystal and then 144MHz out, but with three stages it sure looks messy.

Michael VE2BVW

898. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 04:19:10 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d23cb51.6977114@news.cantech.net.au>
Source record: 42866

On 03 Jul 2002 12:38:33 GMT, hamish@cloud.net.au wrote:

(snip)

>Thanks everyone for the suggestions. I'm also wondering whether
>I should go for 50V DC instead; I want to power a ~300W HF
>solid state amp, and it looks like 50V might be a better
>choice. More options for upgrading to 600W later too.

Paralleling of secondaries shouldn't be automatically be ruled out.
Certainly most Aus manufs I have dealt with in years past have wound
their product to a set turns ratio. Apart from small variations
resulting from materials, this should cause insignificant circulating
current. It might pay to contact a supplier to find out whether you
can return units for exchange if they produce an unacceptable level of
Icirc when //ed. That way you could suck it and see.

Also - BTW - Transworld produced a kilowatt HF linear using a 12V
rail. Was even type approved here in oz at the 500W level which was
all that the user could get the authorities to permit.
It isn't impossible to work it at 12V.

899. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 04:41:44 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D23D022.97B1A1CB@bellatlantic.net>
Source record: 42861

hamish@cloud.net.au wrote:
>
> Hi all,
>
> I want to build a 28V 20-25A supply to power a ~300W HF amplifier
> (which will be my next project). I intend the supply to be linear
> due to a complete lack of switch mode experience on my part.
>
> 700+ VA transformers seem to be difficult to come by here in
> Australia, and they have quite high output voltages too
> (starting at 40V), which means a lot of power will be wasted
> in the transistors. On the other hand, 500VA transformers are
> reasonably priced, available, and come as low as 25-30V out.
> However I think I would need two of them, or a 500VA and
> a 300VA or similar.
>
> What's the best way to make use of two transformers? I
> guess that actually putting them in parallel is out of
> the question due to differences in secondary voltage. I
> see two other options:
>
> 1. Build two 14V 20-25A supplies and put them in series; or
> 2. Build two 28V 10-12A supplies and put them in parallel.
>
> Option #2 looks better due to the minimum 25V out of a
> suitable VA transformer.
>
> Any advice welcome.
>
> thanks,
> Hamish
>
> --
> Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

Don't put two DC supplies in series, or parallel, unless
you do it at the output of the bridges. If you series
them, both need to be capable of 25 amps.

I'd use 2 28 V 500VA transformers, each feeding its own
bridge rectifier. Put the output of the bridges in
parallel. Your pass transistors will have to dissipate
close to 250 watts at full load (25 amps). I'd use
4 or 5 2N3055's (because I have a bunch of them) or other
bipolar than can handle 100+ watts each, on a big heat

sink with a muffin fan. An LM317 in collector wraparound will give you a nice variable supply. You'll need equalizing resistors in the emitter of each transistor - about .1 ohms at 5 watts each.

That's the design I used for a supply I made. I had a single 10 amp 36 volt transformer to use in a 13.8 volt 10 amp supply for a 2 meter rig. My supply has to dissipate close to 350 watts worst case, but I had all the parts on hand, except for the 7812. (It is also on a heat sink. The 7812 takes the place of the LM 317 in my supply, because I wanted a fixed voltage. I added 3 diodes to bring it to ~ 13.8)

900. Re: Help with silk screen lettering

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 04:48:28 UTC
From: "Bob G. Mahrenholz" <bobm@edge.net>
Message-ID: <3D23D39C.E054FCB5@edge.net>
Source record: 42862

Micro-Mark (www.micromark.com) makes clear water slide decal
paper that you can print on with a laser printer. You can then cut out
the names, soak them in water for a few seconds, then slide them onto
your panel. When they are dry, coat the panel with clear Krylon.
I've lettered panels successfully with it. It's a little bit flimsy but
practice on a scrap panel first.

Bob Mahrenholz
K4QQK

GaryH wrote:

> Since I don't have the capabilities of creating silk
> screens, what is there that I can use for small letering
> on a project? I also have some existing gear that has damaged
> silk screen lettering that I want to repair. Any ideas on how
> to make this happen? Is there a source for dry transfers with
> a variety of sizes and fonts? What do you homebrew experts
> suggest?
>
> Thanks

901. Re: MC3362 MC2833

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 04:53:57 UTC
From: "Bob G. Mahrenholz" <bobm@edge.net>
Message-ID: <3D23D4E5.C1E2945C@edge.net>
Source record: 42863

Motorola application note AN980 shows the MC3362 used in a two-meter amateur band receiver that covers 130 to 172 MHz. You can get the app note from their website. Look in the archived documentation.

Bob K4QQK

Peter O wrote:

> Does anyone here have experience with building a 2 meter FM transceiver
> (or transmitter or receiver only) based on the MC3362 and/or MC2833
> chips manufactured by Motorola ?
>
> According to the specs of these IC's it should be possible but I can
> only find designs for 10 to 80 meters or so.
>
> Any designs and/or hints would be very appreciated as I'm trying to
> establish the feasibility of such an undertaking.
>
> 73 ON1DTM Peter

902. Re: 1mH coil?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 06:47:34 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0207032247.39ba294e@posting.google.com>
Source record: 42864

Hi,
1 mH choke seems really much for SW. I found one type of anode choke
in the GES catalogue: inductance 225 uH (i.e. 2500 ohms on 160 m),
max. current 1,5 A, max. plate voltage 4 kV, ceramics former 1 in dia
X 5 5/8 in length. No ferrite to prevent saturation and nonlinearity.

73 de Ivan

903. Re: MC3362 MC2833

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 07:32:24 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d23f9e4.1176010@news.freeserve.net>
Source record: 42865

On Wed, 03 Jul 2002 23:53:57 -0500, "Bob G. Mahrenholz"
<bobm@edge.net> wrote:

>Motorola application note AN980 shows the MC3362 used in a two-meter
>amateur band receiver that covers 130 to 172 MHz. You can get the app note
>from their website. Look in the archived documentation.
>
II just looked for it, and I can't find it. Do you have a URL ?

904. Re: MC3362 MC2833

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 12:22:11 UTC
From: "Bob G. Mahrenholz" <bobm@edge.net>
Message-ID: <3D243DF3.36C15D9E@edge.net>
Source record: 42868

It is a little tricky. Try this:
1. Go to www.motorola.com
2. Click on "Semiconductors"
3. Click on "Documentation Library"
4. Click on "Literature Distribution Center Archived Documents"
5. Enter "AN980" for the document number window and click "Search"
6. Click on "AD980/D" in tne returned results.
7. Click on the second "AD980/D" of the returned results of the second search.
That should get you an Adobe pdf version of the data sheet.

You also might try:
http://merchant.hibbertco.com/fs22/deact/fs12/motorola/AN980_REV0.PDF
to get you there directly.

Bob K4QQK

Mike W wrote:

> On Wed, 03 Jul 2002 23:53:57 -0500, "Bob G. Mahrenholz"
> <bobm@edge.net> wrote:
>
> >Motorola application note AN980 shows the MC3362 used in a two-meter
> >amateur band receiver that covers 130 to 172 MHz. You can get the app note
> >from their website. Look in the archived documentation.
> >
> II just looked for it, and I can't find it. Do you have a URL ?

905. Re: Help with silk screen lettering

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 12:25:08 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3D243EA4.CCA4E538@bloomer.net>
Source record: 42867

We had a demo at our local Experimental Aircraft Association meeting of using the silk screen process to mark aluminum instrument panels. The presenter said you can get silk screen kits at hobby shops, etc. It worked out really well. You might try making your own silk screens! Good luck with the project!

Scott
N0EDV

GaryH wrote:
>
> Since I don't have the capabilities of creating silk
> screens, what is there that I can use for small letering
> on a project? I also have some existing gear that has damaged
> silk screen lettering that I want to repair. Any ideas on how
> to make this happen? Is there a source for dry transfers with
> a variety of sizes and fonts? What do you homebrew experts
> suggest?
>
> Thanks

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

906. Need data sheet on MC3393

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 12:27:27 UTC
From: "Bob G. Mahrenholz" <bobm@edge.net>
Message-ID: <3D243F2F.BA921DB4@edge.net>
Source record: 42869

Hi:
I need to see a data sheet on the Motorola MC3393 15/16 prescaler chip to find out the pin configuration, required input signal logic levels, max input frequency, what it takes to switch from divide by 15 to divide by 16, and maybe the output waveform.

Thanks
Bob K4QQK
bobm@edge.net

907. Re: Help with silk screen lettering

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 12:30:28 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ui8fv6kjjbi5f3@corp.supernews.com>
Source record: 42870

I use Datak dry transfer labels. The label contains a paint that transferres to the panel when you rub on it with the tip of a pen. You can get them with common electronic words. I get them from a local supplier but I notice that they are listed in the catalog for Antique Electronic Supply (http://www.tubesandmore.com)

908. Re: Help with silk screen lettering

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 12:44:09 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3D24416A.1D969849@gte.net>
Source record: 42871

"Bob G. Mahrenholz" wrote:

> Micro-Mark (www.micromark.com) makes clear water slide decal
> paper that you can print on with a laser printer. You can then cut out
> the names, soak them in water for a few seconds, then slide them onto
> your panel. When they are dry, coat the panel with clear Krylon.
> I've lettered panels successfully with it. It's a little bit flimsy but
> practice on a scrap panel first.
>
> Bob Mahrenholz
> K4QQK
>

Hi Bob,

I recently used an ink jet decal system to replace a Gonset GR-212 logo.
The results are fabulous. Because the clear substrate is so thin, it is
visible only under perfect lighting conditions. I was not aware of the
laser decal system- but will definitely pick this up too. Thanks for the
tip.
For those using these systems- spend the time to match the original Font
and size- Drake, Gonset and probably all the rest used common fonts, even
back then.

I have also done the custom silk screen- but would not recommend it unless
the entire panel needs redoing.
Dale W4OP

909. Re: 2.4GHz amplification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 12:51:12 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <ag1gc0$re9$1@knossos.btinternet.com>
Source record: 42872

"kd6ozk" <kd6ozk@hotmail.com> wrote in message
news:e2ff41a.0207031356.7e4a7b12@posting.google.com...
> Hi all. I've been reading a discussion in a computer security mailing
> list, and the current thread surrounds wireless LAN cards. These
> puppies run at 2.4GHz and usually are limited to a few hundred feet
> because of antenna design and power output.
>
> And it occurred to me that it may be possible to amplify the signals
> and extend the range. I don't know how legal a 2.4GHz TX amp would
> be, but I assume an RX amp would be allowed. I also assume that using
> a dish or a good hi-gain yagi could extend a LOS connection to a
> kilometer or more.

MMICs are the easiest way to get some more gain for the Rx.

910. Re: Need data sheet on MC3393

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 13:07:00 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0407020907210001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42873

In article <3D243F2F.BA921DB4@edge.net>, "Bob G. Mahrenholz"
<bobm@edge.net> wrote:

> Hi:
> I need to see a data sheet on the Motorola MC3393 15/16 prescaler chip
> to find out the pin configuration, required input signal logic levels,
> max input frequency, what it takes to switch from divide by 15 to divide
> by 16, and maybe the output waveform.
>
> Thanks
> Bob K4QQK
> bobm@edge.net

Look at the schematic on :

http://www.geocities.com/CapeCanaveral/Lab/9595/mwmsch.jpg

Steve Carlton WB4CZR

911. Re: 2.4GHz amplification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 13:14:10 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0407020914320001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42874

In article <ag1gc0$re9$1@knossos.btinternet.com>, "Leon Heller"
<leon_heller@hotmail.com> wrote:

> "kd6ozk" <kd6ozk@hotmail.com> wrote in message
> news:e2ff41a.0207031356.7e4a7b12@posting.google.com...
> > Hi all. I've been reading a discussion in a computer security mailing
> > list, and the current thread surrounds wireless LAN cards. These
> > puppies run at 2.4GHz and usually are limited to a few hundred feet
> > because of antenna design and power output.
> >
> > And it occurred to me that it may be possible to amplify the signals
> > and extend the range. I don't know how legal a 2.4GHz TX amp would
> > be, but I assume an RX amp would be allowed. I also assume that using
> > a dish or a good hi-gain yagi could extend a LOS connection to a
> > kilometer or more.
>
> MMICs are the easiest way to get some more gain for the Rx.

I don't want to sound like a party pooper, but operation at higher xmt
levels is not a legal option. Even improving the antenna efficiency may
not be legal if the ERP level is limited by requirements. It is legal to
improve your path loss by placement of devices, etc. with the obvious
conclusion being that the lower the path loss, the better the reception
and so on.

Happy trails,

Steve Carlton WB4CZR
Plantation, FL.

912. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 13:24:51 UTC
From: hamish@cloud.net.au
Message-ID: <3d244ca3$0$14693$afc38c87@news.optusnet.com.au>
Source record: 42875

w9gb <gregory.beat@attbi.com> wrote:
> Actually a 50 V power supply (or 48 volt) is easier. Telecom industry
> uses - 48 VDC so the surplus market should have a number of items available.

Not so easy in Australia it seems - and a lot of the US stuff seems
to be 110V AC only.

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

913. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 13:28:59 UTC
From: hamish@cloud.net.au
Message-ID: <3d244d9b$0$14693$afc38c87@news.optusnet.com.au>
Source record: 42876

fred bartoli <toto@hotmail.toto> wrote:
> Have your main transformer/bridge/cap bring you down to what ever you want
> or can (above the 28V target), then have a buck stepdown switcher that will
> get you to the targetted 28V.
> Buck structure is simple, don't have to manage high voltage, transformer...
> and other "weird" things.
> You will very easily find the components, and a well designed one will be
> robust and "happily welcome almost any abuse" you can think of.
> For a homebrew regulated high power supply this may be the best
> heat/size/cost/time/efficiency... ratio.

That sounds interesting Fred.. any suggestions for locating
a sample design (app notes etc)?

I assume the main transformer is still a large VA unit so is
there much advantage - just less heat dissipation?

thanks,
Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

914. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 13:32:39 UTC
From: hamish@cloud.net.au
Message-ID: <3d244e77$0$14693$afc38c87@news.optusnet.com.au>
Source record: 42877

Tim Groat <tmgroat"at"peakpeak"dot"com> wrote:
> My comment assumed you were making two completely separate power
> supplies and hooking them at the output, in series or parallel. I'm
> sorry if that interpretation was wrong!

Yes, that's one option. Alternatively it seems it might be better
to join them together after the bridge rectifiers. (One bridge
rectifier per transformer, joined at the outputs.)
Or just supply the transistors off different supplies, as you
suggest below:

> one chassis. Each transformer has its own rectifier, filter, and pass
> transistors. The transistors have their own emitter ballast resistors,
> as you mentioned. Then you drive all the bases (gates) with the same
> control IC, and you have nice load balance with a much simpler
> circuit. You just need a bigger, stronger box to hold it all ;<)

thanks,
Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

915. Re: 2.4GHz amplification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 13:46:16 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <3D2451A8.AC0A2C6B@one.net>
Source record: 42878

I think this is do-able but the return won't justify the investment for most systems (apologies for the management/techno babbledygook).

According to the last numbers I saw, the noise figures and gains of these systems is already not bad. They could be better, but not a lot. A dish or high-gain yagi for 2.4 gigs may be a modest size to an amateur radio operator, but it probably looks huge to computer folks, and feeding signal back and forth between the antenna and computer would be a substantial increase in complexity.

There may be more-clever approaches, but I'd imagine something like this:

You'd want a nice low-loss feedline (translate: large diameter) between the antenna and the LAN card. You'll need additional T/R switching for the preamp. Or you'll have to put the LAN card at the antenna and run the computer bus to it (tell the computer folks that one!). Not being standard office decor, you probably need to put the antenna on the roof, and be careful to point it accurately. While you're at it, get rid of any other buildings between your remote site and the server.

This sort of thing is sometimes done (not the part about the buildings :-) for a wide area network (WAN) to link the servers of smaller LAN's, but I expect there's not much demand for the LAN's themselves.

Of course, for amateur radio I've done lots of things just for the fun of it that were of questionable practical value.

... Rich

kd6ozk wrote:
>
> Hi all. I've been reading a discussion in a computer security mailing
> list, and the current thread surrounds wireless LAN cards. These
> puppies run at 2.4GHz and usually are limited to a few hundred feet
> because of antenna design and power output.
>
> And it occurred to me that it may be possible to amplify the signals
> and extend the range. I don't know how legal a 2.4GHz TX amp would
> be, but I assume an RX amp would be allowed. I also assume that using
> a dish or a good hi-gain yagi could extend a LOS connection to a
> kilometer or more.
>
> It also occurred that the Amateur Radio community might be the best
> resource for this side of the discussion. Alas I have very little
> knowledge WRT microwave amplification (or much other amplification,

> for that matter), so I am asking of the readers here for any thoughts.
>
> I don't need any details, but they are welcome. I still have my own
> research to do, such as checking regulations that cover the band, but
> if anyone has any thoughts or is aware of any existing equipment, I
> would certainly appreciate hearing from you. Emails are fine, I will
> summarize.
>
> Thanks,
> Larry

916. Re: MC3362 MC2833

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 13:51:37 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d245213.2394030@news.freeserve.net>
Source record: 42879

Thanks Bob, got it.
Mike W
--
On Thu, 04 Jul 2002 07:22:11 -0500, "Bob G. Mahrenholz"
<bobm@edge.net> wrote:

>It is a little tricky. Try this:
>1. Go to www.motorola.com
>2. Click on "Semiconductors"
>3. Click on "Documentation Library"
>4. Click on "Literature Distribution Center Archived Documents"
>5. Enter "AN980" for the document number window and click "Search"
>6. Click on "AD980/D" in tne returned results.
>7. Click on the second "AD980/D" of the returned results of the second search.
>That should get you an Adobe pdf version of the data sheet.
>
>You also might try:
>http://merchant.hibbertco.com/fs22/deact/fs12/motorola/AN980_REV0.PDF
>to get you there directly.
>
>Bob K4QQK
>
>Mike W wrote:
>
>> On Wed, 03 Jul 2002 23:53:57 -0500, "Bob G. Mahrenholz"
>> <bobm@edge.net> wrote:
>>
>> >Motorola application note AN980 shows the MC3362 used in a two-meter
>> >amateur band receiver that covers 130 to 172 MHz. You can get the app note
>> >from their website. Look in the archived documentation.
>> >
>> II just looked for it, and I can't find it. Do you have a URL ?
>

917. Re: Help with silk screen lettering

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 14:32:17 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <Q%YU8.409614$cQ3.27961@sccrnsc01>
Source record: 42880

Depending upon you radio, the silk screen may already exist

Johnson's and HQ-180
http://w4pnt.8k.com/refinishing.htm

Heath, Collins, Hallicrafters, Johnson, others
http://www.nctotalelectronics.com/

MAKING HAMMERTONE FINISH HAMMER

Years ago, sheet metal was often supplied in coils and if the smith did not have a uncoiler and straightening roll press (expensive!) he "planished" the metal flat with a planishing hammer. The planishing hammer has a very slight dome shape to the head. The metal was worked from the center to the outside edges in overlapping passes. Later, hammertone finishes were developed to simulate this look. Getting a good hammertone finish is just about as easy as painting with any aerosol type finish. It is important that certain rules be observed:

1.. Surface must be clean and dry. Clean means no rust, oil, grease or fingerprints.
2.. Be sure that the temperature of the paint can and the surface to be painted is between 70 and 90 degrees F.
3.. Spray with even strokes at a distance of 14 to 16 inches. Spray lightly horizontally then again vertically. Dries in a few minutes, depending upon temperature.

NOTE: When the temperature of the can is appropriate, shake can at least one minute and occasionally during use, making sure the ball agitator in the can is moving freely.

MAKING WRINKLE FINISH WRINKLE

Getting a good wrinkle finish is just about as easy as painting with any aerosol type finish. It is important that certain rules be observed:

1.. Surface must be clean and dry. Clean means no oil, grease or fingerprints.
2.. Be sure that the temperature of the paint can and the surface to be painted is between 70 and 90 degrees F.
3.. Spray with even strokes at a distance of 8 to 12 inches. Apply a fairly heavy coat.
4.. Spray a second coat approximately 3 minutes after the first, also fairly heavy.
5.. The wrinkling will appear gradually, requiring about 12 hours at room temperature to completely develop.

6.. Experience seems to indicate that a better finish is developed when sprayed onto bare metal.

NOTE: When the temperature of the can is appropriate, shake can at least one minute and occasionally during use.

"GaryH" <webpub@fastmail.ca> wrote in message news:4CPU8.30653$wj4.2584839@e3500-atl2.usenetserver.com...
> Since I don't have the capabilities of creating silk
> screens, what is there that I can use for small letering
> on a project? I also have some existing gear that has damaged
> silk screen lettering that I want to repair. Any ideas on how
> to make this happen? Is there a source for dry transfers with
> a variety of sizes and fonts? What do you homebrew experts
> suggest?
>
> Thanks
>

918. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 15:52:21 UTC
From: fred bartoli <toto@hotmail.toto>
Message-ID: <3d246f1d$0$578$626a54ce@news.free.fr>
Source record: 42881

<hamish@cloud.net.au> a &#65533;crit dans le message :
3d244d9b$0$14693$afc38c87@news.optusnet.com.au...
> fred bartoli <toto@hotmail.toto> wrote:
> > Have your main transformer/bridge/cap bring you down to what ever you
want
> > or can (above the 28V target), then have a buck stepdown switcher that
will
> > get you to the targetted 28V.
> > Buck structure is simple, don't have to manage high voltage,
transformer...
> > and other "weird" things.
> > You will very easily find the components, and a well designed one will
be
> > robust and "happily welcome almost any abuse" you can think of.
> > For a homebrew regulated high power supply this may be the best
> > heat/size/cost/time/efficiency... ratio.
>
> That sounds interesting Fred.. any suggestions for locating
> a sample design (app notes etc)?
>
> I assume the main transformer is still a large VA unit so is
> there much advantage - just less heat dissipation?
>

Yes, heat will be greatly reduced and almost constant vs input voltage. So
you have a greatest flexibility for choosing your transformer. Also (ex.)
56V input / 28V output mean your post transformer bridge/cap requirements
are reduced the by the same ratio (but be reasonable).
This also holds for size.
Another good point for homebrewing is that it can be virtually
indestructible. (short circuit protection - small output cap so low energy
stored at output and low damage on accidental short circuit)
And last, but not least, mosfets are very cheap. Heat sinks can't rival at
all.

Efficiency might also be a concern (at least in summer) and a 85/90%
efficiency versus maybe 50% for a linear psu can be welcomed at the 0.5/1 Kw
level if all the stuff is in the room.

For appnotes search major mosfets & smps controler manufacturers sites for
"step down" or "buck" SMPS (this is the right SMPS structure to go with).
You'll find plenty of.
Onsemi / Irf / LT / ST / TI-Unitrode / Fairchild / ...

Fred.

> thanks,
> Hamish
> --
> Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

919. Tetrodes or Triodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 16:15:23 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <vw_U8.397648$352.52210@sccrnsc02>
Source record: 42882

Just some interesting Tetrode links (largely based in Ian White's work,
G3SEK)

Control and Protection
http://www.ifwtech.co.uk/g3sek/boards/tetrode/tetrode-3.htm

IMD
http://www.ifwtech.co.uk/g3sek/cleansig/imd1.htm

http://www.cpii.com/eimac/sec2-2.htm

For the die hard Triode fans (I did not forget you)
The WD7S Triode Control Board
http://wd7s.home.att.net/triode_control.htm

w9gb

"Skipp" <skipp@pilotNOSPAMPLEASE.ucdavis.edu> wrote in message
news:aenmpv$c4t$1@woodrow.ucdavis.edu...
> Well Pete'e
>
> You imply that 4cx250b type tubes are bad news in the IMD department.
> There are many tubes with better operational IMD specs, but the 4cx250b
> family works just fine in linear service. IMD is not any type of problem
> if you pay attention to the proper circuit and operational details. Basic
> linear amplifier 101 related to a specific family of high gain tetrodes.
>
> If any of the 4cx250b family of tubes are around cheap/free, one should
> not be scared off from using said by people posting blanket bad news IMD
> statements on New Groups. How about you posting some comparisons of IMD
> operational preformanc of some popular tetrodes vs the 4cx250b family and
> we'll beat the data back and forth.
>
> The 4cx250b family of tubes work well in properly designed and
> constructed linear circuits, simple enough.
>
> Your turn to "enlighten us" with some actual data that you have measured,
> not something reprinted or quoted out of an older Handbook...
>
> 73
> skipp

920. Xtals wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 17:24:10 UTC
From: my_callsign@btopenworld.com
Message-ID: <ag20bq$j4r$2@knossos.btinternet.com>
Source record: 42883
Cross-posted to: uk.radio.amateur,rec.radio.amateur.homebrew

Anyone know where I can get custom made crystals in the UK. HC49 size ideally but other sizes not much of a problem. Looking for Top band QRP freqs. Any suggestions on what spot freqs. to use phone and CW also welcome. I've found kanga at http://www.kanga.demon.co.uk/crystals.htm but they only do one at 1.8432 and the postage and packing is a bit silly just for something that only costs a pound.

Ideally looking at a number of them i.e. a couple for CW and a couple for phone.

Ideally looking for a website with an order form.

(also looking for same for 80m, though I have one at 3.579 already)

--
73
G1LVN
mail replies: replace 'my_callsign' with my actual callsign

921. Re: Hi-Gain 12-AVQ dims

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 19:24:19 UTC
From: "Kenneth D. Grimm, K4XL" <kgrimm@adelphia.invalid>
Message-ID: <u489iugp9c8jvpdarvhqo3lml6jirj83u9@4ax.com>
Source record: 42884

On Wed, 03 Jul 2002 20:34:56 GMT, mike@corn2.freeserve.co.uk (Mike W)
wrote:

>Hi Folks,
>I've just aquired a Hi-Gain 12-AVQ 20/15/10m trapped vertical but
>without any destruction sheet. Can anyone help with the relevant
>dimentions. I assume it requires a counterpoise/groundplane, should
>this be cut for 20m or should there be a GP for each band?.
>most comments welcome ;=)
>thanks Mike W, G8NXD aka M3MSM qthr

You are welcome to download the manual for the antenna from
http://bama.sbc.edu which gives the dimensions for the radials.

Ken K4XL - Replace "invalid" with "net" to reply.
*** BoatAnchor Manual Archive ***
On the web at http://bama.sbc.edu or
FTP site info: bama.sbc.edu login: anonymous p/w: youremailadr

922. Re: Help finding 10.7MHz crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 19:38:20 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <Mu1V8.37144$DB.645458@news1.east.cox.net>
Source record: 42885

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message
news:3D152D42.6DB9@pop.removethistomailme.net...
> Uncle Peter wrote:
> >
> > I've used ceramic filters in log IFs for spectrum analyzers without
> > problems.
>
> How'd you get rid of the spurious responses above the fundamental? All
> of the ceramics I've swept look just awful. Lots of jaggies above the
> passband, barely 40-50 dB down.

Hello John

I used two ceramic filters in cascade for each bandwidth.
That would have place the "jaggies" well over 80 dB down compared
to a single filter. If the "jaggies" responses were unique to each filter
even better suppression might be had when a cascaded arrangement.
That was something I never verified, however...
The filters were harmonic-mode Murata ceramic filters (New Narrow-Band
Ceramic Filters From Murata-- Littlefield, CommQuarterly, Summer 1994.)

The log amp/detector was a AD606. No abnomolies showed on the
slopes over the 75 dB display range. This was a log IF project
for the Fall 1996 issue of Communications Quarterly Mag.

>
> > I also was lead
> > to understand that very sharp skirts (good shape factors) could lead
> > to problems in spectrum analyzers.
>
> Not that I'm aware of. Most commercial units have pretty sharp skirts.
> What sort of problems are you referring to?
>
Filter ringing when doing wide sweep ranges with a fast scan rate.

> -- jm
>
73

Peter

> --

> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

923. Re: Homebrew RC equipment on ham bands?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 20:27:04 UTC
From: Chris Boone <Cboone@earthlink.net>
Message-ID: <3D24B042.4E156404@earthlink.net>
Source record: 42886

You are correct......FCC regs do not specify a band or freqs...
ANY freq that the type of emissions are allowed is legal for RC...
Note that the 6mtr freqs have changed to the 50.8-50.98 region...
and now are 20 kHz spaced......you would probably have to upgrade
your rcvr to a new model.....and then have the xmtr correctly set to
deviation, etc....AMA rules for planes specify that you MUST use
20 kHz equip on the 50MHz range and they are discouraging use of
the old 53 MHz channels...

I would not use 2mtrs for this.....other than saying that, its
hard to recommend a band OTHER than 50 MHz.....220 and 420-450
are crowded in metro areas (well most of them anyway...Houston
is somewhat devoid of activity on a lot of freqs! :)
1.2 GHz may be the best bet but stay away from ATV used channels
as well as FM rptrs and weak signal/sat operations...(does that
leave any room at all??) I would HIGHLY recommend DIGITAL over
analog at any time!!

If you are out in the boonies, 1.2Ghz or 220 may be ok...

BTW you CAN run more power than 1watt on RC PROVIDED you legally
ID the station...the 1watt and below rule is there to exempt you
from the ID required...but your callsign, etc must still be on
the xmtr..

Chris
WB5ITT

JLB wrote:
>
> I'm talking about controling model airplanes.
>
> I haven't done RC in 20 years and my equipment is out of date.
>
> The FCC regs, as far as I can see, does not restrict RC to any
> particular band. All they say is 1 w max output and (I assume)
> bandwidth restrictions.
>
> Two of my units are on 6 meters, but I think this is just a voluntary
> band plan started back in the days when anything above 53.999 MHz
> required black magic.
>
> What I am wondering is if anyone was homebrewing RC equipment for any
> higher bands, such as 430 MHz, 902 MHz or 1.2 GHz, or even higher?
> With PICs and all the neat RF components I think it would be
> relatively easy, compared to 40 or 50 years ago (when 6 Mtrs use

> started). What bands would you recommend, and what modulation mode?
> Some type of digital encoded PM?
>
> Ok, if I was restriced to 6 Mtrs, any ideas on upgrading my 20 year
> old equipment to meet todays specs? Transmitter upgrade would be
> easy, compared to the receiver, but for my 100 inch sailplane there is
> plenty of room for a small homebrew receiver. What I have is a
> Heathkit 5 channel PWM analog, and a 2 channel Cannon (same format).

924. Re: Ferrite toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 20:59:07 UTC
From: chas <chas@multiscan.junglelink.co.uk>
Message-ID: <ag2cur$s3f$1@helle.btinternet.com>
Source record: 42887

"SB" <susantv69_uk@btinternet.com> wrote in message
news:afqa68$315$1@helle.btinternet.com...
> Can anyone please direct me to a supplier in the UK for ferrite toroid
> formers of the type T-130-2, T-200-6 and subsequent types in this series.
>
> Simon G7CPN.
>
>
http://www.users.zetnet.co.uk/kama/compsupp.htm

Try "sycom" off this list of suppliers - I've had excellent service from
them.

Chas

925. Re: Hi-Gain 12-AVQ dims

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 21:11:04 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d24b9c0.28942936@news.freeserve.net>
Source record: 42888

On Thu, 04 Jul 2002 19:24:19 GMT, "Kenneth D. Grimm, K4XL"
<kgrimm@adelphia.invalid> wrote:

>On Wed, 03 Jul 2002 20:34:56 GMT, mike@corn2.freeserve.co.uk (Mike W)
>wrote:
>
>>Hi Folks,
>>I've just aquired a Hi-Gain 12-AVQ 20/15/10m trapped vertical but
>>without any destruction sheet. Can anyone help with the relevant
>>dimentions. I assume it requires a counterpoise/groundplane, should
>>this be cut for 20m or should there be a GP for each band?.
>>most comments welcome ;=)
>>thanks Mike W, G8NXD aka M3MSM qthr
>
>You are welcome to download the manual for the antenna from
>http://bama.sbc.edu which gives the dimensions for the radials.
>
many thanks Ken, on my way over there now.
atb Mike W, G8NXD aka M3MSM qthr
--

926. Re: Need data sheet on MC3393

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 22:23:21 UTC
From: "Bob G. Mahrenholz" <bobm@edge.net>
Message-ID: <3D24CAD8.32DD8DAC@edge.net>
Source record: 42889

Thanks, but I get a "Page is currently unavailable for viewing" message when I try to access it.

Bob

carltons wrote:

> In article <3D243F2F.BA921DB4@edge.net>, "Bob G. Mahrenholz"
> <bobm@edge.net> wrote:
>
> > Hi:
> > I need to see a data sheet on the Motorola MC3393 15/16 prescaler chip
> > to find out the pin configuration, required input signal logic levels,
> > max input frequency, what it takes to switch from divide by 15 to divide
> > by 16, and maybe the output waveform.
> >
> > Thanks
> > Bob K4QQK
> > bobm@edge.net
>
> Look at the schematic on :
>
> http://www.geocities.com/CapeCanaveral/Lab/9595/mwmsch.jpg
>
> Steve Carlton WB4CZR

927. Free Hallicrafters HT32A manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 22:29:38 UTC
From: Richard Daventry <nearlynews_email@ntlworld.com>
Message-ID: <BZ3V8.2138$8y.153096@news8-gui.server.ntli.net>
Source record: 42890

Anyone want an HT32A manual to go with their HT32A? Just pay me postage costs and it's yours. Downside: I have to send from UK, and front, back and circuit pages disconnected from main body. But, otherwise fine. First posted response secures. Postage to US would be about $3.00. Three one dollar bills would be okay.

928. Re: Free Hallicrafters HT32A manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-04 23:03:24 UTC
From: Richard Daventry <nearlynews_email@ntlworld.com>
Message-ID: <js4V8.2240$8y.159371@news8-gui.server.ntli.net>
Source record: 42891

"Richard Daventry" <nearlynews_email@ntlworld.com> wrote in message
news:BZ3V8.2138$8y.153096@news8-gui.server.ntli.net...
> Anyone want an HT32A manual to go with their HT32A? Just pay me postage
> costs and it's yours. Downside: I have to send from UK, and front, back
and
> circuit pages disconnected from main body. But, otherwise fine. First
> posted response secures. Postage to US would be about $3.00. Three one
> dollar bills would be okay.

Oops, meant to go to boatanchors. Just thought, if post costs $3 and bureau
de change charge me $2 then I'd need $5.

929. Re: 2.4GHz amplification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-05 00:39:44 UTC
From: Simon Twigg <stwigg@btopenworld.com>
Message-ID: <ag2psenmq1@venus.btinternet.com>
Source record: 42892

If you go to Cisco's website (www.cisco.com), then downloads, then WLAN you will be able to download a 1 page excel spreadsheet that calculates all relevant figures, gains, suitable antenna, cable lengths etc... it will also tell you if your virtual config is against any regulations! :-)

It's branded Cisco but it's generic stuff. It will only model around Cisco antennae though, but again the specs can be found in the manual appendix for several of the WLAN cards. None of this kit as actually made by Cisco.....

I successfully bridged (at 11Mbs) two LAN's (Line of sight) at a distance of 1.3 Km in central London! Your security concerns are well founded though, doesn't take much at all......

If you're researching I'd check out PRISM and Lucent Wi-Fi cards, as between that pair about 70% of the WLAN card sales can be found, Therefore they have a better developed product and generally more info is kicking about on these cards.

Have fun,

Si.

"Rich Griffiths" <richgrif@one.net> wrote in message
news:3D2451A8.AC0A2C6B@one.net...
> I think this is do-able but the return won't justify the investment for
> most systems (apologies for the management/techno babbledygook).
>
> According to the last numbers I saw, the noise figures and gains of
> these systems is already not bad. They could be better, but not a lot.
> A dish or high-gain yagi for 2.4 gigs may be a modest size to an amateur
> radio operator, but it probably looks huge to computer folks, and
> feeding signal back and forth between the antenna and computer would be
> a substantial increase in complexity.
>
> There may be more-clever approaches, but I'd imagine something like
> this:
>
> You'd want a nice low-loss feedline (translate: large diameter) between
> the antenna and the LAN card. You'll need additional T/R switching for
> the preamp. Or you'll have to put the LAN card at the antenna and run
> the computer bus to it (tell the computer folks that one!). Not being
> standard office decor, you probably need to put the antenna on the roof,
> and be careful to point it accurately. While you're at it, get rid of
> any other buildings between your remote site and the server.
>
> This sort of thing is sometimes done (not the part about the buildings

> :-) for a wide area network (WAN) to link the servers of smaller LAN's,
> but I expect there's not much demand for the LAN's themselves.
>
> Of course, for amateur radio I've done lots of things just for the fun
> of it that were of questionable practical value.
>
> ... Rich
>
>
> kd6ozk wrote:
> >
> > Hi all. I've been reading a discussion in a computer security mailing
> > list, and the current thread surrounds wireless LAN cards. These
> > puppies run at 2.4GHz and usually are limited to a few hundred feet
> > because of antenna design and power output.
> >
> > And it occurred to me that it may be possible to amplify the signals
> > and extend the range. I don't know how legal a 2.4GHz TX amp would
> > be, but I assume an RX amp would be allowed. I also assume that using
> > a dish or a good hi-gain yagi could extend a LOS connection to a
> > kilometer or more.
> >
> > It also occurred that the Amateur Radio community might be the best
> > resource for this side of the discussion. Alas I have very little
> > knowledge WRT microwave amplification (or much other amplification,
> > for that matter), so I am asking of the readers here for any thoughts.
> >
> > I don't need any details, but they are welcome. I still have my own
> > research to do, such as checking regulations that cover the band, but
> > if anyone has any thoughts or is aware of any existing equipment, I
> > would certainly appreciate hearing from you. Emails are fine, I will
> > summarize.
> >
> > Thanks,
> > Larry

930. Re: 2.4GHz amplification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-05 03:20:48 UTC
From: "Dana H. Myers" <dana@dioxine.net>
Message-ID: <3D25107C.7030607@dioxine.net>
Source record: 42893

carltons wrote:

>>"kd6ozk" <kd6ozk@hotmail.com> wrote in message
>>news:e2ff41a.0207031356.7e4a7b12@posting.google.com...
>>>Hi all. I've been reading a discussion in a computer security mailing
>>>list, and the current thread surrounds wireless LAN cards. These
>>>puppies run at 2.4GHz and usually are limited to a few hundred feet
>>>because of antenna design and power output.
>>>
>>>And it occurred to me that it may be possible to amplify the signals
>>>and extend the range. I don't know how legal a 2.4GHz TX amp would
>>>be, but I assume an RX amp would be allowed. I also assume that using
>>>a dish or a good hi-gain yagi could extend a LOS connection to a
>>>kilometer or more.

...

> I don't want to sound like a party pooper, but operation at higher xmt
> levels is not a legal option. Even improving the antenna efficiency may
> not be legal if the ERP level is limited by requirements. It is legal to
> improve your path loss by placement of devices, etc. with the obvious
> conclusion being that the lower the path loss, the better the reception
> and so on.

Part 15 wireless networking devices at 2.4GHz are allowed a remarkably
large amount of transmit power and antenna gain; I personally have experience
with a system based on conventional Lucent 802.11b cards combined with
high-gain antennas and amplifiers that achieves a solid 11Mbps link
over a distance of 12 miles. If you read Part 15 very carefully with
respect to 802.11b point-to-point operation, you can run up to +30dBm
of transmit power into a +6dBi antenna; above this, the maximum transmit
power is folded back at the rate of 1dBm/3dB antenna gain. With a +24dB
antenn system, you can run +24dBm of transmit power, for example, and this
is more than adequate to cover 20km in a point-to-point configuration.

While your caution regarding legal restrictions is reasonable, you're
apparently unaware that use of amplifiers and high-gain antennas for
Part 15 wireless networking devices is certainly legal.

Dana K6JQ
dana@dioxine.net

931. Re: 2.4GHz amplification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-05 04:59:41 UTC
From: MS Bob <msbob@hotmail.com-edy>
Message-ID: <f87aiu0p3ndcrhltainhcvsd3k4dog3ddj@4ax.com>
Source record: 42894

On Fri, 05 Jul 2002 03:20:48 GMT, "Dana H. Myers" <dana@dioxine.net>
wrote:

>Part 15 wireless networking devices at 2.4GHz are allowed a remarkably
>large amount of transmit power and antenna gain; I personally have experience
>with a system based on conventional Lucent 802.11b cards combined with
>high-gain antennas and amplifiers that achieves a solid 11Mbps link
>over a distance of 12 miles. If you read Part 15 very carefully with
>respect to 802.11b point-to-point operation, you can run up to +30dBm
>of transmit power into a +6dBi antenna; above this, the maximum transmit
>power is folded back at the rate of 1dBm/3dB antenna gain. With a +24dB
>antenn system, you can run +24dBm of transmit power, for example, and this
>is more than adequate to cover 20km in a point-to-point configuration.
>
>While your caution regarding legal restrictions is reasonable, you're
>apparently unaware that use of amplifiers and high-gain antennas for
>Part 15 wireless networking devices is certainly legal.
>
>Dana K6JQ
>dana@dioxine.net

I just want to point out that isn't always true outside the US.

In the UK, EIPR is 100mW (20dBm) . The reg. is ETSI 300-328. Source:
<http://consume.net/twiki/bin/view/Main/LegalLimit>. I believe the
rest of Europe may be similar.

This limit applies to the whole radio setup, from the tranceiver card
to the antenna.

EIRP is 'Effective Isotropic Radiated Power' which means it is
measured, in any direction, as if it were coming from a true isotropic
radiator i.e. in all directions at the same level. In other words you
are not allowed to radiate in ANY direction at a level greater than
you would have from an isotropic radiator, so by definition is ISN'T
different if you have a directional antenna.

For a Canadian perceptive, it gets fun. See BC Wireless's web site
<http://bcwireless.net/wiki-moinmoin/moin.cgi/Regulatory>.
Industry Canada documents: RSS-210 and RSS-139
1W (+30dBm) from the transmitter, 4W (+36dBm) E(I)RP, channels 1-8
indoors only without a license, channels 9-14 may be used outdoors
without a license, and Radio Comm Regulations prohibits the average
person from manufacturing or modifying transmission equipment.*

*] IMO if you built or modified the transmiter and held a Canadian advanced qualifications amateur radio license I guess you could operate it, but as amateur radio gear, i.e. amateur power restrictions, no encryption, no WEP, and with callsign IDing every 15 minutes to other licensed amateurs.

I hope to setup some wide area networking using 802.11 hopefully soon, glad to hear of your successful use of it over a long path.

932. Re: Need data sheet on MC3393

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-05 10:56:44 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0507020657070001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42895

In article <3D24CAD8.32DD8DAC@edge.net>, "Bob G. Mahrenholz"
<bobm@edge.net> wrote:

> Thanks, but I get a "Page is currently unavailable for viewing" message when I
> try to access it.
>
> Bob
>
> carltons wrote:
>

> > http://www.geocities.com/CapeCanaveral/Lab/9595/mwmsch.jpg
> >
> > Steve Carlton WB4CZR

I just tried it again with a copy and paste of the above URL and got the
schematic right off.

Steve

933. Re: Hi-Gain 12-AVQ dims

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-05 11:17:14 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d258016.426986@news.freeserve.net>
Source record: 42896

On Thu, 04 Jul 2002 19:24:19 GMT, "Kenneth D. Grimm, K4XL"
<kgrimm@adelphia.invalid> wrote:

>On Wed, 03 Jul 2002 20:34:56 GMT, mike@corn2.freeserve.co.uk (Mike W)
>wrote:
>
>>Hi Folks,
>>I've just aquired a Hi-Gain 12-AVQ 20/15/10m trapped vertical but
>>without any destruction sheet. Can anyone help with the relevant
>>dimentions. I assume it requires a counterpoise/groundplane, should
>>this be cut for 20m or should there be a GP for each band?.
>>most comments welcome ;=)
>>thanks Mike W, G8NXD aka M3MSM qthr
>
>You are welcome to download the manual for the antenna from
>http://bama.sbc.edu which gives the dimensions for the radials.
>
Ken, the software to read the file is'nt running. I assume its a
plug-in for Internet Explorer, I'm running Ver 5.0, is there a bug
involved?. I've tried downloading twice and both installs install ok
but ar'nt recognised.
sorry to be a pain.
atb Mike W, G8NXD aka M3MSM qthr

934. Re: 2.4GHz amplification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-05 11:20:13 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0507020720000001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42797

In article <3D25107C.7030607@dioxine.net>, dana@dioxine.net wrote:

> carltons wrote:
> > I don't want to sound like a party pooper, but operation at higher xmt
> > levels is not a legal option. Even improving the antenna efficiency may
> > not be legal if the ERP level is limited by requirements. It is legal to
> > improve your path loss by placement of devices, etc. with the obvious
> > conclusion being that the lower the path loss, the better the reception
> > and so on.
>

> Part 15 wireless networking devices at 2.4GHz are allowed a remarkably
> large amount of transmit power and antenna gain; I personally have experience
> with a system based on conventional Lucent 802.11b cards combined with
> high-gain antennas and amplifiers that achieves a solid 11Mbps link
> over a distance of 12 miles. If you read Part 15 very carefully with
> respect to 802.11b point-to-point operation, you can run up to +30dBm
> of transmit power into a +6dBi antenna; above this, the maximum transmit
> power is folded back at the rate of 1dBm/3dB antenna gain. With a +24dB
> antenn system, you can run +24dBm of transmit power, for example, and this
> is more than adequate to cover 20km in a point-to-point configuration.
>
> While your caution regarding legal restrictions is reasonable, you're
> apparently unaware that use of amplifiers and high-gain antennas for
> Part 15 wireless networking devices is certainly legal.
>
> Dana K6JQ
> dana@dioxine.net

Dana

I'm not an expert on this particular band, but those numbers above are surprising to me for an unlicensed band. Besides that, just from an EME aspect, I don't think that I would want to be sitting in this strong a field of microwave energy. I guess it's okay if you remote the antenna, but then you have line losses to worry about unless you want to complicate the system more with data lines out to a remoted xcvr. If you have an amateur licence then you could just set up your own MDS on one end and let your buddy at the other end with an amateur licence set up his. This would solve the whole problem. Don't they still allow wideband at 2.3 GHz. ? I don't keep up with these things now.

My experience is in CT2 and Bluetooth (to some degree). I've also done alot of work at low, mid, and high bands as well as UHF for public safety for a company whose name starts with an M. ;-)

No matter. RF is a pain.

73,

Steve WB4CZR

935. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-05 11:44:59 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d258623.4248645@news.cantech.net.au>
Source record: 42798

On Thu, 04 Jul 2002 04:41:44 GMT, ehsjr@bellatlantic.net wrote:

>Don't put two DC supplies in series, or parallel, unless
>you do it at the output of the bridges. If you series
>them, both need to be capable of 25 amps.
>
>I'd use 2 28 V 500VA transformers, each feeding its own
>bridge rectifier. Put the output of the bridges in
>parallel. Your pass transistors will have to dissipate
>close to 250 watts at full load (25 amps). I'd use
>4 or 5 2N3055's (because I have a bunch of them)
(snip)
That'd be about the only valid reason for using 3055's.
These transistors, often listed for linear PSU duty, have abysmal HFE
at any half-decent current. For a project like Hamish is planning, a
type with higher gain and still a decent power rating would be
preferred IMOE.

936. Re: 2.4GHz amplification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-05 13:48:41 UTC
From: chas <chas@multiscan.junglelink.co.uk>
Message-ID: <ag483p$n7n$1@venus.btinternet.com>
Source record: 42799

"kd6ozk" <kd6ozk@hotmail.com> wrote in message
news:e2ff41a.0207031356.7e4a7b12@posting.google.com...
> Hi all. I've been reading a discussion in a computer security mailing
> list, and the current thread surrounds wireless LAN cards. These
> puppies run at 2.4GHz and usually are limited to a few hundred feet
> because of antenna design and power output.
>
> And it occurred to me that it may be possible to amplify the signals
> and extend the range. I don't know how legal a 2.4GHz TX amp would
> be, but I assume an RX amp would be allowed. I also assume that using
> a dish or a good hi-gain yagi could extend a LOS connection to a
> kilometer or more.

Do a google search: +wireless +pringles some interesting articles pop up.

Chas

937. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-05 15:02:27 UTC
From: ZOOM <robert931@sympatico.ca>
Message-ID: <WxiV8.7480$aJ4.1831711@news20.bellglobal.com>
Source record: 42800

Simple.
Get two 300W computer supplies. Modify the regulator to output 14V on all
12V lines. Combine the12V lines on each supply. A 300W computer supply
will easily give 20A+ of current. Combine the two supplies to yeild 28V.
You will need a couple of power resistors across the 5V line of each supply
to initiate regulation. Approx 5 ohms 20W. Yes they are switching supplies
and if using with HF you'll want to put a few ferrite cores on the voltage
lines to eleiminate the switching noise.

<hamish@cloud.net.au> wrote in message
news:3d21b1a5$0$28003$afc38c87@news.optusnet.com.au...
> Hi all,
>
> I want to build a 28V 20-25A supply to power a ~300W HF amplifier
> (which will be my next project). I intend the supply to be linear
> due to a complete lack of switch mode experience on my part.
>
> 700+ VA transformers seem to be difficult to come by here in
> Australia, and they have quite high output voltages too
> (starting at 40V), which means a lot of power will be wasted
> in the transistors. On the other hand, 500VA transformers are
> reasonably priced, available, and come as low as 25-30V out.
> However I think I would need two of them, or a 500VA and
> a 300VA or similar.
>
> What's the best way to make use of two transformers? I
> guess that actually putting them in parallel is out of
> the question due to differences in secondary voltage. I
> see two other options:
>
> 1. Build two 14V 20-25A supplies and put them in series; or
> 2. Build two 28V 10-12A supplies and put them in parallel.
>
> Option #2 looks better due to the minimum 25V out of a
> suitable VA transformer.
>
> Any advice welcome.
>
> thanks,
> Hamish
>
> --
> Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

938. Re: 2.4GHz amplification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-05 16:42:50 UTC
From: "Dana H. Myers" <dana@dioxine.net>
Message-ID: <3D25CC97.2050204@dioxine.net>
Source record: 42801

carltons wrote:

> I'm not an expert on this particular band, but those numbers above are
> surprising to me for an unlicensed band. Besides that, just from an EME
> aspect, I don't think that I would want to be sitting in this strong a
> field of microwave energy. I guess it's okay if you remote the antenna,
> but then you have line losses to worry about unless you want to complicate
> the system more with data lines out to a remoted xcvr. If you have an
> amateur licence then you could just set up your own MDS on one end and let
> your buddy at the other end with an amateur licence set up his. This
> would solve the whole problem. Don't they still allow wideband at 2.3
> GHz. ? I don't keep up with these things now.

Have a look at the latest revision of Part 15, specifically
15.247:

http://www.fcc.gov/oet/info/rules/part15/part15_5_30_02.pdf

Frankly, given the relatively large amount of off-the-shelf
11Mbps equipment available (PC-Cards, access points, mast-mounted
amplifiers, and antennas), I'm surprised that hams aren't a little
more excited about the stuff. Remember the wailing and gnashing
of teeth trying to get from 1200 baud AFSK to 9600 baud FSK that
ultimately stalled packet long enough for the Internet to kill it?
Here's wireless Ethernet speeds out of the box, and amateur
radio experience, aligning antennas and so on, is very valuable.

> My experience is in CT2 and Bluetooth (to some degree). I've also done
> alot of work at low, mid, and high bands as well as UHF for public safety
> for a company whose name starts with an M. ;-)

Ahhh... Bluetooth - that's *sure* taking some time to gain
traction... the key there will be a $2 single-chip silicon
implementation... not quite here yet, still, though there keep
being promising developments.

Dana K6JQ
dana@dioxine.net

939. Re: 2.4GHz amplification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-05 18:13:41 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0507021414040001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42802

In article <3D25CC97.2050204@dioxine.net>, dana@dioxine.net wrote:
>
> Have a look at the latest revision of Part 15, specifically
> 15.247:
>
> http://www.fcc.gov/oet/info/rules/part15/part15_5_30_02.pdf
> dana@dioxine.net

I do believe you and that you're right. It's just an unusual regulation compared to others that I've dealt with in the past. I still don't like sitting next to a microwave xtmr at those levels. Next thing you know, they will allow pulse modulation at low frequencies on this. Then I'll have to move to the next county or into a missle silo in Hermosa, SD. :-)

Steve WB4CZR

940. Re: Experience with charging Ni-MH batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-05 18:59:02 UTC
From: Markus L <uo9oew@tzk.pu>
Message-ID: <m0mV8.126$Y72.339912@rdr1.wex.teleglobe.net>
Source record: 42641

"Derek Toeppen" <derek_toeppen@agilent.com> wrote in message
news:2219e080.0206281506.39496894@posting.google.com...
> I am looking for experiences people have had with rapid
> charging (C/2 to C) Ni-MH batteries using the negative
> delta voltage charge termination technique.

Read Appendix A of
http://www.linear.com/pub/document.html?pub_type=app&document=65
which is an excellent introduction into the different charge termination
methods.

Have built a charger based on ICS1702 made by http://www.galaxypower.com/
Get the datasheet http://www.galaxypower.com/organization/ics1702.PDF and
read about their charge termination. Never ever had a problem with this
charger (batteries getting hot etc.). Am operating at C/2.

73, Markus HB9BRJ

e-mail address rot13 encoded. Decode before replying.

941. Radcom July/02: CDG2000 Transceiver, fig 12.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-05 20:36:29 UTC
From: la8ak.xnd@online.no
Message-ID: <3d2600c3.21517759@news.online.no>
Source record: 42803

The circuit diagram on page 22 - uper right corner (July) is obviously incorrect. The LO has no connection to 74AC109

The same circuit diagram is also shown on an internet site, but according to LA7MI it has the same fault. Discovered it since it was receintly some notes by G3SBI on adjusting mixer balance, but it seems to have vanished

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

942. Re: 2.4GHz amplification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-05 22:26:08 UTC
From: dphil <dphil@breathemail.net>
Message-ID: <3d261cc7_2@news1.vip.uk.com>
Source record: 42804

See www.fraras.org.uk In the UK some WLAN channels
are in the 13cm. amateur band.

Phil G8AAE

kd6ozk wrote in message ...
>Hi all. I've been reading a discussion in a computer security mailing
>list, and the current thread surrounds wireless LAN cards. These
>puppies run at 2.4GHz and usually are limited to a few hundred feet
>because of antenna design and power output.
>
>Thanks,
>Larry

943. Sir Douglas Halls Circuits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-05 22:31:55 UTC
From: geoffrey brown <geoff@spontaflex.freeserve.co.uk>
Message-ID: <ag56no$h7i$1@newsg2.svr.pol.co.uk>
Source record: 42805
Cross-posted to: aus.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.shortwave,uk.radio.amateur

http://www.spontaflex.freeserve.co.uk/

The Ingenious circuits of Sir Douglas Hall.

Updated the list of component suppliers and added a letter from
Sir Douglas giving a brief history of his radio construction.

Still have lots of articles to add but have used up all the webspace allowed
by freeserve.
Tried condensing the jpegs even more to gain some space but quality
deteriorated too much.
Any suggestiond to free up some space?
I'v been told adobe acrobat format would help but this is the one program I
hate using.

Cheers
Geoff

944. Re: 2.4GHz amplification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-06 03:10:40 UTC
From: MS Bob <msbob@hotmail.com-edy>
Message-ID: <9tnciuo2lqfl7joth839lid2beps0harm8@4ax.com>
Source record: 42806

On Fri, 5 Jul 2002 23:26:08 +0100, "dphil" <dphil@breathemail.net>
wrote:

>See www.fraras.org.uk In the UK some WLAN channels
>are in the 13cm. amateur band.
>
>Phil G8AAE

But isn't DSSS not allowed in the UK amateur bands?

945. VHF/UHF reciever schematics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-06 05:11:54 UTC
From: Mark <tubes#NOSPAM#@shaw.ca>
Message-ID: <u_uV8.9734$Xs6.361680@news2.calgary.shaw.ca>
Source record: 42807

I'm not sure if I'm in the right place to ask this question.

I was thinking of making a reciever (tube based) for the VHF and UHF range.

any schematics? or will this be pretty difficult?

thanks

946. Re: Sir Douglas Halls Circuits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-06 06:29:16 UTC
From: Walt Davidson <walt99@tiscali.co.uk>
Message-ID: <ik2diusg6nk0ufbvjlfebn1mjv9vadmtpg@4ax.com>
Source record: 42808
Cross-posted to: aus.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.shortwave,uk.radio.amateur

On Fri, 5 Jul 2002 23:31:55 +0100, "geoffrey brown"
<geoff@spontaflex.freeserve.co.uk> wrote:

>http://www.spontaflex.freeserve.co.uk/
>
>The Ingenious circuits of Sir Douglas Hall.
>
>Updated the list of component suppliers and added a letter from
>Sir Douglas giving a brief history of his radio construction.
>
>Still have lots of articles to add but have used up all the webspace allowed
>by freeserve.
>Tried condensing the jpegs even more to gain some space but quality
>deteriorated too much.
>Any suggestiond to free up some space?

A very interesting site, Geoff! Many thanks for putting it up.

Why not just open another Freeserve "pay-as-you-go" account (or
indeed, one with any "free" ISP), complete with another allocation of
web space, and link to pages on it from your main site.

Better still, you could just use a subdirectory at the secondary site
as a location for the graphics files, and point to them at the
secondary URL in your html code. Many of the graphics and audio files
on my main BT Internet Web pages are, in reality, located in a
subdirectory on a Virgin Net web server, but this is completely
transparent to the user. This frees up webspace on the main server
for additional html files.

If you want some examples of how to code this, just drop me an email.

73,
Walt (G3NYY)

--
Walt Davidson Email: g3nyy @freeuk.com

947. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-06 06:59:35 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d2694dd.1607564@news.cantech.net.au>
Source record: 42809

On Fri, 5 Jul 2002 11:02:27 -0400, "ZOOM" <robert931@sympatico.ca>
wrote:

>Simple.
>Get two 300W computer supplies. Modify the regulator to output 14V on all
>12V lines. Combine the12V lines on each supply. A 300W computer supply
>will easily give 20A+ of current.
(snip)

Typical peasea PSU's have a poomteenth of an amp on -5 and -12, and
the remainder of the total wattage is split 50:50 between +5 and +12.
So a 300W unit would be good for ~12.5A on +12 rail. Of course, your
unit(s) could be different.

948. Re: VHF/UHF reciever schematics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-06 09:17:23 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <5f5diu0qi6srvlko1u3pt440cstrpmdq3d@4ax.com>
Source record: 42810

On Sat, 06 Jul 2002 05:11:54 GMT, "Mark" <tubes#NOSPAM#@shaw.ca>
wrote:

>I'm not sure if I'm in the right place to ask this question.
>
>I was thinking of making a reciever (tube based) for the VHF and UHF range.
>
>any schematics?

The "VHF/UHF manual" by G.R. Jessop, G6JP, published by the RSGB (ISBN
0 900612 92 4) contains some tube based receiver circuits (not
complete receiver schematics) at least in the 4th edition (1983, with
multiple reprints at least up to the 1990's). I guess the older
editions might contain more tube circuits.

>or will this be pretty difficult?

Building an VHF/UHF receiver is not very hard with modern components,
such as MMICs, with low and constant impedances and plenty of gain.

However, if you insist of building the VHF/UHF receiver with tubes,
there are going to be problems with the stray capacitances and
generally quite high impedance levels.

One way to implement the UHF preamplifier is to use grounded grid
triodes, which effectively isolates the input from the output.
Nuvistors and other very small tubes are often used with flexible
leads directly soldered to the circuit to reduce the stray
capacitances. The real problem is were to find such tubes, since they
have not been used for decades in new designs.

The noise figure of tube preamplifiers were generally quite lousy
compared to modern solid state devices and the oscillator stability
was not at all good.

If you are interested in building tube receivers, I would suggest
building a 0-30 or 0-100 MHz tube receiver and building a solid state
down converter from the frequency range of interest. A crystal
oscillator followed by 1-3 frequency multiplier stages will give a
high stability and using a GaAs-Fet as the UHF preamplifier will
enable a very low _system_ noise figure.

When looking at old VHF/UHF receiver designs, you should remember that
these were designed in the days when there was only a few signals on
VHF/UHF and the signal levels were quite low (except for the few TV
transmitters), so the receiver front end selectivity and string signal
handling was not an issue. However, in these days, there quite a lot

more signals and thus capable of producing many more intermodulation products popping up all over the dial and the signal strengths can be quite high (e.g. a nearby cellular phone), making some of the old designs useless in urban areas, while they might still be usable in rural areas. These designs might need an extra tuned stage in front of the mixer. Using very sharp tuned circuits, with higher losses, in front of the first RF amplifier will even further degrade the lousy noise figure of some tube RF amplifiers.

Paul OH3LWR

949. Re: Sir Douglas Halls Circuits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-06 11:25:26 UTC
From: Jules <j.omega_no_spam_@members.v21.co.uk>
Message-ID: <3d26d3b6_1@news.greennet.net>
Source record: 42811
Cross-posted to: aus.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.shortwave,uk.radio.amateur

Geoff - thanks for nice site, with nostalgic associations, will browse there again.
The DjVu format offers major file compression - for explanation and examples see the BAMA site, eg
http://bama.sbc.edu/viewers.htm
...it works very well.
- Jules

"geoffrey brown" <geoff@spontaflex.freeserve.co.uk> wrote in message news:ag56no$h7i$1@newsg2.svr.pol.co.uk...
> http://www.spontaflex.freeserve.co.uk/
>
> The Ingenious circuits of Sir Douglas Hall.
(snip)
> Any suggestiond to free up some space?
> I'v been told adobe acrobat format would help but this is the one program I
> hate using.
>
> Cheers
> Geoff

950. Re: High voltage regulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-06 12:17:19 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <fdBV8.417274$352.55506@sccrnsc02>
Source record: 42812

A nice PC board actually already exists that accomplishes much of this ($ 15 USD). You can surely tweak the design for your specific voltage requirement.

Here is the web page:

http://www.theheathkitshop.com/hp23pc.html

w9gb

"Deos" <lineoffiretoday@yahoo.com> wrote in message news:afejjj$7ki$1@nic.grnet.gr...
>
> Dose any one know any type of High voltage regulator (up to 200V 200ma)
>
> To be more exact , something like a 78XX series but for the the above
> specs..
>
>
> --
> deosiereas.virtualave.net
>
>

951. Re: Why bother?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-06 14:32:33 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <5cDV8.57307$DB.1125518@news1.east.cox.net>
Source record: 42813
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.antiques.radio+phono

".Bill :-)" <TheRealExray@netscape.net> wrote in message
news:3D0182A1.73D3D0B@netscape.net...
> Roger Brown wrote:
> >
> > AC/DC's are no problem. I don't understand why you would bother.
Granted,
> > it was a cheap way to do things back then. They are not, however,
> > particularly unsafe with normal precautions. The S-38 was not a serious
> > communications receiver anyway (more geared to SWL'ing). Used for
causual
> > listening - I would think it would be fine the way it is. As someone
else
> > stated - many of us grew up with AC/DC sets and they hardly ever caused
any
> > problems.
> > R.G. Brown, NL7FP
>
> The S-38 I had, I forget which model, had the chassis isolated from the
> metal cabinet via rubber mountings. So it wasn't an automatic killer
> <G>.
> If the rig in question also has them, restoring those mounts should be
> the first order of business.
> -Bill
>
Not to mention there is a wax paper cap between the hot chassis and
the outer steel cabinet. It may not have been a serious problem back
then, but after 50 years most paper caps have developed serious
leakage and should be replaced, especially those that can place a
user in harm's way.

Pete

952. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-06 15:19:21 UTC
From: hamish@cloud.net.au
Message-ID: <3d270a79$0$14696$afc38c87@news.optusnet.com.au>
Source record: 42814

ZOOM <robert931@sympatico.ca> wrote:
> Get two 300W computer supplies. Modify the regulator to output 14V on all
> 12V lines. Combine the12V lines on each supply. A 300W computer supply
> will easily give 20A+ of current. Combine the two supplies to yeild 28V.
> You will need a couple of power resistors across the 5V line of each supply
> to initiate regulation. Approx 5 ohms 20W. Yes they are switching supplies
> and if using with HF you'll want to put a few ferrite cores on the voltage
> lines to eleiminate the switching noise.

They are usually not rated to give their whole 300W output on the 12V
line though - most of it is 3.3V and 5V.

Hamish
--
Hamish Moffatt VK3SB <hamish@debian.org> <hamish@cloud.net.au>

953. Re: 2.4GHz amplification

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-06 18:27:04 UTC
From: dphil <dphil@breathemail.net>
Message-ID: <3d27364a_2@news1.vip.uk.com>
Source record: 42815

Sorry finger trouble. Should be www.frars.org.uk .

Phil G8AAE

dphil wrote in message <3d261cc7_2@news1.vip.uk.com>...
>See www.fraras.org.uk In the UK some WLAN channels
>are in the 13cm. amateur band.
>
>Phil G8AAE
>
>
>kd6ozk wrote in message ...
>>Hi all. I've been reading a discussion in a computer security mailing
>>list, and the current thread surrounds wireless LAN cards. These
>>puppies run at 2.4GHz and usually are limited to a few hundred feet
>>because of antenna design and power output.
>>
>>Thanks,
>>Larry
>
>

954. Re: new-basement construction grounding suggestions wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-06 18:45:54 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <CVGV8.58602$DB.1177282@news1.east.cox.net>
Source record: 42816

"Myron A Calhoun" <mcalhoun@ksu.edu> wrote in message
news:af7jip$8jm@unix1.cc.ksu.edu...
> , he volunteered that he could even leave "sleeves" in
> the basement floorslab itself through which I could drive ground rods.
> (In other words, he's quite cooperative!)
>

Better make sure your water table never rises above that point!! You don't want to provide a means for a temporarily high water table to enter the cellar.

Pete

955. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-06 22:52:39 UTC
From: john graesser <graesser@tca.net>
Message-ID: <uiet1nb6jvgv33@corp.supernews.com>
Source record: 42817

>
> They are usually not rated to give their whole 300W output on the 12V
> line though - most of it is 3.3V and 5V.

I guess it it too late for people to grab up old s-100 based systems, with their 8v 80 amp linear power supplies and use 4 of them in parallel. The ones I have left are still in operating condition so I don't want to gut them for the power supplies, never mind the fact that each one is about 60 pounds so 4 would be a mighty heavy power supply.
thanks, John.
KC5DWD

956. Re: Where do I start

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-07 00:42:33 UTC
From: ogrowup@webtv.net
Message-ID: <18142-3D278E79-537@storefull-2234.public.lawson.webtv.net>
Source record: 42818

May I jump into this discussion a little late?
1) There are three levels of license: Technician, General and Extra. Each one has a test requiring deeper & broader knowledge. Each also has increasing privileges.
2) Try to find a class in your area if that is possible! Being in a class setting is a way to get a lot of background.
3) If the class offers CW lessons, TAKE THEM!!!!! The only FCC CW requirement now is a single 5 Words-per-Minute test. TAKE IT NOW AND GET IT OVER WITH!!!
4) The best books out there are the Gordon West Q&A books sold at Radio Shack. They cover the entire test pool, question by question, and take the time to explain the answers.

It may not be easy at first, but keep in mind that kids as young as 5-6 years old have passed the Extra exam! As a 10-year ham & a Technician-Plus licensee, I assure you it can be done! Go for it & join the fun!!

Patrick O'Connor, N1NCJ

957. Re: Help with silk screen lettering

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-07 01:21:05 UTC
From: Ron Banks <rjb5@csinet.net>
Message-ID: <5IMV8.610$FW5.696184@newshog.newsread.com>
Source record: 42819

"GaryH" <webpub@fastmail.ca> wrote in message
news:4CPU8.30653$wj4.2584839@e3500-atl2.usenetserver.com...
> Since I don't have the capabilities of creating silk
> screens, what is there that I can use for small letering
> on a project? I also have some existing gear that has damaged
> silk screen lettering that I want to repair. Any ideas on how
> to make this happen? Is there a source for dry transfers with
> a variety of sizes and fonts? What do you homebrew experts
> suggest?
>
> Thanks
>
Hi, Try this stuff. http://www.gwengibson.com/order.html It used to be sold under Circuit Bridge but their site redirects to Gwen Gibson. It's pre-sensitized silk screen. It keeps very well in the fridge. You can cut to just the size you need. I reconstruct the lettering using a digital photo and photo editing software, then I change the lettering to black. "Select" just the lettering and print it on inkjet transparency sheets once I get the size right. Use a sheet of glass or contact frame and expose per directions and rinse with warm water and you should have the screen you need. I use the thick enamels in the plastic squeeze bottles from Wal Mart's craft dept. Use a business card for the squeegee. Practice on something with a similar surface until you get the feel of it. If you make a mistake you can usually clean it up with water or alcohol if you don't let it set too long. I use a good masking tape to hold the screen in place on one end. You can also use the screen to make decals using the inkjet decal paper that have white or pastel colors. Something you can't do with the inkjet printer.

958. AD9835 and REFIN ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-07 02:35:37 UTC
From: lepton@sympatico.ca
Message-ID: <399debb7.0207061835.3e036916@posting.google.com>
Source record: 42820

AD9835 and REFIN ?

Hi

It's possible to control the output amplitude by varing the REFIN
input voltage ?

IOUT FULL-SCALE = 12.5 X VREFIN/RSET

VREFIN = 1.21 V nominal, RSET = 3.9 kW typical

REFIN Input Impedance 10M typ

From these equations the output is directly proportional to REFIN and
the recommended V REFIN is 1.21V. Is this means that the voltage
between 0 and 1.21 volt can be use to linearly control the output
amplitude, or if at least i can toggle the output via REFIN ?

Thanks for your collaboration.

Gilles

959. Re: Where do I start

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-07 04:22:13 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D27C1F5.4F850D89@clifto.com>
Source record: 42822

P.L. O'Connor wrote:
> 3) If the class offers CW lessons, TAKE THEM!!!!! The only FCC CW
> requirement now is a single 5 Words-per-Minute test. TAKE IT NOW AND GET
> IT OVER WITH!!!

There's no reason to do that. Just have them wait until after WARC 2003.

(Sorry, I couldn't resist.)

--
.signature in flux

960. Aluminum Sheet Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-07 06:31:28 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <uifcffo8145ma0@corp.supernews.com>
Source record: 42821

Where do you homebrewers buy aluminum sheet?
Stuff to make boxes and chassis out of ?

Doug N4IJ

961. Re: Aluminum Sheet Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-07 08:25:26 UTC
From: n2cqr@clix.pt
Message-ID: <3d27fa31.120386294@news.clix.pt>
Source record: 42823

On Sat, 6 Jul 2002 23:31:28 -0700, "Douglas Snowden"
<snowden@peoplepc.com> wrote:

>Where do you homebrewers buy aluminum sheet?
>Stuff to make boxes and chassis out of ?
>
>Doug N4IJ

Doug: Dead VCRs often have nice sheets of aluminum as the top or
bottom of the cabinet. You can cut it with tin shears. Very useful.

I also use cheap cake or cooking pans available in supermarkets.

I'm told in the old days, enterprising young hams used to appropriate
STOP signs and turn them into chassis. But I don't recommend that.
Not aluminum anyway.

73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 25.7 W
http://planeta.clix.pt/n2cqr

962. HEDS-6310 and HEDS-5310 HP Encoders information

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-07 09:33:00 UTC
From: Bruno I6YPK <i6ypk#nospam#@yahoo.it>
Message-ID: <gVTV8.41494$Jj7.1131172@news1.tin.it>
Source record: 42825

Hi All.

I need the data sheets of the above mentioned encoders.
Google and HP site search gave no result.

These encoders have a DC motors included and have 10 PINS contact.
(removed from a broken HP Optical Attenuator).

Pls see the photo here:

http://www.qsl.net/i6ypk/FOTO/HP%20ENC%20IM000240.JPG

Thanks for help.

73
Bruno, I6YPK

963. GPIB software search for RACAL-DANA 1991 Counter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-07 09:33:01 UTC
From: Bruno I6YPK <i6ypk#nospam#@yahoo.it>
Message-ID: <hVTV8.41495$Jj7.1131274@news1.tin.it>
Source record: 42824

Hi All.

My RACAL-DANA 1991 nanosecond Universal Counter have the GPIB option installed.

Anyone have/know a PC software for the GPIB interface ?

Thanks for help.

Bruno, I6YPK

964. HEDS-6310 and HEDS-5310 HP Encoders information

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-07 09:50:18 UTC
From: Bruno I6YPK <i6ypk#nospam#@yahoo.it>
Message-ID: <u9UV8.41540$Jj7.1132578@news1.tin.it>
Source record: 42826

Hi All.

I need the data sheets of the above mentioned encoders.
Google and HP site search gave no result.

These encoders have a DC motors included and have 10 PINS contact.
(removed from a broken HP Optical Attenuator).

Pls see the photo here:

http://www.qsl.net/i6ypk/FOTO/HP%20ENC%20IM000240.JPG

Thanks for help.

73
Bruno, I6YPK

965. Re: MC3362 MC2833

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-07 11:17:54 UTC
From: dfg <A.Gras@wanadoo.fr>
Message-ID: <ag97vkjo1@wanadoo.fr>
Source record: 42827

take a look at:
http://perso.wanadoo.fr/jacques.legoff/015.htm

"Peter O" <peter.o@lennik.org> a crit dans le message news:
3D23774E.BC15B046@lennik.org...
>
> Does anyone here have experience with building a 2 meter FM transceiver
> (or transmitter or receiver only) based on the MC3362 and/or MC2833
> chips manufactured by Motorola ?
>
> According to the specs of these IC's it should be possible but I can
> only find designs for 10 to 80 meters or so.
>
> Any designs and/or hints would be very appreciated as I'm trying to
> establish the feasibility of such an undertaking.
>
> 73 ON1DTM Peter

966. Advantest TR4110 TR4113AL

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-07 15:45:24 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <omZV8.2162$uO3.78439758@newssvr17.news.prodigy.com>
Source record: 42838

I know this isn't homebrew butbeing a homebrewer and old equipment aficianado I though maybe someone on this group could help me. I have an early 1980s I'd guess Advantest TR4110 Tracking Scope with a TR4113AL RF Section. Its lost sensistivity on the high band and I think the mixer is blown. I need an Advantest TR4113AL RF section, manual, schematic or guidance on the mixer. Any help or leads appreciated.
tnx
Hank wd5jfr

967. Re: Help with silk screen lettering

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-07 16:09:49 UTC
From: aDOThorne@verizon.net
Message-ID: <3d284110.1995549@news.verizon.net>
Source record: 42828

Hi Dale,
What is your source for the paper for use with InkJet? Would the
paper suggested for laser printer work on InkJet? Thanks,

Art K6KFH

On Thu, 04 Jul 2002 12:44:09 GMT, Dale Parfitt <parinc@gte.net> wrote:

>
>
>"Bob G. Mahrenholz" wrote:
>
>> Micro-Mark (www.micromark.com) makes clear water slide decal
>> paper that you can print on with a laser printer. You can then cut out
>> the names, soak them in water for a few seconds, then slide them onto
>> your panel. When they are dry, coat the panel with clear Krylon.
>> I've lettered panels successfully with it. It's a little bit flimsy but
>> practice on a scrap panel first.
>>
>> Bob Mahrenholz
>> K4QQK
>>
>
>Hi Bob,
>
>I recently used an ink jet decal system to replace a Gonset GR-212 logo.
>The results are fabulous. Because the clear substrate is so thin, it is
>visible only under perfect lighting conditions. I was not aware of the
>laser decal system- but will definitely pick this up too. Thanks for the
>tip.
>For those using these systems- spend the time to match the original Font
>and size- Drake, Gonset and probably all the rest used common fonts, even
>back then.
>
>I have also done the custom silk screen- but would not recommend it unless
>the entire panel needs redoing.
>Dale W4OP
>

968. Free - New power transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-07 16:09:53 UTC
From: Terry Perdue <k8tp@home.com>
Message-ID: <IJZV8.313066$6m5.298446@rwcrnsc51.ops.asp.att.net>
Source record: 42829

If you are into homebrewing ham radio or hifi amplifiers, I have three NEW power transformers that are just taking up space. If you can use one or all, they're yours for pickup in Kenmore, WA.

All have dual primaries with taps. Two transformers have a single 55V secondary with multiple taps, the third (smallest) has two secondaries, one 50V, one 28V, both with taps. The 28V winding is rated at 8A continuous. The largest transformer is rated at 250A peak, 6% duty cycle. Any of these would easily power a solid state kilowatt amp.

If interested, call Terry at 425-485-3188.

969. Re: Aluminum Sheet Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-07 16:11:46 UTC
From: mikea@mikea.ath.cx
Message-ID: <6LZV8.4195$Gv1.183546946@newssvr16.news.prodigy.com>
Source record: 42830

Bill Meara <n2cqr@clix.pt> wrote:
: On Sat, 6 Jul 2002 23:31:28 -0700, "Douglas Snowden"
: <snowden@peoplepc.com> wrote:

:>Where do you homebrewers buy aluminum sheet?
:>Stuff to make boxes and chassis out of ?
:>
:>Doug N4IJ

: Doug: Dead VCRs often have nice sheets of aluminum as the top or
: bottom of the cabinet. You can cut it with tin shears. Very useful.

: I also use cheap cake or cooking pans available in supermarkets.

: I'm told in the old days, enterprising young hams used to appropriate
: STOP signs and turn them into chassis. But I don't recommend that.
: Not aluminum anyway.

Depends on the sign. Most are, some aren't. I've spent enough
time at my employer's (a state highway department) sign shop to
learn that over the past 25 years. I've also seen the results of
a stolen STOP sign: the local sheriff's wife and two kids dead.
No, I'm not kidding.

But, aside from it being a felony in its own right and at least
manslaugter if someone dies as a result, it's not all that good
for chassis construction: it's too heavy and thick.

I use a local sheet metal shop. Not terribly expensive, and I
can actually talk with the guys and see specs on conductivity
and so on.

--
You are in a maze of twisty little protocols, all written by
Microsoft.
"The Horror! The Horror!"

970. Re: Aluminum Sheet Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-07 16:52:08 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <Yk_V8.76457$vq.3501759@bin6.nnrp.aus1.giganews.com>
Source record: 42831

You didn't say where you live.

Here in southern California there is a place called Industrial Metals that sells all sorts of raw material at reasonable prices. Steel, aluminum, brass, copper, and so on. I built my entire dual band WARC two element beam from stuff I got there. Except for the clamps.

I'm sure there are such places in most metropolitan areas.

73, Bob

971. New program COAXTRAP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-07 18:12:32 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aga0afgqv1@paris.btinternet.com>
Source record: 42832

New program COAXTRAP.exe

Coaxial traps are often inserted in HF dipole antennas to isolate the ends of the wires from the the feedpoint thus shortening the effective overall length of the antenna. The antenna is then resonant in a higher frequency band. A trap is a parallel tuned circuit which is adjusted to resonate at the higher frequency.

A trap is constructed from a length of coaxial line wound as a solenoid on a cylindrical former. The program models the construction operation by assisting the designer to wind on turns until the required resonant frequency is achieved. The normal coaxial capacitance behaves as the high-voltage tuning capacitance although there is a transformer action in the manner of connecting the ends of the line together. This small program will be interesting even if the user does not intend to make any traps.

This program has been tested by me on only two actual traps - one using 75-ohm coax and the other 50-ohm RG 58 on different diameter formers and different numbers of turns. Errors in predicting resonant frequency were less than 1 percent but great care was taken with measuring and checking dimensions. It would be appreciated if any constructors who have a trap in the shack doing nothing could measure it up and check frequency. If anything is suspicious please let me have the data and how it was obtained. It is possible on my solitary pair of samples I could have made a common error. The best way to measure resonant frequency is to use an antenna analyser on the Z range. Use a thin single-turn coupling loop around the middle and 6 or 10 inches of loosely-twisted pair to the meter. Look for a very sharp peak in Z.

Download COAXTRAP in a few seconds from website below. About 31 kilobytes. Not zipped up. Run immediately.

========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================

972. FS: Copper Wire - #9 Solid Bare

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-07 23:32:00 UTC
From: adam@panix.com
Message-ID: <agaj1g$5cr$1@panix2.panix.com>
Source record: 42833
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.antenna

I have just acquired over 700 pounds of bare #9 solid copper wire. I'm going to use some of it to redo my radial system, but the rest is for sale.

The lot includes lengths varying from about 33 feet to 37 feet. (Splice it together with pieces of 1/8" copper tubing to make longer lengths).

Asking $1.75 per length. (Less than 6 cents per foot!) 6 lengths for $10.

Pickup in Yorktown Heights or White Plains NY area. Will consider delivering nearby if you want the whole lot. Will also consider shipping if quantity is both worthwhile and manageable. (A 37 foot length weighs about 24 ounces. Buyer to pay shipping).

-Mike, wa2vqw@yahoo.com
--
test

973. Re: Aluminum Sheet Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 00:07:53 UTC
From: NoBody <NotHere@NoWhere.net>
Message-ID: <3D28D783.4545FAAF@NoWhere.net>
Source record: 42834

Watch for a rain trough/gutter replacement operation in your neighborhood. The guys that make the gutters on site have aluminum sheet in continuous rolls. I bought an 8 foot x 18 inch piece for $5 years ago.... I don't know what gauge it is but it works great for making boxes/chassis/panels. I've also used discarded aluminum siding from demolished buildings...

tk KD4EE

Douglas Snowden wrote:

> Where do you homebrewers buy aluminum sheet?
> Stuff to make boxes and chassis out of ?
>
> Doug N4IJ

974. Re: ROHM BA1404 FM STEREO TRANSMITTER CHIPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 00:13:52 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <4P4W8.84985$UT.5699300@bgtnsc05-news.ops.worldnet.att.net>
Source record: 42835

Those chips are still available; why would anybody want to bid on them,
unless you are selling them for 5 cents each?

Douglas Carter <opalezzzzz@earthlink.net> wrote in message
news:ZtFV8.3599$A43.345699@newsread2.prod.itd.earthlink.net...
> ROHM BA1404 FM STEREO TRANSMITTER CHIPS WWW.EBAY.COM ITEM #1364627614
>
>
>
>

975. Re: Help with silk screen lettering

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 00:15:27 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D28D99F.5E922C7E@netscape.net>
Source record: 42836

Art K6KFH wrote:
>
> Hi Dale,
> What is your source for the paper for use with InkJet? Would the
> paper suggested for laser printer work on InkJet? Thanks,
>
> Art K6KFH

I've tried some decals with the ink-jet. Used the same Micro-Mark products. The major problem with ink-jet decals is the amount of transparency in the printing. So it depends a lot on the colors you want to use and the color of the background where the decals go. Often it comes out fine but on a dark colored panel it simply won't do.
Laser printing is considerably better. There's a few folks on the web who will take your artwork and prepare a decal sheet for a reasonable cost.
I've used one fella a couple of times with an ALPS printer that will print gold and white but am hesitant to recommend him because his 'day' job keeps him pretty busy and his turn-around time is quite unacceptable these days. He charged $13 for a full 8x11 sheet.
Something I've thought about but never investigated...the folks who run little shops for custom tee-shirts, coffee mugs, etc...wonder if they could do good printing of decals if you furnish the media?
-Bill WX4A

976. Junkbox Parts FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 00:29:09 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <BS4W8.17$E4.5492@news.iquest.net>
Source record: 42837
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

```
Junkbox Surplus Parts for Sale as of 07/04/2002
===============================================

Website coming soon....stay tuned!

New Item
============
LM386N-1 - Audio Amps 5 for $2.50

Odd Items
============
9.8304 Mhz Crystals, 1/4 in tall - 25 for $7.00
27mH inductors with radial leads - 50 for $7.00

Caps - All new, old stock. No pulls.
====================================
All caps now 50/$3 or 100/$5
====================================
8pf NPO Ceramic - Loose
11pf NPO Ceramic - Loose
12pf NPO ceramics on tape
22pf Kemet Ceramic Caps, 200v, 10%
100pf Axial Mono Caps, 100v, 10%
150pf ceramics, 100v, 10%
470pf Ceramics on paper tape, rated 5% (NPO)
560pf Kemet Ceramic Caps, 200v, 10%
1000pf blue mono caps, 10% 100v
3300pf Kemet Ceramic Caps, 100v, 10%
.01 uF ceramic caps, 10% 100v brand new by Kyocera
and
.01 uF ceramic caps, 20% 50v, new old stock, not used
50/2.50 100/$4

Voltage Regulators
==================
L7805ACV voltage regulators TO220 case. 7/$4 or 15/$7
LM7812 voltage regulators. TO220 case. 5/$4
LM317T Adjust. Positive Voltage Regulator TO220. 6/$5.00 or 12/$8.50
LM78L62ACZ Volt regulators, TO92 format 5/$3.00 10/$5.00

Transistors - New Parts - No Pulls
==========
TP2222 plastic TO92 NPN (House brand 2N2222)50/$4 100/$7
2N3906's plastic TO92. PNP - 50/$4 100/$7
2N3904's plastic TO92. NPN - 50/$4 100/$7
```

2N3704's plastic TO92, NPN - 50/$4 100/$7

Op AMPS, Comparators
====================
LM741CN - Single Op Amp, 8 Pin Dip, 6 for $2.00
http://www.hep.ph.ic.ac.uk/~hallg/Instrumentation/Data/LM741.pdf

BA10324 - LM324 equiv Quad Ground Sense Op Amp 14 pin, 4 for $2.00
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10358 - Dual Ground Sense Op Amp, 8 pin, 5 for $4.00
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10393 - Dual Comparator 8 pin dip, 4 for $2.00
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA10339 - Quad Comparator 14 pin, 4 for $2.00
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

BA4560 - Dual High Slew Op Amp, 4 for $2.00
http://www.rohm.com/products/databook/standard/pdf/ba4560.pdf

Diodes
======
1N4148 - You always need these. 100 for $2.50 These are NEW.

Let me know if you're interested. All prices are post paid to the
USA, unless otherwise noted. I will ship to non USA addresses but we
need to discuss the shipping charges first.

--

=======================================
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57
=======================================

977. FS: Shack Cleaning

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 02:05:45 UTC
From: Dan Reynolds <bcdlr@insightbb.com>
Message-ID: <Zr6W8.117057$Uu2.22270@sccrnsc03>
Source record: 42839
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

I'm trying to raise some money to buy a SSB filter for my Kenwood TS-140S...

I have some laptop batteries, I have two Li-Ion 14.4V 2500mAh Dell batteries, $8 a piece plus shipping or 2 for $12 plus shipping. Never could figure out a charging circuit...

I also have a new IBM 9.6V 2.8Ah Ni-MH, $15 plus shipping (this is for an IBM TP365 and is $85 new). I have a 3.5" floppy drive for a IBM TP365 with the external cable/box for $10 plus shipping. I could make a deal on both ($20 plus shipping?)!

I have a Baycom type packet modem, N3PRT assembled from a kit but never wired up and tested, $12 shipped. I have a Ramsey 2 meter power amp with the sensing relay in a nice little alum. box. Worked but would never put out rated power, $15 - box connectors everything (no manual) plus shipping.

Analog devices AD9835 with a breadboard for experimenting (a little board with traces on it made by one of the genius qrp-l members), $10 shipped and includes two SMD Maxim chips (could've swore they were charge pumps...) mystery.

Original Neophyte receiver, assembled, with connectors pot vernier drive air variable, speaker w/headphone jack. Works FB. Mounted on a piece of plywood with a wood front panel, $25 plus shipping.

Speedex key, black wrinkle base, no shorting bar, $15 shipped.

Now to the oldies but goodies. I have a BC221 Frequency Meter, 125 - 20000 KC, Bendix Radio. In fair to good shape with calibration manual. I started a power supply and will include that also. Worked five years ago hasn't been touched since. This is not a museum piece but it did work and includes the calibration manual which is kinda rare (if you want to see one http://www.qsl.net/ab0cw/ral7.htm). Price is negotiable - plus shipping. It is heavy and I'd want to pack it really well. I don't need this one as I have a "brand new" one in storage.

I also have an Arc-5 shell with the roller inductor and variable capacitor. Best offer plus shipping. Sorry for the length of this post. And thanks.

Please reply off the list... Dan Reynolds KB9JLO

bcdlr@insightbb.com

978. Re: ROHM BA1404 FM STEREO TRANSMITTER CHIPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 02:57:05 UTC
From: Bob Headrick <bobh@proaxis.com>
Message-ID: <uihvt96nebp4bb@corp.supernews.com>
Source record: 42840

"Pete Gianakopoulos" <n.gianakopoulos@worldnet.att.net> wrote in message
news:4P4W8.84985$UT.5699300@bgtnsc05-news.ops.worldnet.att.net...
> Those chips are still available; why would anybody want to bid on them,
> unless you are selling them for 5 cents each?

Currently at $0.006 each.... I do not want 800 but could use a couple :-).

- Bob W7OV

979. FS: 1000's of TUBES, very low prices

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 03:39:11 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <zP7W8.28636$0c1.1708895@news1.west.cox.net>
Source record: 42841
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Please email w6krc@arrl.net for a detailed list.

980. TDA7000

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 04:57:27 UTC
From: Al <none@none.com>
Message-ID: <agb63pbnp1@geraldo.cc.utexas.edu>
Source record: 42842

I don't see it in the datasheet, but what exactly is the AF band that the TDA7000 outputs. More specifically, can it output DC. I want to receive digital data in the form of FSK as well as FM audio broadcasts.

Al

981. FX3851 toroid spec?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 07:40:33 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d294139.5622843@news.freeserve.net>
Source record: 42843

I've just found a box full of toroids type FX3851 in my junk drawer,
but I have no idea of their spec nor can I find any mention of them on
the web.
Does anyone out there know about these beasties.
thanks Mike W, G8NXD aka M3MSM qthr

982. Re: TDA7000

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 11:03:09 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <agbrhc$7i4$1@venus.btinternet.com>
Source record: 42844

"Al" <none@none.com> wrote in message
news:agb63pbnp1@geraldo.cc.utexas.edu...
> I don't see it in the datasheet, but what exactly is the AF band that the
> TDA7000 outputs. More specifically, can it output DC. I want to receive
> digital data in the form of FSK as well as FM audio broadcasts.

They have been used for receiving 1200 baud amateur packet radio on 2m by
putting the AF output into a standard packet radio modem. Outside their
upper frequency spec. but they work fairly well.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

983. Summing loop PLL

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 11:40:39 UTC
From: fred bartoli <toto@hotmail.toto>
Message-ID: <3d297a08$0$10518$626a54ce@news.free.fr>
Source record: 42845
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Hello,

I want to design some HF (almost DC to 200MHz+) precision vector measurement (ABB & GPA/NA) equipments.

I know that HP (and maybe others) have some nice products, but for personal use, they are totally out of reach, even used, so I build. Another reason is that I very like the idea of competing with the big shots and see what I can do with rather limited means.

I will use a sligtly modified 100KHz lock-in detector for the vector measurements.

For the signal generation, I will probably use a DDS ref/pll loop upconverter, mixed down to the "baseband", allowing a simple single VCO design.

Here is now my problem :
It has to do with the sync demod reference frequency.
Wanting to get the most S/N ratio out of the beast, I don't want 2 high freq VCOs (one for the signal, and one for mixing with the output and return signals, down to the 100kHz IF reference and 100kHz IF signal), since I will have 2 x 2 vco phase noise to deal with (2 VCO, and 2 mixs - ref & signal).

So I've imagined another way :
Have a low phase noise (crystal generated) 100kHz sync reference, upconverted around the VCO signal frequency (hence having almost only one VCO phase noise), which mixed with the return signal, will convert down to the 100kHz target.

Simple direct mixing is not possible since eliminating one of the sidebands by filtering is impractical at 100kHz offset & 100s order MHz variable frequency.
Also for simplicity and S/N reasons I'd prefer avoid multiple IF frequencies / mixing stages...
And managing a precision IF, high dynamic range, amplification, sounds easier to me at a low 100kHz freq than at multi MHZ.

So I plan to upconvert the 100kHz sync reference with a PLL summing (mixing) loop :
My 100kHz demodulator reference will be used as the PLL summing loop ref frequency, driving the VCO (through the filter loop of course), the VCO output signal (FreqVCO) being downconverted by mixing with the signal output frequency (FreqMain, main signal VCO). The resulting product will be low passed, then compared with the ref.
Et voil&#65533;...

Reversing the loop filtering gain sign will even allow to select the mixed
product frequency (FreqMain + or - 100k)

But now I'm stuck with a "little" remaining problem : the loop nicely locks when the starting VCO frequency (FreqVCO) is inside a guardband around the target frequency (+/-100kHz), but outside this guardband the loop gain reverse then driving the loop into saturation at one end of the VCO.

Anyone have a clue of overcoming this little annoying pb ?

Oh, I forgot to mention that, of course, the summing loop phase comparator is a phase/frequency one.

Thanks for any answer/advice/comment, even about the general design philosophy.

regards,
Fred.

984. W8MMQ Radio Mods Page

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 13:13:12 UTC
From: Dan <dahicks-NOSPAM@email.com>
Message-ID: <3d299049$0$3570$2c3e98f8@news.voyager.net>
Source record: 42846

Check out the Radio Mods Page:
http://www.w8mmq.com/mods/

Over 1,200 radio modification files, for amateur radios, scanners, and shortwave receivers. There are also links to several other mod sources on the internet.

And, the W8MMQ Amateur Radio Page:
http://www.w8mmq.com/

73 de
Dan W8MMQ

985. Re: FX3851 toroid spec?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 13:23:31 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <hqgW8.2051$l01.88513@newsfep1-win.server.ntli.net>
Source record: 42747

> I've just found a box full of toroids type FX3851 in my junk drawer,
> but I have no idea of their spec nor can I find any mention of them on
> the web.
> Does anyone out there know about these beasties.
> thanks Mike W, G8NXD aka M3MSM qthr
==========
May I add my question to the above one : I have a box of cylindrical toroids
FX2513
Size : dia 3/4" x length 1" x bore 1/4" , probably an old Philips/Mullard
part ,but no info on electrical characteristics.
Tnx
Frank gm0csz.kn6wh@ntlworld.com

986. Re: Aluminum Sheet Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 14:59:15 UTC
From: Mark Mansfield <mmans@aeneas.net>
Message-ID: <oFiW8.41$FA.60233@news.uswest.net>
Source record: 42749

Another source is "Hobby Lobby" stores and probably other hobby stores in
your area.
"H-L" sells sheets (12"X18") of it pretty reasonable.

"Douglas Snowden" <snowden@peoplepc.com> wrote in message
news:uifcffo8145ma0@corp.supernews.com...
> Where do you homebrewers buy aluminum sheet?
> Stuff to make boxes and chassis out of ?
>
> Doug N4IJ
>
>
>

987. Re: Radcom July/02: CDG2000 Transceiver, fig 12.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 15:58:47 UTC
From: dave.roberts@btinternet.com
Message-ID: <62deefd7.0207080758.374dcca7@posting.google.com>
Source record: 42748

la8ak.xnd@online.no (J M Noeding) wrote in message
news:<3d2600c3.21517759@news.online.no>...
> The circuit diagram on page 22 - uper right corner (July) is obviously
> incorrect. The LO has no connection to 74AC109
>
> The same circuit diagram is also shown on an internet site, but
> according to LA7MI it has the same fault. Discovered it since it was
> receintly some notes by G3SBI on adjusting mixer balance, but it seems
> to have vanished
>
> 73
> Jan-Martin
> LA8AK

Oops - you are correct. That part of the circuit diagram was spotted
as having several errors at the last minute before publication. Most
were cleaned up on the circuit diagram on the website but the local
osc divider is still wrong. It also has wrong pin numbering on the
chip (it is a 16 pin device !). Apologies - will get it corrected.
The clock input connects to the top of the resistor and not to ground
as shown.

Dave

988. Re: Aluminum Sheet Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 16:23:35 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnaijf46.gco.QSB@animas.frontier.net>
Source record: 42750

On Sun, 07 Jul 2002 08:25:26 GMT, Bill Meara scribbled:
> On Sat, 6 Jul 2002 23:31:28 -0700, "Douglas Snowden"
><snowden@peoplepc.com> wrote:
>
>>Where do you homebrewers buy aluminum sheet?
>>Stuff to make boxes and chassis out of ?
>
> I'm told in the old days, enterprising young hams used to appropriate
> STOP signs and turn them into chassis. But I don't recommend that.

"OLD DAYS" !! ??

In the Olde Days, hams would boil 78 RPM records to peel the vinyl
off and use the aluminium 'substrate'.

As collectors' items, those records, now-a-days, in prime condx,
would probably pay for a full blown Icom/Kenwood/Yaseu station...

Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

989. Re: Aluminum Sheet Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 16:25:43 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnaijf85.gco.QSB@animas.frontier.net>
Source record: 42751

```
On Mon, 08 Jul 2002 00:07:53 GMT, NoBody scribbled:
> I've also used discarded aluminum siding
> from demolished buildings...

....and the scrap pieces from new metal roof installs.

Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK
```

990. Re: Why bother?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 17:59:01 UTC
From: Phil Nelson <philnelson@antiqueradio.orgNOSPAM>
Message-ID: <FpkW8.8997$Yx5.5620@newsread1.prod.itd.earthlink.net>
Source record: 42752
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.antiques.radio+phono

Doug Moore has written a nice article about safety and AC/DC radios, which he has allowed me to publish at http://antiqueradio.org/safety.htm .

Regards,

Phil Nelson
Phil's Old Radios
http://antiqueradio.org/index.html

P.S. Sorry if this was mentioned earlier in this thread -- I recently had to reformat the hard disk on my computer and lost all history.

991. Re: FX3851 toroid spec?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 18:02:12 UTC
From: la8ak.xnd@online.no
Message-ID: <3d29c872.78003792@news.online.no>
Source record: 42753

On Mon, 8 Jul 2002 14:23:31 +0100, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>> I've just found a box full of toroids type FX3851 in my junk drawer,
>> but I have no idea of their spec nor can I find any mention of them on
>> the web.
>> Does anyone out there know about these beasties.
>> thanks Mike W, G8NXD aka M3MSM qthr
>==========
>May I add my question to the above one : I have a box of cylindrical toroids
>FX2513
>Size : dia 3/4" x length 1" x bore 1/4" , probably an old Philips/Mullard
>part ,but no info on electrical characteristics.
>Tnx
>Frank gm0csz.kn6wh@ntlworld.com
>
it is a useful idea to compare differemt cores if you wind 10 turns
and measure the inductance, and compare with other types. Just checked
an N77 core from Siemens today - I have no idea what it is compared to
the more familiar Philips 3C3 and 3F3 material

Estimate the reactance to be at least 4 times the impedance on the
lowest frequency

JM
LA8AK
--
remove ,xnd to reply

992. Re: Sir Douglas Halls Circuits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 19:41:16 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <B0CTs9CcreK9Ewfs@fslife.co.uk>
Source record: 42772
Cross-posted to: aus.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.shortwave,uk.radio.amateur

Geoff,

I don't want you to go spending money now but you may wish to consider
the package you get from the commercial web space company I currently
use.

www.webhoster.com

Best deal on the planet.

Now I'll go look at your site.

Good luck.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

993. Mechanical filter MF-455-10AZ

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 19:41:43 UTC
From: Richard Daventry <nearlynews_email@ntlworld.com>
Message-ID: <rVlW8.58$oZ2.4191@newsfep1-win.server.ntli.net>
Source record: 42754
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

I don't know what the difference is, but when I looked inside my Kokusai MF-455-10CK, it wasn't that, but a MF-455-10AZ. The can had been opened prior to me getting my mitts on it. I wonder if these two are equivalents.

When I opened the filter two things surprised me. First, there are no disks, but bars. Second, the foam inside is perfect, not gooey at all. So I figure it must be okay.

http://www.ksky.ne.jp/~t-kato/hamf/myexp/MF-Repair.html

Don't you just love those translation engines:

"Mechanism NIKARU filter
Mechanism NIKARU filter (following) Philharmonic a mechanism An abbreviation is a kind of the filter of an electric signal used in order to sort out an electric signal. There is impossible sharp signal sorting capability in LC resonance circuit using the coil (L) and the capacitor (C). This is the substitute of LC resonance circuit. ???? alloy It is because ? quantity Q resonance is used. They are ERIMBA (Elinver) from which a temperature coefficient is small as a ???? alloy, and Quantity Q is obtained, BIBURAROI (Vibralloy), and nickel SUPAN. - C (nickel-Span-C) etc. is used. A temperature coefficient is Q as ï¿½5 ppm [degree C] /or less and a resonator..."

"Degradation of a mechanism NIKARU filter
Philharmonic a mechanism using mechanical resonance Degradation It seems that there are many ? and things which mainly originate in a transformer juicer. However, many of filters of Kokusai Electric are the shock absorbing material currently used for the inside. Degradation of foaming urethane ? -- it seems that it is remarkable It seems that decomposition degradation is carried out in a long time, and it becomes the shape of the shape of mucus, or powder, and comes to bar a resonance child's vibration. Since a thing like urethane is not seen inside in Collins's philharmonic a mechanism A internal structure peculiar to Kokusai Electric It is considered a ??? thing. "

994. Solvents

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 19:50:48 UTC
From: mnewman@clear.net.nz
Message-ID: <3d29ec3b.221976@news.clear.net.nz>
Source record: 42755

Hi All

I want to use some ferrite cored transformers recovered from junked PC PSUs.

What are the best solvents to soften the glues used in assembly, but which won't attack the plastic bobbins.

Thanks

Mike

995. Re: Where do I start

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 20:07:12 UTC
From: rhaub <rhaub@itc.com>
Message-ID: <3D29F0EF.35175E17@itc.com>
Source record: 42756

ehsjr@bellatlantic.net wrote:

> rhaub wrote:
> >
> > carltons wrote:
> >
> > > "Kelvin Barnes" <KBARNES@NOSPAMMINGsi.rr.com> wrote in message
> > > news:YM4U8.57874$QD2.14831191@twister.nyc.rr.com...
> > > > I want to get started as a Ham hobbyist doing things the right way (ie no
> > > > illegal transmissions and all that nonsense).
> > > >
> > > > I'm a bit confused as to the license I should start with.
> > > > Also are there any good books on the market that I can study to pass the
> > > > exams?
> > > >
> > > > So far I have not found any FCC sponsored or sanctioned study guides.
> > > >
> > > >
> > > >
> > >
> > > I would ask firstly if you're sure you want to get into the hobby. It
> > > isn't cheap and requires some degree of dedication to complete.
> >
> > Whow, whow, whow, Slow up there Steve. I started out about 3 years ago and I will
> > admit that it takes a lot of dedication to get a general and I also agree that
> > getting a general is a good way to go. But, I've spent about $200.00 on my
> > station and I have an excellent HB receiver and a very nice 100W HB transmitter.
> > I'll admit that not every one is going to want to build a totaly 100% HB station
> > but it can be done and it can be done cheeply. But you need to rely heavly on the
> > dedication part. Lots of study and lots of experimenting, much more study than
> > needed for the test that is for sure.
> >
> > Oh, and to the original poster you can find lots of stuff for the beginner at
> > Radio Shack and you can find lots more for all levels at
> >
> > http://arrl.org
> >
> > I got most of my study material for the test from the internet for free and most
> > of my ideas and designs from my local University library's collection of QST
> > magazines and ARRL Radio Amatuer Handbooks. Although the internets seems to have
> > become the defacto source of infomation, one should not ignore the local library.
> >
> > Good luck and don't forget that a good radio should glow.
> >

> > Rick KC0GIX
> >
>
> Whoa, Whoa, Whoa, slow up there, Rick.
>
> Steve is exactly on target. You are an exception - a
> very rare exception.

I disagree. You could not be more wrong. You could try, But you would not be successful. My point is that with dedication and study any one can build a 100% HB station for little money. Not, you - can - do - it - but - if - you - have - the - money - don't - bother. Although I only got my license a few years ago I got interested in the hobby about 25 years ago. I remember talking to a number of hams at the time and most of them built there first stations. The way they talked, building your own station was a right-of-passage into the hobby. When did hamming go from building to buying? I don't think that I am the rare exception, I think I am the interested ham.

Rick KC0GIX

> MOST new hams will not be able
> to put together a station that includes an excellent HF
> receiver and a very nice 100W HF transmitter for 200 bucks,
> even buying an old transceiver.

>
> Most new hams won't be able to build an excellent receiver,
> at any price. Heck, most new hams can't even build a
> 100 W transmitter. There are a few exceptions, of course. You
> are one of them.
>
> You are right on target with dedication. If one is truly
> interested, he can develop the skill and knowledge to
> brew a nice station, often starting with single band
> QRP, CW and working up from there. But MOST hams (not
> restricting it to newcomers) cannot build an excellent
> receiver, unless its from a kit. A very small percentage
> have the experience and expertise to do that.

996. Re: Mechanical filter MF-455-10AZ

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 21:31:56 UTC
From: Richard Daventry <nearlynews_email@ntlworld.com>
Message-ID: <DunW8.693$oZ4.60702@newsfep2-win.server.ntli.net>
Source record: 42757
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Richard Daventry" <nearlynews_email@ntlworld.com> wrote in message
news:rVlW8.58$oZ2.4191@newsfep1-win.server.ntli.net...
> I don't know what the difference is, but when I looked inside my Kokusai
> MF-455-10CK, it wasn't that, but a MF-455-10AZ. The can had been opened
> prior to me getting my mitts on it. I wonder if these two are
equivalents.

Probably the actual mechanical filter is MF-455-10AZ. But when it's in the
can, along with the wiring, it's MF-455-10CK. Yea, I bet that's it.

997. Re: HEDS-6310 and HEDS-5310 HP Encoders information

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 22:32:51 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207081432.3360a2d5@posting.google.com>
Source record: 42758

I didn't find anything for those particular numbers in my 1993 HP Optoelectronics Designer's Catalog, nor on the current Agilent web site. I did find some numbers that are somewhat close, though, and they may give you enough info that you can figure out the details. It may help some if you find a date code on the parts...that could focus the data book search. I can likely locate newer and older data books than the one on my shelf. I suspect that the DC motors aren't actually included in the HEDS part numbers, but refer only to the encoders, but I may be wrong about that.

Cheers,
Tom

"Bruno I6YPK" <i6ypk#nospam#@yahoo.it> wrote in message
news:<gVTV8.41494$Jj7.1131172@news1.tin.it>...
> Hi All.
>
> I need the data sheets of the above mentioned encoders.
> Google and HP site search gave no result.
>
> These encoders have a DC motors included and have 10 PINS contact.
> (removed from a broken HP Optical Attenuator).
>
> Pls see the photo here:
>
> http://www.qsl.net/i6ypk/FOTO/HP%20ENC%20IM000240.JPG
>
>
> Thanks for help.
>
> 73
> Bruno, I6YPK

998. Re: coil calculating program on my site

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 22:37:17 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207081437.7755c469@posting.google.com>
Source record: 42759

That address didn't work for me just now...

What are the features of this program? What are the advantages over
the other existing programs?

Cheers,
Tom

Monaco <ihaveno@email.com> wrote in message
news:<Xns9240DB03E64F6ihavenoemailcom@195.121.6.84>...
> on my site:
> http://beam.to/homemade
> you will find a program for coil calculating
> (orange text)

999. Re: duplexers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-08 23:05:37 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207081505.1c955ac5@posting.google.com>
Source record: 42760

It seems like the design the ARRL published (assuming it's the same as the one I looked at) didn't take into account what the "stop" channel reflects back, which can be incorporated into the input reactance of the "pass" channel to good effect; also it's possible-fairly easy--to put a zero in each path to provide better stopping of the alternate frequency. I found that it wasn't too hard to design and build a rather better duplexer, but that said, I have to admit that I have access to some good network analyzers for "tweaking" (transmission response and return loss). (I suppose I should document my design and put it on a web page somewhere...)

Cheers,
Tom

"Clinton" <clinton@_nospam_netidea.com> wrote in message
news:<afph9d0soa@enews4.newsguy.com>...
> The 16th Edition of the ARRL Antenna Book has plans.
> ---
> Clinton Peebles VE7KNL
> Salmo, B.C. Canada
> Remove _nospam_ to reply
>
> "Rod" <rivservice@bigpond.com> wrote in message
> news:OFNT8.379129$o66.1023188@news-server.bigpond.net.au...
> > Gday all
> > just wondering if anyone has plans for home brew duplexers uhf primarily
> or
> > does anyone have some info or webpages i could take a look at
> > thanks rjroy@silchip.com.au
> >
> >

1000. Re: Aluminum Sheet Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 01:03:49 UTC
From: DonB <7432D63DBB01D03A196B1EDD80E8@comcast.net>
Message-ID: <VDqW8.96837$vq.4653075@bin6.nnrp.aus1.giganews.com>
Source record: 42762

Try www.onlinemetals.com they are the best in my book.

"Douglas Snowden" <snowden@peoplepc.com> wrote in message
news:uifcffo8145ma0@corp.supernews.com...
> Where do you homebrewers buy aluminum sheet?
> Stuff to make boxes and chassis out of ?
>
> Doug N4IJ
>
>
>

1001. FA: B&W 850A Bandswitch / Tank

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 01:25:35 UTC
From: motg@stratos.net
Message-ID: <efd5c18c.0207081725.5fe38106@posting.google.com>
Source record: 42763
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.boatanchors

Thanks for looking here's the link:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1365298441

1002. hp181a scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 01:49:32 UTC
From: "paul.g7izx" <paul.g7izx@ntlworld.com>
Message-ID: <MtqW8.1232$oZ2.46776@newsfep1-win.server.ntli.net>
Source record: 42761

HI THERE.
can anyone tell me how to use a hp181a oscilloscope functions

MAX-W / WRITE / NORM / VIEW / STORE , BUTTONS CORRECTLY , as i am tryin gto
make a intercarrier sound module
with dual freq and it would be useful to be able to comapre the two
signals . any info welcome

de paul

1003. Re: Solvents

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 01:52:25 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnaikgeo.aa4.QSB@animas.frontier.net>
Source record: 42764

On Mon, 08 Jul 2002 19:50:48 GMT, Mike Newman scribbled:
>
> I want to use some ferrite cored transformers recovered from junked PC
> PSUs.
> What are the best solvents to soften the glues used in assembly, but
> which won't attack the plastic bobbins.

Following a thread over in sci.electronics.misc (or s.e.somethingsimilar),
I see the most occurring suggestion to be to bring it up to temp in
an oven -- and then pull it apart using gloves.
Not much agreement on the temp -- 150-200D F seemed to be most
recommended. (Personal comment: Don't the insides of some of this gear
get up near 150D F.? Maybe 200-250D F might be the final 'selection'.)

The 'stuff' won't dissolve -- so 'they' say --
but it will loosen up with heat. One feller thought he was successful
with soaking it in MEK for several weeks. (Personal comment: By then
I would have forgotten what the hell I was going to do with it!)

73
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

1004. Building your own flexible VHF handheld antenna???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 02:28:08 UTC
From: grant <5@6.7>
Message-ID: <YSrW8.29714$P%6.2315321@news2.west.cox.net>
Source record: 42765

Hello,
I am interested in finding out how to possibly build flexible handheld VHF antennas.

Any of you here done this before?

I have been given some suggestions as to using something like speedometer cable housing for the casing and also using guitar string for the antenna element wire. Cut the wire to the appropriate length and solder it to the BNC connector. Put it in the housing. Possibly epoxying the base or using glue filled heat shrink to stiffen the base and cap the top.

I am looking to replace an antenna for a VHF marine band radio. I bought this 15" flexible antenna http://members.cox.net/radiocheck/Antenna.jpg , about ten year ago from a marine electronics store called Neptune Electronic in San Pedro. It had no packaging at the time, and was just under the glass counter, and they said it was for the VHF marine band. It has been MUCH better than the stock 7" flex antenna that come with the Standard Horizon HX220S that I use, and as you can see from the picture it gets used a lot at work. In fact part of metal are falling out of the BNC connector on the antenna.

I could use a 30"(approximately) metal telescopic antenna which I have and get even better reception, but the length and stiffness of such an antenna breaks the BNC fitting at the top of the radio if the radio is moved around to much or to quickly as I do at work. So this 15" flexible antenna has been perfect because it is thin and light, but flexes if hit or the radio is jarred, and I move around a lot at work and need to have the radio with me. So I've also been thinking that the building materials could be something like using a bicycle break/shift cable housing, and using some good copper wire for the element. Any ideas as to what would be the best housing and element material, so that it would be as thin as possible, light and still flexible? And I really need this longer antenna because I need/like to hear stations that are well away from the harbor at times, further away than the stock 7" will receive.

These VHF FM marine band radios use a frequency range of 156.2500 - 157.4250 (plus 161.8000 - 162.0000 for "marine operator" repeater outputs). And this Standard Horizon has a transmit power of 1watt and 6watt.

I gotten a formula for cutting the wire to the appropriate length and here it is:

Now I don't know much about this stuff yet. And I am just assuming that I understand the 1/4, 1/2, 1/8 wave idea. Correct me if I'm wrong.

So using 156.800 (channel 16) as the frequency I get:

1/4 wave; 234 / 156.800 = 1.4923469, x 12 = 17.908162, x .8 = 14.326529 inches.

1/2 wave; 468 / 156.800 = 2.9846938, x 12 = 35.816325, x .8 = 28.65306 inches.

And looking at the math going on here I just assumed the a typical stock 7-8" antenna is 1/8 wave. Again, correct me if I'm wrong.

And going up in length gets proportionally better reception. Does that also mean the transmission gets better as well? Again, for my handheld, I want reception as the key feature I want out of it. After I hear someone calling for assistance I can run to the boat for best transmission on the fixed mount VHF marine radio if the handheld is not getting through to them.

Now there are antennas on the market that sold where they say that they "cut length to frequency". And some of those out there that look interesting to me are said to be "base loaded", and end up being not quite as long as a straight element antenna. One company called Smiley Antenna makes a model called the "5/8 Slim Duck" http://www.htantennas.com/2meter.htm that is base loaded. Would an antenna like this be better than a straight element antenna? Is making a "base loaded" antenna possible?

Well enough for now. Any Ideas?

Grant

1005. FS: BC221 Freq. Meter & ARC5 Shell

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 03:49:38 UTC
From: Dan Reynolds <bcdlr@insightbb.com>
Message-ID: <m3tW8.442383$352.67742@sccrnsc02>
Source record: 42766
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

I have a BC221 Frequency Meter, 125 - 20000 KC, made by Bendix Radio. In fair to good shape with calibration manual. I started a power supply and will include that also. Worked five years ago hasn't been touched since. This is not a museum piece but it did work and includes the calibration manual which is kinda rare (if you want to see one http://www.qsl.net/ab0cw/ral7.htm). Price is negotiable - plus shipping. It is heavy and I'd want to pack it really well. I don't need this one as I have a "brand new" one in storage.

I also have an Arc-5 shell - case - with the roller inductor and variable capacitor and dials. Best offer plus shipping.

Dan Reynolds KB9JLO

1006. FS: Neophyte Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 03:51:01 UTC
From: Dan Reynolds <bcdlr@insightbb.com>
Message-ID: <F4tW8.456474$cQ3.36359@sccrnsc01>
Source record: 42767
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

Original Neophyte receiver, assembled, with connectors pot vernier drive air variable, speaker w/headphone jack. Works FB. Mounted on a piece of plywood with a wood front panel, $25 plus shipping.

Dan Reynolds KB9JLO

1007. FS: Speedex Key

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 03:52:24 UTC
From: Dan Reynolds <bcdlr@insightbb.com>
Message-ID: <Y5tW8.456483$cQ3.36749@sccrnsc01>
Source record: 42768
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

Speedex key, in good to very good condition. Black wrinkle base, no shorting bar, mounted on piece of wood with felt bottom, $15 shipped.

Dan Reynolds KB9JLO

1008. Re: Summing loop PLL

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 04:27:50 UTC
From: Rick Karlquist <richard@karlquist.removethis.com>
Message-ID: <aDtW8.456688$cQ3.36760@sccrnsc01>
Source record: 42769
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I built loops like that 25 years ago at Zeta Labs.
What we did in those days was to coarse tune
the VCO with a DAC and only allow the loop
to fine tune it. So in your case, the loop can
only tune the VCO 100 kHz, and you sum
in coarse tuning to get it within range. If your
VCO isn't already linear (ours wasn't) you have
to linearize it first.

We looked at various alternative schemes, but
always came back to this one.

Rick Karlquist N6RK
"fred bartoli" <toto@hotmail.toto> wrote in message
news:3d297a08$0$10518$626a54ce@news.free.fr...
> Hello,
>
> I want to design some HF (almost DC to 200MHz+) precision vector
> measurement (ABB & GPA/NA) equipments.
>
> I know that HP (and maybe others) have some nice products, but for
personal
> use, they are totally out of reach, even used, so I build. Another reason
is
> that I very like the idea of competing with the big shots and see what I
can
> do with rather limited means.
>
> I will use a sligtly modified 100KHz lock-in detector for the vector
> measurements.
>
> For the signal generation, I will probably use a DDS ref/pll loop
> upconverter, mixed down to the "baseband", allowing a simple single VCO
> design.
>
> Here is now my problem :
> It has to do with the sync demod reference frequency.
> Wanting to get the most S/N ratio out of the beast, I don't want 2 high
freq
> VCOs (one for the signal, and one for mixing with the output and return
> signals, down to the 100kHz IF reference and 100kHz IF signal), since I
will
> have 2 x 2 vco phase noise to deal with (2 VCO, and 2 mixs - ref &

signal).
>
> So I've imagined another way :
> Have a low phase noise (crystal generated) 100kHz sync reference,
> upconverted around the VCO signal frequency (hence having almost only one
> VCO phase noise), which mixed with the return signal, will convert down to
> the 100kHz target.
>
> Simple direct mixing is not possible since eliminating one of the
sidebands
> by filtering is impractical at 100kHz offset & 100s order MHz variable
> frequency.
> Also for simplicity and S/N reasons I'd prefer avoid multiple IF
frequencies
> / mixing stages...
> And managing a precision IF, high dynamic range, amplification, sounds
> easier to me at a low 100kHz freq than at multi MHZ.
>
>
> So I plan to upconvert the 100kHz sync reference with a PLL summing
(mixing)
> loop :
> My 100kHz demodulator reference will be used as the PLL summing loop ref
> frequency, driving the VCO (through the filter loop of course), the VCO
> output signal (FreqVCO) being downconverted by mixing with the signal
output
> frequency (FreqMain, main signal VCO). The resulting product will be low
> passed, then compared with the ref.
> Et voil...
> Reversing the loop filtering gain sign will even allow to select the mixed
> product frequency (FreqMain + or - 100k)
>
> But now I'm stuck with a "little" remaining problem : the loop nicely
locks
> when the starting VCO frequency (FreqVCO) is inside a guardband around the
> target frequency (+/-100kHz), but outside this guardband the loop gain
> reverse then driving the loop into saturation at one end of the VCO.
>
> Anyone have a clue of overcoming this little annoying pb ?
>
> Oh, I forgot to mention that, of course, the summing loop phase comparator
> is a phase/frequency one.
>
>
> Thanks for any answer/advice/comment, even about the general design
> philosophy.
>
> regards,
> Fred.

>
>
>
>
>
>

1009. Re: Where do I start

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 04:37:23 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D2A68E9.B80BA6E0@bellatlantic.net>
Source record: 42770

rhaub wrote:

> > >
> >
> > Whoa, Whoa, Whoa, slow up there, Rick.
> >
> > Steve is exactly on target. You are an exception - a
> > very rare exception.
>
> I disagree. You could not be more wrong. You could try, But you would not be
> successful. My point is that with dedication and study any one can build a 100% HB
> station for little money.

What are the specifics of this station - what do you have in mind?
I called you an exception, because you said you built an excellent
receiver and a very nice 100W transmitter for $200. Are you saying
any one can build an excellent receiver and a very nice transmitter
for that price? Or are you talking about a receiver with poor
selectivity and poor sensitivity with a high noise floor and
bad IMD ? Is the transmitter SSB as well as CW, is it rock bound or
under VFO control? Note that I did not address the concept
of building just any HF station. I used your terms - an
excellent receiver and a very nice 100W transmitter.

You must have some compelling evidence to be so vehement
in your response - essentially, that I could not be more
wrong if I tried. Now here's what I said:
"You are an exception - a very rare exception.
MOST new hams will not be able
to put together a station that includes an excellent HF
receiver and a very nice 100W HF transmitter for 200 bucks,
even buying an old transceiver."
Ok. Show me where I am wrong. What percentage of new hams
do you think can build an excellent receiver and a very nice
100W transmitter for $200 ?

Not, you - can - do - it - but - if - you - have - the -
> money - don't - bother. Although I only got my license a few years ago I got interested
> in the hobby about 25 years ago. I remember talking to a number of hams at the time and
> most of them built there first stations. The way they talked, building your own station
> was a right-of-passage into the hobby. When did hamming go from building to buying? I
> don't think that I am the rare exception, I think I am the interested ham.
>
> Rick KC0GIX
>

If you talk to a bunch of hams today, you'll find a marked difference. Got my extra in '78, so I'm very familiar with what ham's were doing 25 years ago, when many did brew their stations. I was one of them

1010. Re: TDA7000

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 06:30:51 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0207082230.4f4c82fb@posting.google.com>
Source record: 42771

Hi all,
1200 Bd packet radio uses audible frequencies, it has nothing to do with capability to detect and pass frequencies below 300 Hz down to DC. Looking at the structure of TDA7000, I think it should demodulate these frequencies, but to obtain a clean smooth S-curve you should better connect your circuitry directly to the demodulator output - pin 4.

BR from Ivan

1011. Re: Mechanical filter MF-455-10AZ

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 07:35:18 UTC
From: Ham Operator <no-one@nobodyradio.org>
Message-ID: <age3nmpef1@paris.btinternet.com>
Source record: 42773
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Richard Daventry" <nearlynews_email@ntlworld.com> wrote in message
news:DunW8.693$oZ4.60702@newsfep2-win.server.ntli.net...
>
> "Richard Daventry" <nearlynews_email@ntlworld.com> wrote in message
> news:rVlW8.58$oZ2.4191@newsfep1-win.server.ntli.net...
> > I don't know what the difference is, but when I looked inside my Kokusai
> > MF-455-10CK, it wasn't that, but a MF-455-10AZ. The can had been opened
> > prior to me getting my mitts on it. I wonder if these two are
> equivalents.
>
> Probably the actual mechanical filter is MF-455-10AZ. But when it's in
the
> can, along with the wiring, it's MF-455-10CK. Yea, I bet that's it.
>
The old Trio JR310 amateur bands rx (valves!) had as an option the Kokusai
MF455-10AZ filter.
Regards. Mike.

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.373 / Virus Database: 208 - Release Date: 01/07/2002

1012. Re: Aluminum Sheet Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 10:35:59 UTC
From: Don Nelson <n0ugy@att.net>
Message-ID: <3D2ABD52.2040209@att.net>
Source record: 42774

Doug,

1. Check your yellow pages for where aluminum is sold in your area.
Metal suppliers, machine shops, etc.

2. Check your local aluminum/metel recycling businesses in your area.
The variety of aluminum that gets recycled is sometimes amazing. There
was a 12 foot microwave dish there once (too big). I visit the recycling
business frequently and stock pile usefull pieces as they come in.

3. Recycling centers may be a source too.

Don N0UGY

P.S. Copper flashing for roofing can be made into very nice small boxes.

Douglas Snowden wrote:

> Where do you homebrewers buy aluminum sheet?
> Stuff to make boxes and chassis out of ?
>
> Doug N4IJ
>
>
>
>

1013. [Need] 144Mhz transverter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 11:16:48 UTC
From: Jean-Michel Bombar <jmbombar@graphnet.fr>
Message-ID: <3d2ac6ce$0$21417$4d4eb98e@read.news.fr.uu.net>
Source record: 42775

Hello there,

does anyone know a link where I could find the diagram of a 28 > 144Mhz
tranverter.

73's, Jean-Michel

1014. I wish that no home brewer has to part their tools

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 11:44:50 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <agei5n$5rj$1@nic.grnet.gr>
Source record: 42776

7/7/2002

I am in the unpleasant position to announce the death of my 20 watt ANTEX soldering iron, although I tried what ever was possible to bring it back to life it was hopeless , nature took it course. I had it on for days with no complaints and was always there when I needed it. I was disappointed today when I turned it on and nothing happened and afterwards frustrated when I realized that I could not fix it . After 10 years together in good and bad (succeed home brewing and disastrous flops) it time to let it go and buy a new one. I wish that no home brewer has to part their tools (its like losing a part of you).

--
deosiereas.virtualave.net

1015. Re: Solvents

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 11:58:11 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <ageiup$6bh$1@nic.grnet.gr>
Source record: 42777

I took I bit of the glue to a chemist and gave me THE MAGIC stuff to do my thing!

In my situation the whole core was covered with glue (so I could not see how many winding were on the coil but afterwards :))
"Mike Newman" <mnewman@clear.net.nz> wrote in message news:3d29ec3b.221976@news.clear.net.nz...
> Hi All
>
> I want to use some ferrite cored transformers recovered from junked PC
> PSUs.
>
> What are the best solvents to soften the glues used in assembly, but
> which won't attack the plastic bobbins.
>
> Thanks
>
> Mike

1016. Re: I wish that no home brewer has to part their tools

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 12:35:17 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <agel9rjam1@paris.btinternet.com>
Source record: 42778

"Deos" <lineoffiretoday@yahoo.com> wrote in message
news:agei5n$5rj$1@nic.grnet.gr...
>
> 7/7/2002
>
> I am in the unpleasant position to announce the death of my 20 watt ANTEX
> soldering iron, although I tried what ever was possible to bring it back
to
> life it was hopeless , nature took it course.

You should be able to resuscitate it by fitting a replacement element.
Spares for most Antex irons are available.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

1017. Re: I wish that no home brewer has to part their tools

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 12:55:01 UTC
From: Dwight Stewart <stewart@sc.rr.com>
Message-ID: <3D2ADD83.2DD19806@sc.rr.com>
Source record: 42779

Deos wrote:
>
> I am in the unpleasant position to announce
> the death of my 20 watt ANTEX soldering iron,
> although I tried (snip)
>
> (snip) I wish that no home brewer has to part
> their tools (its like losing a part of you).

LOL! Did you at least give your soldering iron a decent burial, Deos? I've always made sure the loss of my tools meant something by donating their parts to other tools in need. In a way, it makes me feel like my tools live on in those other tools. :)

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

1018. Do/did any outboard VFO's for tranceivers, sold as an extra, include digital readout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 13:06:06 UTC
From: Richard Daventry <nearlynews_email@ntlworld.com>
Message-ID: <QaBW8.7651$oZ4.630361@newsfep2-win.server.ntli.net>
Source record: 42780
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

I could do with a VFO that includes a digital readout. True digital VFO or PLL. With ability to off-tune from TX freq. on receive.

1019. FS: HV DIODES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 13:37:20 UTC
From: Joe Hargis <joehargis@worldnet.att.net>
Message-ID: <kGBW8.15950$Iu6.907644@bgtnsc04-news.ops.worldnet.att.net>
Source record: 42781

1n5408 rated at 1200v min. at 1.5A only $.10 each + shipping
Joe in MO. WS0E

1020. Re: hp181a scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 14:27:53 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <IpCW8.103457$vq.5114284@bin6.nnrp.aus1.giganews.com>
Source record: 42782

It's not that simple. I suggest you obtain a manual; they are readily
available I believe.

73, Bob K6DDX

1021. Re: Sir Douglas Halls Circuits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 16:02:44 UTC
From: Walt Davidson <walt99@tiscali.co.uk>
Message-ID: <590miu0gbj9264efllohasndulk1si6s2b@4ax.com>
Source record: 42783
Cross-posted to: aus.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.shortwave,uk.radio.amateur

On Mon, 8 Jul 2002 20:41:16 +0100, Philip de Cadenet
<Philstheboss@thebbc.fslife.co.uk> wrote:

>www.webhoster.com
>
>Best deal on the planet.

"At WebHoster, we don't just build pretty web pages, we build results.
And right now, we're ready to work with you. Our website solutions
start at $3,000. "

Yeah right!
:-))

73 de G3NYY

--
Walt Davidson Email: g3nyy @freeuk.com

1022. FA: Transmit Variable for your Tuner Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 17:34:58 UTC
From: GaryH <garyh@bellsouth.net>
Message-ID: <L5FW8.72363$wj4.6215568@e3500-atl2.usenetserver.com>
Source record: 42784

Still cleaning out my 30 year collection of stuff. Found
these in a box and don't need them. There are 3 of
them so check sellers other auctions. Thanks

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1365648339

1023. Re: Do/did any outboard VFO's for tranceivers, sold as an extra, include digital readout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 17:48:39 UTC
From: Richard Daventry <nearlynews_email@ntlworld.com>
Message-ID: <KjFW8.2568$H65.117889@news8-gui.server.ntli.net>
Source record: 42785
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Richard Daventry" <nearlynews_email@ntlworld.com> wrote in message
news:QaBW8.7651$oZ4.630361@newsfep2-win.server.ntli.net...
> I could do with a VFO that includes a digital readout. True digital VFO
or
> PLL. With ability to off-tune from TX freq. on receive.

I found out some do include at least the digital readout.

1024. Re: ROHM BA1404 FM STEREO TRANSMITTER CHIPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 18:34:43 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D2B2CC3.41397991@clifto.com>
Source record: 42786

Bob Headrick wrote:
> "Pete Gianakopoulos" <n.gianakopoulos@worldnet.att.net> wrote...
> > Those chips are still available; why would anybody want to bid on them,
> > unless you are selling them for 5 cents each?
>
> Currently at $0.006 each.... I do not want 800 but could use a couple :-).

Hell, that's $4.80 for the whole lot of 800.

--
.signature in flux

1025. Re: coil calculating program on my site

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 18:52:14 UTC
From: Monaco <emailhebik@niet.nl>
Message-ID: <Xns9246D43BEB499emailhebiknietnl@195.121.6.82>
Source record: 42787

k7itm@aol.com (Tom Bruhns) wrote in
news:3200347.0207081437.7755c469@posting.google.com:

> That address didn't work for me just now...
>
> What are the features of this program? What are the advantages over
> the other existing programs?
>
> Cheers,
> Tom
>
> Monaco <ihaveno@email.com> wrote in message
news:<Xns9240DB03E64F6ihavenoemailcom@195.121.6.84>...
>> on my site:
>> http://beam.to/homemade
>> you will find a program for coil calculating
>> (orange text)
>

You can also try http://www.geocities.com\homemade1234\index.html
but because this is a long adres to type I
made this short redirection.

What the advantages are if you compare it with others, I don't
know.

Greetings from the Netherlands.

1026. Can digital VFO's do this..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 19:36:53 UTC
From: Richard Daventry <nearlynews_email@ntlworld.com>
Message-ID: <BVGW8.3724$Ae.149938@newsfep1-win.server.ntli.net>
Source record: 42788

Hi. If I substitute the old regular VFO in my KW2000A, I can see that whenever the VFO output does up by 1khz, the readout must go down by 1 khz and vica versa.

Also, for each band there must be a starting position or starting offset. For eg, on 160, when the VFO outputs 2700 khz, the VFO must read 1800 Khz the actual output frequency. Then, when the actual rf output frequency goes up the VFO readout must of course go up, but the VFO output has to go down by the same amount.

And that must be repeated for every band, yet the starting offset will be different for each band. And the VFO must know when band has changed.

I suppose a modern VFO unit can take care of these things.

1027. Re: Summing loop PLL

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 19:44:17 UTC
From: Fred Bartoli <fred.bartoli.nospamplease@free.removethis.fr.invalid>
Message-ID: <3d2b3c74$0$469$626a54ce@news.free.fr>
Source record: 42789
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"Rick Karlquist" <richard@karlquist.removethis.com> a crit dans le message
news: aDtW8.456688$cQ3.36760@sccrnsc01...
> I built loops like that 25 years ago at Zeta Labs.
> What we did in those days was to coarse tune
> the VCO with a DAC and only allow the loop
> to fine tune it. So in your case, the loop can
> only tune the VCO 100 kHz, and you sum
> in coarse tuning to get it within range. If your
> VCO isn't already linear (ours wasn't) you have
> to linearize it first.
>
> We looked at various alternative schemes, but
> always came back to this one.
>

Thanks Rick for replying.

Could you tell more about the other schemes, because my VCOs will (I hope) be large range ones (150-250MHz tuning range for mixing down to 0-100MHz in one range), so getting them inside the capture range over all their tuning range, by open loop means, will be at least a real nigthmare.
Having more tracks to follow / build on, could lead me to the right solution.

Any comments about the rest of the structure ?

Regards,
Fred.

> Rick Karlquist N6RK
> "fred bartoli" <toto@hotmail.toto> wrote in message
> news:3d297a08$0$10518$626a54ce@news.free.fr...
> > Hello,
> >
> > I want to design some HF (almost DC to 200MHz+) precision vector
> > measurement (ABB & GPA/NA) equipments.
> >
> > I know that HP (and maybe others) have some nice products, but for
> personal
> > use, they are totally out of reach, even used, so I build. Another
reason
> is
> > that I very like the idea of competing with the big shots and see what I
> can

> > do with rather limited means.
> >
> > I will use a sligtly modified 100KHz lock-in detector for the vector
> > measurements.
> >
> > For the signal generation, I will probably use a DDS ref/pll loop
> > upconverter, mixed down to the "baseband", allowing a simple single VCO
> > design.
> >
> > Here is now my problem :
> > It has to do with the sync demod reference frequency.
> > Wanting to get the most S/N ratio out of the beast, I don't want 2 high
> freq
> > VCOs (one for the signal, and one for mixing with the output and return
> > signals, down to the 100kHz IF reference and 100kHz IF signal), since I
> will
> > have 2 x 2 vco phase noise to deal with (2 VCO, and 2 mixs - ref &
> signal).
> >
> > So I've imagined another way :
> > Have a low phase noise (crystal generated) 100kHz sync reference,
> > upconverted around the VCO signal frequency (hence having almost only
one
> > VCO phase noise), which mixed with the return signal, will convert down
to
> > the 100kHz target.
> >
> > Simple direct mixing is not possible since eliminating one of the
> sidebands
> > by filtering is impractical at 100kHz offset & 100s order MHz variable
> > frequency.
> > Also for simplicity and S/N reasons I'd prefer avoid multiple IF
> frequencies
> > / mixing stages...
> > And managing a precision IF, high dynamic range, amplification, sounds
> > easier to me at a low 100kHz freq than at multi MHZ.
> >
> >
> > So I plan to upconvert the 100kHz sync reference with a PLL summing
> (mixing)
> > loop :
> > My 100kHz demodulator reference will be used as the PLL summing loop ref
> > frequency, driving the VCO (through the filter loop of course), the VCO
> > output signal (FreqVCO) being downconverted by mixing with the signal
> output
> > frequency (FreqMain, main signal VCO). The resulting product will be low
> > passed, then compared with the ref.
> > Et voil&#65533;...
> > Reversing the loop filtering gain sign will even allow to select the

mixed
> > product frequency (FreqMain + or - 100k)
> >
> > But now I'm stuck with a "little" remaining problem : the loop nicely
> locks
> > when the starting VCO frequency (FreqVCO) is inside a guardband around
the
> > target frequency (+/-100kHz), but outside this guardband the loop gain
> > reverse then driving the loop into saturation at one end of the VCO.
> >
> > Anyone have a clue of overcoming this little annoying pb ?
> >
> > Oh, I forgot to mention that, of course, the summing loop phase
comparator
> > is a phase/frequency one.
> >
> >
> > Thanks for any answer/advice/comment, even about the general design
> > philosophy.
> >
> > regards,
> > Fred.
> >
> >
> >
> >
> >
> >
>
>

1028. Re: Sir Douglas Halls Circuits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 20:05:42 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D2B430B.3E24BFB5@bellatlantic.net>
Source record: 42790
Cross-posted to: aus.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.shortwave,uk.radio.amateur

geoffrey brown wrote:
>
> http://www.spontaflex.freeserve.co.uk/

Many thanks for posting this link!

>
> The Ingenious circuits of Sir Douglas Hall.
>
> Updated the list of component suppliers and added a letter from
> Sir Douglas giving a brief history of his radio construction.
>
> Still have lots of articles to add but have used up all the webspace allowed
> by freeserve.
> Tried condensing the jpegs even more to gain some space but quality
> deteriorated too much.
> Any suggestiond to free up some space?
> I'v been told adobe acrobat format would help but this is the one program I
> hate using.
>
> Cheers
> Geoff

1029. FS: Lot of RF power Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 21:56:50 UTC
From: GaryH <garyh@bellsouth.net>
Message-ID: <VOIW8.1642$JU3.90281@e3500-atl1.usenetserver.com>
Source record: 42791

These are all new and have never been installed or used in any way.
I acquired these when I was working in the two way manufacturing
field many years ago and they have been in storage since then. I have
not tested these but I have checked all the junctions with an ohm meter
and they all look OK. I am not splitting these up but selling as one lot
and a simple check with RF power transistor sources will give you the
value of these items. I am cleaning out my collection of parts, so my
loss is your gain! Here is a list of the transistors and quantities. Some
I can not remember what they are but many are common devices used
in VHF power amplifiers.

DEVICE QUANTITY

2N5590 4
2N5591 2
2N6081 1
MRF221 1
MRF247 2
SRF2926K 1
CTC A3-12 1
CTC CD2772 1
CTC CD2773 1
RF2236 1
1421-2 1

The main value is on the first several items listed, a value of almost
$250.00 if you had to buy them new! Get them here at a fraction of the cost!

I have been asked to list some of my parts here but due to insane offers I
have
been forced to resort to Ebay. Make me a fair offer for these and we can
talk
or they will be Ebay bound.

1030. Re: coil calculating program on my site

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 22:37:05 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207091437.59901d8e@posting.google.com>
Source record: 42792

Actually, I managed to get the originally posted address to work just after I posted saying it didn't work for me. Probably my fault!

The one trial I tried gave me results a few percent higher than those of a couple other programs I've recently evaluated fairly carefully and trust, though the results are certainly within a useable range.

One thing that I've found convenient for the way that I normally wind coils is to be able to enter the winding pitch, and let the program calculate coil length from the pitch and number of turns. That's nice because I normally wind coils either by using a second wire for spacing, or by winding the coil on machine screw threads. So it would be nice to be able to enter the pitch in terms of wire diameters (like 1.0, which is close-wound, or 2.0, which is two pieces of the same wire then remove one of them), or in mm (to match machine screw thread pitch). One of the programs I use lists out results for a range of number of turns, so you can easily see that your target value lies close to some number of turns which might be a little different from your initial guess. But that program works in US ("English") measurements, and I really do appreciate the availability of metric programs such as yours.

Cheers,
Tom
(My daughter is about to head off to study in Groeningen for a few months. :-)

Monaco <emailhebik@niet.nl> wrote in message
news:<Xns9246D43BEB499emailhebiknietnl@195.121.6.82>...
> k7itm@aol.com (Tom Bruhns) wrote in
> news:3200347.0207081437.7755c469@posting.google.com:
>
> > That address didn't work for me just now...
> >
> > What are the features of this program? What are the advantages over
> > the other existing programs?
> >
> > Cheers,
> > Tom
> >
> > Monaco <ihaveno@email.com> wrote in message
> news:<Xns9240DB03E64F6ihavenoemailcom@195.121.6.84>...
> >> on my site:
> >> http://beam.to/homemade
> >> you will find a program for coil calculating

> >> (orange text)
> >
>
> You can also try http://www.geocities.com\homemade1234\index.html
> but because this is a long adres to type I
> made this short redirection.
>
> What the advantages are if you compare it with others, I don't
> know.
>
> Greetings from the Netherlands.

1031. Re: FS: HV DIODES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 22:42:25 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2b65f2.29569171@news.akorn.net>
Source record: 42793

On Tue, 09 Jul 2002 13:37:20 GMT, "Joe Hargis"
<joehargis@worldnet.att.net> wrote:

>1n5408 rated at 1200v min. at 1.5A only $.10 each + shipping
>Joe in MO. WS0E

The 1N5408 diode is a 1000 volt MAXIMUM reverse voltage @ 3 amperes
average forward current.

Not 1200v min @ 1.5a.

Are you sure you have the correct part number?

1032. Re: Aluminum Sheet Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 22:54:30 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207091454.30f23ba@posting.google.com>
Source record: 42794

"Douglas Snowden" <snowden@peoplepc.com> wrote in message
news:<uifcffo8145ma0@corp.supernews.com>...
> Where do you homebrewers buy aluminum sheet?
> Stuff to make boxes and chassis out of ?

Boeing Surplus? (Trouble is, it's typically in 4'x12' sheets there,
and the alloys available aren't always what you'd want.) In general,
I'd try sheet metal shops, especially places that do commercial
'lectronics work. You might be able to get small pieces for scrap
prices there, and in any event should be able to get larger pieces for
reasonable prices. I do NOT consider the prices I see in the
home/hardware stores to be reasonable!

Cheers,
Tom

1033. Re: Building your own flexible VHF handheld antenna???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 23:21:37 UTC
From: grant <5@6.7>
Message-ID: <5eKW8.31955$P%6.2557666@news2.west.cox.net>
Source record: 42795

No response for a few days now. I guess I should have asked first if building things yourself what what this "homebrew" group was all about. Any idea where I should post my question about this?

1034. Re: [Need] 144Mhz transverter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-09 23:40:05 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3D2B7455.2BC8F718@bloomer.net>
Source record: 42796

The RSGB VHF/UHF Manual has several. I built the solid state unit
designed by Larry Leighton that is built in modules.

Scott
N0EDV

Jean-Michel Bombar wrote:
>
> Hello there,
>
> does anyone know a link where I could find the diagram of a 28 > 144Mhz
> tranverter.
>
> 73's, Jean-Michel

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

1035. Re: duplexers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 00:39:30 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0907022039560001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42597

In article <bhqW8.1197$oZ2.45358@newsfep1-win.server.ntli.net>,
"paul.g7izx" <paul.g7izx@ntlworld.com> wrote:

> "Rod" <rivservice@bigpond.com> wrote in message
> news:OFNT8.379129$o66.1023188@news-server.bigpond.net.au...
> > Gday all
> > just wondering if anyone has plans for home brew duplexers uhf primarily
> or
> > does anyone have some info or webpages i could take a look at
> > thanks rjroy@silchip.com.au
> >
> >
>
>
> begin 666 DIPLEX.TXT

I do believe there's a bigger difference between diplexer and duplexer
than just one letter. Is there a typo in the DIPLEX.TXT filename?

BTW, good going on the uuencode instead of base64 for the file. base64 stinks.

Steve Carlton
WB4CZR

1036. Re: Building your own flexible VHF handheld antenna???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 01:10:36 UTC
From: Idontwantspam@net
Message-ID: <3d2b8857.5681875@news.bellatlantic.net>
Source record: 42598

On Tue, 09 Jul 2002 23:21:37 GMT, "grant" <5@6.7> wrote:

>No response for a few days now. I guess I should have asked first if
>building things yourself what what this "homebrew" group was all about. Any
>idea where I should post my question about this?
>
You could also try rec.radio.amateur.antenna where there is more focus
on antenna design and construction.

Also keep in mind that many people vacation around July 4 and may not
be online as much.

I would still be surprised if there were no off-the-shelf solutions
for you, although I do not do marine VHF myself. Have you tried a ham
specialty store?

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

1037. Re: Can digital VFO's do this..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 01:37:43 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D2B8FE7.C46BD21C@netscape.net>
Source record: 42599

Richard Daventry wrote:
>
>
> And that must be repeated for every band, yet the starting offset will be
> different for each band. And the VFO must know when band has changed.
>
> I suppose a modern VFO unit can take care of these things.

This may explain it better...

http://hamradio.online.ru/dafco.htm

-Bill

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http://www.newsfeed.com The #1 Newsgroup Service in the World!
-----= Over 100,000 Newsgroups - Unlimited Fast Downloads - 19 Servers =-----

1038. F.A. heavy duty roller inductor F.A.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 01:48:29 UTC
From: kf4toh@aol.com
Message-ID: <20020709214829.01783.00000163@mb-fv.aol.com>
Source record: 42600

if interested please check it out

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1365662837

1039. Re: Silkscreen in PCB tools, (Ultiboard in particular)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 02:40:12 UTC
From: "Clyde R. Shappee" <clydes@world.std.com>
Message-ID: <3D2B9E8C.CEC2358B@world.std.com>
Source record: 42601

Thank you....

I did finally get feedback from Electronics Workbench, and they did acknowledge a problem. I had originally placed a few components on the top (by default that is where they all land) and moving them to the bottom, they got goofed. The footprint for the part I made worked out correctly as it was placed on the bottom to begin with.

I am slowly, but surely closing in on my new station clock, with Nixie tubes.

Clyde

Leon Heller wrote:

> "Clyde R. Shappee" <clydes@world.std.com> wrote in message
> news:3D22556B.43C2D750@world.std.com...
> > ok, I can do that, but Which way should the letters be?
> >
> > I need to know which ones are right and which are wrong.
> >
>
> They should appear mirrored, looking through the board from the top, on the
> display. I'm fairly sure this right, because I often put text in copper on
> the solder/copper side of PCBs I make at home.
>
> Leon

1040. Re: Building your own flexible VHF handheld antenna???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 03:13:05 UTC
From: grant <5@6.7>
Message-ID: <5DNW8.32066$P%6.2622851@news2.west.cox.net>
Source record: 42602

Thanks, I did not know that there was an antenna group, I'll check there.

1041. Re: I wish that no home brewer has to part their tools

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 03:38:08 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <A_NW8.468055$cQ3.38853@sccrnsc01>
Source record: 42603

So what is the replacement?

gb

"Deos" <lineoffiretoday@yahoo.com> wrote in message
news:agei5n$5rj$1@nic.grnet.gr...
>
> 7/7/2002
>
> I am in the unpleasant position to announce the death of my 20 watt ANTEX
> soldering iron, although I tried what ever was possible to bring it back
to
> life it was hopeless , nature took it course. I had it on for days with no
> complaints and was always there when I needed it. I was disappointed today
> when I turned it on and nothing happened and afterwards frustrated when I
> realized that I could not fix it . After 10 years together in good and bad
> (succeed home brewing and disastrous flops) it time to let it go and buy
a
> new one. I wish that no home brewer has to part their tools (its like
losing
> a part of you).
>
>
> --
> deosiereas.virtualave.net
>
>

1042. Push-Pull Type Circuit Findings and Questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 04:41:29 UTC
From: durabolin1@aol.com
Message-ID: <3d2bba8c.2800507@l158.ede.bit.nl>
Source record: 42604

I tried feeding a square wave into a push-pull circuit and it basically just short-circuited the primary. On the output my 'scope showed only little blips where there was a voltage change into the transformer. This surprised me in that I had heard that you could use square waves in a transformer, for example a square wave inverter works with 60Hz transformers. I then looked at the output from my square wave inverter and noticed the voltage wasn't square but sloped. I suppose this is the key in that the transformer needs changing voltages to work. Is there an easy way to get this slope or should I look at a less efficient design using a sinwave?

Also I was wondering if the secondary winding of the transformer in the above circuit will act like a choke to limit current like a normal inductor?

Brock

1043. Leader Sig Gen Circuits needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 08:30:02 UTC
From: Brian Keegan <bkeegan@optusnet.com.au>
Message-ID: <3d2bef8c$0$14696$afc38c87@news.optusnet.com.au>
Source record: 42605

Anyone know of site for above circuits/manuals as I have a couple of sig gens that have given good service but have recently given up the ghost and I would like to repair them. Manuals and circuts have long since disapeared from my files

1044. Re: Push-Pull Type Circuit Findings and Questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 08:34:11 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D2BF183.5030806@eznec.com>
Source record: 42606

The following assumes that the load on the transformer's secondary isn't what's causing the distortion.

To keep the distortion from happening, you need to have enough inductance in each winding that the impedance is high at the square wave's fundamental frequency. By "high", I mean at least several times the source impedance. If you had an infinite impedance, the square wave would be undistorted. As the impedance gets less and less, you'll see more and more tilt on the square wave. If you just see blips, you have much too little inductance. To think of this in the frequency domain, your transformer's windings only have enough inductance at the high frequency harmonics of the fundamental, so that's all that's surviving unattenuated. If you apply a sine wave of the same fundamental frequency to this transformer, you'll still see a sine wave, but it'll be greatly attenuated.

No, the transformer's secondary won't act like a choke, because of its coupling to the primary.

Roy Lewallen, W7EL

Brock wrote:
> I tried feeding a square wave into a push-pull circuit and it
> basically just short-circuited the primary. On the output my 'scope
> showed only little blips where there was a voltage change into the
> transformer. This surprised me in that I had heard that you could use
> square waves in a transformer, for example a square wave inverter
> works with 60Hz transformers. I then looked at the output from my
> square wave inverter and noticed the voltage wasn't square but sloped.
> I suppose this is the key in that the transformer needs changing
> voltages to work. Is there an easy way to get this slope or should I
> look at a less efficient design using a sinwave?
>
> Also I was wondering if the secondary winding of the transformer in
> the above circuit will act like a choke to limit current like a normal
> inductor?
>
> Brock

1045. Re: Aluminum Sheet Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 10:24:25 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <6CUW8.3858$_57.284836@newsfep2-win.server.ntli.net>
Source record: 42607

> I'd try sheet metal shops, especially places that do commercial
> 'lectronics work. You might be able to get small pieces for scrap
> prices there, and in any event should be able to get larger pieces for
> reasonable prices. I do NOT consider the prices I see in the
> home/hardware stores to be reasonable!
========
Agree with that , also in the UK aluminium sheet can be best obtained from a sheet metal workshop , involved in (among other) ventilation ducting. They usually have aluminium in various thicknesses ...and nice cutting and bending tools ,such that after you have marked and cut the sheet, they are usually happy to bend the material to a chassis and even are prepared to weld the joining edges.
Since for them it is an oddball job they will be interested in what you are going to do with it . From then on they will always be very helpful.

Frank gm0csz.kn6wh@ntlworld.com

1046. Re: I wish that no home brewer has to part their tools

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 11:06:24 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <7CUW8.3860$_57.284582@newsfep2-win.server.ntli.net>
Source record: 42608

> I am in the unpleasant position to announce the death of my 20 watt ANTEX
> soldering iron, although I tried what ever was possible to bring it back
to
> life it was hopeless , nature took it course. I had it on for days with no
> complaints and was always there when I needed it. I was disappointed today
> when I turned it on and nothing happened and afterwards frustrated when I
> realized that I could not fix it . After 10 years together in good and bad
> (succeed home brewing and disastrous flops) it time to let it go and buy
a
> new one. I wish that no home brewer has to part their tools (its like
losing
> a part of you).
==========
To extend the life of any electric AC soldering iron , consider the
following :

Make or modify an existing iron holder with a hinge ,a spring and a
microswitch ,such
that when the iron is placed in its holder the micro switch is operated .
Wire a diode (with the proper rating) in the supply circuit such that when
the iron is resting in its holder, the diode is in series with the iron's
heater element.
The element is now supplied with half its normal power resulting in a lower
temperature.
When the iron is lifted off its holder the diode is bypassed , full power is
applied and (within
10-15 seconds,perhaps sooner) the soldering tip temperature is back to
normal.

Frank gm0csz.kn6wh@ntlworld.com

1047. Re: Can digital VFO's do this..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 11:25:37 UTC
From: Richard Daventry <nearlynews_email@ntlworld.com>
Message-ID: <IOUW8.3976$_57.293444@newsfep2-win.server.ntli.net>
Source record: 42609

":-) Bill" <therealexray@netscape.net> wrote in message
news:3D2B8FE7.C46BD21C@netscape.net...
> Richard Daventry wrote:
> >
> >
> > And that must be repeated for every band, yet the starting offset will
be
> > different for each band. And the VFO must know when band has changed.
> >
> > I suppose a modern VFO unit can take care of these things.
>
> This may explain it better...
>
> http://hamradio.online.ru/dafco.htm
>
> -Bill
>

Egads, that was well dredged up. Thanks.

That article is a good solution, yet my hearts desire is really to use a digital VFO, not simply just digital readout. I figure someone somewhere must be using a digital VFO with old valved equipment. However, that article may be okay in providing a digital readout for the 2000A. But I do wonder if a digital VFO with readout can be made to work. Perhaps I ought to contact a digital VFO manufacturer and see whether their product can be made to work with the KW2000A I have. But there could be a homebrew project that not only provides digital readout, but incorporates a digital VFO as well. That would be ideal.

Rich.

1048. Re: Can digital VFO's do this..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 11:44:11 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D2C1E0B.9A1CFB0B@netscape.net>
Source record: 42610

Richard Daventry wrote:

> Egads, that was well dredged up. Thanks.
>
> That article is a good solution, yet my hearts desire is really to use a
> digital VFO, not simply just digital readout. I figure someone somewhere
> must be using a digital VFO with old valved equipment. However, that
> article may be okay in providing a digital readout for the 2000A. But I do
> wonder if a digital VFO with readout can be made to work. Perhaps I ought to
> contact a digital VFO manufacturer and see whether their product can be made
> to work with the KW2000A I have. But there could be a homebrew project that
> not only provides digital readout, but incorporates a digital VFO as well.
> That would be ideal.
>
> Rich.

I've seen somewhere on the web a universal type synthesizer (digital
vfo) because I once had a similar idea. Of course once the synthesizer
is built, the digital readout becomes an easy add-on.
Anyway, the point I gathered from the article mentioned was that the VFO
tunes a single 200 khz range regardless of the band. It referred to a B
model...I suspect the A follows the same heterodying scheme.
Good luck,
Bill

1049. Re: Can digital VFO's do this..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 12:03:30 UTC
From: fred bartoli <toto@hotmail.toto>
Message-ID: <3d2c2263$0$225$626a54ce@news.free.fr>
Source record: 42611

Found this.
http://lea.hamradio.si/~s57nan/ham_radio/dds_9851/dds_9851.html

from this list http://www.nitehawk.com/rasmit/dds50.html

Remember having seen exactly what your looking for but not where.

Search for DDS & VFO & PIC

Now I'm thinking (yes !!!) maybe that was a Circuit Cellar project. Have a look at their site.

Fred.

:-) Bill <therealexray@netscape.net> a écrit dans le message : 3D2C1E0B.9A1CFB0B@netscape.net...
> Richard Daventry wrote:
>
> > Egads, that was well dredged up. Thanks.
> >
> > That article is a good solution, yet my hearts desire is really to use a
> > digital VFO, not simply just digital readout. I figure someone somewhere
> > must be using a digital VFO with old valved equipment. However, that
> > article may be okay in providing a digital readout for the 2000A. But I do
> > wonder if a digital VFO with readout can be made to work. Perhaps I ought to
> > contact a digital VFO manufacturer and see whether their product can be made
> > to work with the KW2000A I have. But there could be a homebrew project that
> > not only provides digital readout, but incorporates a digital VFO as well.
> > That would be ideal.
> >
> > Rich.
>
> I've seen somewhere on the web a universal type synthesizer (digital
> vfo) because I once had a similar idea. Of course once the synthesizer
> is built, the digital readout becomes an easy add-on.
> Anyway, the point I gathered from the article mentioned was that the VFO
> tunes a single 200 khz range regardless of the band. It referred to a B
> model...I suspect the A follows the same heterodying scheme.
> Good luck,

> Bill

1050. Re: I wish that no home brewer has to part their tools

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 12:33:10 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d2c2891.400607@news.freeserve.net>
Source record: 42613

On Wed, 10 Jul 2002 12:06:24 +0100, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>
>> I am in the unpleasant position to announce the death of my 20 watt ANTEX
>> soldering iron, although I tried what ever was possible to bring it back
>to
>> life it was hopeless , nature took it course. I had it on for days with no
>> complaints and was always there when I needed it. I was disappointed today
>> when I turned it on and nothing happened and afterwards frustrated when I
>> realized that I could not fix it . After 10 years together in good and bad
>> (succeed home brewing and disastrous flops) it time to let it go and buy
>a
>> new one. I wish that no home brewer has to part their tools (its like
>losing
>> a part of you).
>=======================
>To extend the life of any electric AC soldering iron , consider the
>following :
>
>Make or modify an existing iron holder with a hinge ,a spring and a
>microswitch ,such
>that when the iron is placed in its holder the micro switch is operated .
>Wire a diode (with the proper rating) in the supply circuit such that when
>the iron is resting in its holder, the diode is in series with the iron's
>heater element.
>The element is now supplied with half its normal power resulting in a lower
>temperature.
>When the iron is lifted off its holder the diode is bypassed , full power is
>applied and (within
>10-15 seconds,perhaps sooner) the soldering tip temperature is back to
>normal.
>
An old trick which is well worth remembering. I think I first saw it
in SWM in about 1968 using a BY100 diode. Trust a Scot (should that be
two T'es) to publish it though ;-)

1051. Re: Can digital VFO's do this..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 12:59:25 UTC
From: Richard Daventry <nearlynews_email@ntlworld.com>
Message-ID: <T9WW8.4725$_57.353182@newsfep2-win.server.ntli.net>
Source record: 42614

":-) Bill" <therealexray@netscape.net> wrote in message
news:3D2C1E0B.9A1CFB0B@netscape.net...
> > Rich.
>
> I've seen somewhere on the web a universal type synthesizer (digital
> vfo) because I once had a similar idea. Of course once the synthesizer
> is built, the digital readout becomes an easy add-on.
> Anyway, the point I gathered from the article mentioned was that the VFO
> tunes a single 200 khz range regardless of the band. It referred to a B
> model...I suspect the A follows the same heterodying scheme.
> Good luck,
> Bill

Bill

The A model is the same scheme. Unless I misunderstand the article, readout of the display simply goes from 0 to 200. When VFO outputs 2500 Khz readout is 200, when 2700 readout is 0. What I need is a display that will give the whole frequency, like 14250.1 Khz. And for each band. Don't know know yet how that would be accomplished, but I will in the end.

Rich

1052. Re: Can digital VFO's do this..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 13:04:05 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D2C30C5.BDCAFE53@netscape.net>
Source record: 42615

Richard Daventry wrote:

>
> The A model is the same scheme. Unless I misunderstand the article, readout
> of the display simply goes from 0 to 200. When VFO outputs 2500 Khz readout
> is 200, when 2700 readout is 0. What I need is a display that will give the
> whole frequency, like 14250.1 Khz. And for each band. Don't know know yet
> how that would be accomplished, but I will in the end.
>
> Rich

For a counter it would be done much the way it is done in the radio...by
taking a bit of signal from the carrier oscillator and from the LO for
the individual bands.
-Bill

1053. Re: Experience with charging Ni-MH batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 13:14:07 UTC
From: "paul.g7izx" <paul.g7izx@ntlworld.com>
Message-ID: <rBVW8.1403$F%6.65625@newsfep1-win.server.ntli.net>
Source record: 42612

FOR ALL THOES INTRESTED , THERE
is a article in this one of this months Electronics magazines
here in the uk , not to sure maybe its Elector magazine , or
everyday electronics , anyway it has an article on charging nicads
and Ni . batts

it sugests to charge 6 aa batteries , use a 12v 300ma supply , with
a 5w (10W) better 22 ohm resistor is series .
hope the info helps

de Paul

"Derek Toeppen" <derek_toeppen@agilent.com> wrote in message
news:2219e080.0206281506.39496894@posting.google.com...
> I am looking for experiences people have had with rapid
> charging (C/2 to C) Ni-MH batteries using the negative
> delta voltage charge termination technique. I have studied
> the panasonic technical notes on this technique
> (www.panasonic.com). I have confirmed the charge profile by
> reading the data sheets for Maxim charger IC's
> (see www.maxim-ic.com search MAX713). It all seemed straight
> forward enough. In fact, I have been using this technique
> on Ni-Cd batteries for years. It was just a matter of
> adjusting the delta voltage detection and max and min voltage
> limits.
>
> However, I am having trouble getting the batteries to produce
> a voltage drop. I have tried charging two seperate batteries.
> One 3 cell pack. One 6 cell pack. First I tried at C/2. The
> battery voltage ramped up nicely but then just leveled off.
> No drop was observed on a voltage meter monitoring the process.
> I manually terminated the 3 cell charge because I thought
> they were getting too hot. When I tried C/2 on the 6 cell pack
> the voltage ramped up and leveled as with the 3 cell pack. But
> then too my supprise one of the cells in the pack vented before
> a drop was detected. At C/2 the max specified time is 3 hours.
> Venting occured at 2.25 hour. Just when I was expecting the voltage
> to drop.
> After discharging the 6 cell pack to 1 volt/cell, I tryed charging
> it a C. This time I did get a nice detectable drop, but one
> cell vented again.
>
> Any inputs?
>
> Derek Toeppen WA0ZTI

> derek_toeppen@att.net

1054. FA: Box of new Glass/Metal Receiving tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 13:18:38 UTC
From: GaryH <garyh@bellsouth.net>
Message-ID: <qrWW8.75382$wj4.6804781@e3500-atl2.usenetserver.com>
Source record: 42616

I am still cleaning out my 30 years of electronics
stuff. Check this box lot of receiving tubes, many
I believe were used in Hallicrafters gear etc.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1748859014

1055. Re: Can digital VFO's do this..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 16:11:05 UTC
From: Richard Daventry <nearlynews_email@ntlworld.com>
Message-ID: <wZYW8.747$LR4.95237@news8-gui.server.ntli.net>
Source record: 42617

":-) Bill" <therealexray@netscape.net> wrote in message
news:3D2C30C5.BDCAFE53@netscape.net...
> Richard Daventry wrote:
>
> For a counter it would be done much the way it is done in the radio...by
> taking a bit of signal from the carrier oscillator and from the LO for
> the individual bands.
> -Bill

In the 2000A, you get the rf out, by basically adding (in "additive mixer")
455 Khz C.O. to the VFO (2500 -2700 Khz) then subtracting (in "substractive
mixer") output of each (Band change) HF Xtal Osc.

So, the math for 160m is:

VFO High:

C.O. + VFO = Output 1st mix.

(455 + 2700) = 3155 Khz

HF Osc. - 1st Mix = Rf out

4955 - 3155 = 1800 Khz

VFO Low:

C.O. + VFO = Output 1st mix.

(455 + 2500) = 2955 Khz

HF Osc. - 1st Mix = Rf out

4955 - 2955 = 2000 Khz

I think all you have to do then is to do the same in your VFO circuitry.
Three inputs for your display circuitry: Take the DDS VFO signal (2500 -
2700)) add it to the 455 Khz C.O. then subtractively mix with the output
from the HF Osc and feed that to the display. But, I don't hardly know what
I'm doing. :c).

Biut I would have though that maybe you could program these things into a
programmable VFO, with no need to take inputs from your TX/Rx oscillators.
I thought that might be one of the beauties of a modern synthesized VFO.

1056. FA: Box of RF power switches, coils etc

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 16:27:21 UTC
From: GaryH <garyh@bellsouth.net>
Message-ID: <lcZW8.75469$wj4.6846014@e3500-atl2.usenetserver.com>
Source record: 42618

Been back in the basement and found another box of stuff
that you guys might want. Wife wants this tuff gone so please help!

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1365864705

1057. Re: Can digital VFO's do this..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 16:54:35 UTC
From: Richard Daventry <nearlynews_email@ntlworld.com>
Message-ID: <2DZW8.945$LR4.104505@news8-gui.server.ntli.net>
Source record: 42619

"Richard Daventry" <nearlynews_email@ntlworld.com> wrote in message
news:wZYW8.747$LR4.95237@news8-gui.server.ntli.net...
> Biut I would have though that maybe you could program these things into a
> programmable VFO, with no need to take inputs from your TX/Rx oscillators.
> I thought that might be one of the beauties of a modern synthesized VFO.

In other words the only connection between DDS VFO is output of VFO. On
""band 1" I programme the display to take VFO output, add C.0. (appx 455)
then to minus that summation from 4995. Etc, for each band with different
HF osc frequency.

Problem is though that when you change sidebands the C.O. changes slightly
in this rig. And things change again when using CW, so that calls for a
sophisticated display programability function. So, taking signals from C.O.
and HF OSC might well be the best solution anyway.

1058. Re: Can digital VFO's do this..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 17:19:43 UTC
From: Richard Daventry <nearlynews_email@ntlworld.com>
Message-ID: <%ZZW8.992$LR4.107607@news8-gui.server.ntli.net>
Source record: 42620

"fred bartoli" <toto@hotmail.toto> wrote in message
news:3d2c2263$0$225$626a54ce@news.free.fr...
> Found this.
> http://lea.hamradio.si/~s57nan/ham_radio/dds_9851/dds_9851.html
>
> from this list http://www.nitehawk.com/rasmit/dds50.html
>
> Remember having seen exactly what your looking for but not where.
>
> Search for DDS & VFO & PIC
>
> Now I'm thinking (yes !!!) maybe that was a Circuit Cellar project. Have a
> look at their site.
>
>
> Fred.

Fred

Thanks. I've now got to see some really useful webpages on the subject. I
think getting a display to read correct frequency is my real challange.

Rich.

1059. Re: Can digital VFO's do this..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 18:09:27 UTC
From: fred bartoli <toto@hotmail.toto>
Message-ID: <3d2c7831$0$260$626a54ce@news.free.fr>
Source record: 42621

The one I'm thinking about and I can't remember who did, exactly what and where it is, do *exactly* what you want. It is controled by a PIC (IIRC) controler with digital readout (controled by the ÂC). The software had ALL the bells and whistles you could dream about, with by band programmable offsets and offset signs for easy USB-LSB, ... (sorry don't remember exactly all the details since I'm not ham, but I'm pretty sure it meets 100% your requirements).

Go on searching. I'm sure it is a DDS based VFO.... and TILT!!! I now remeber very well...

Ok, I verified. It's the one I thought about.

Go on www.analog.com and download an app note AN557 by Ulrich Rhodes, and give many thanks to this guy.

Fred.

Richard Daventry <nearlynews_email@ntlworld.com> a Âcrit dans le message : %ZZW8.992$LR4.107607@news8-gui.server.ntli.net...
>
> "fred bartoli" <toto@hotmail.toto> wrote in message
> news:3d2c2263$0$225$626a54ce@news.free.fr...
> > Found this.
> > http://lea.hamradio.si/~s57nan/ham_radio/dds_9851/dds_9851.html
> >
> > from this list http://www.nitehawk.com/rasmit/dds50.html
> >
> > Remember having seen exactly what your looking for but not where.
> >
> > Search for DDS & VFO & PIC
> >
> > Now I'm thinking (yes !!!) maybe that was a Circuit Cellar project. Have
a
> > look at their site.
> >
> >
> > Fred.
>
>
> Fred
>
> Thanks. I've now got to see some really useful webpages on the subject.
I
> think getting a display to read correct frequency is my real challange.

>
> Rich.
>

1060. Re: 28V suppy ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 18:47:47 UTC
From: "Dana H. Myers" <dana@dioxine.net>
Message-ID: <3D2C815F.7070102@dioxine.net>
Source record: 42622

I've always preferred a SMPS pre-regulator followed
by a linear regulator to gain the best of both; you'd
pre-regulate to about 2V above the desired output
and use a linear regulator to arrive at the
target voltage.

Dana K6JQ
dana@dioxine.net

fred bartoli wrote:
> Hamish,
> If you don't want to bother with the design of a SMPS, and still want avoid
> huge power waste, you have another choice : a mixed design.
>
> Have your main transformer/bridge/cap bring you down to what ever you want
> or can (above the 28V target), then have a buck stepdown switcher that will
> get you to the targetted 28V.
> Buck structure is simple, don't have to manage high voltage, transformer...
> and other "weird" things.
> You will very easily find the components, and a well designed one will be
> robust and "happily welcome almost any abuse" you can think of.
> For a homebrew regulated high power supply this may be the best
> heat/size/cost/time/efficiency... ratio.

1061. FS: Small Switcher PS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-10 22:47:15 UTC
From: Dan Reynolds <bcdlr@insightbb.com>
Message-ID: <TP2X8.353160$6m5.397951@rwcrnsc51.ops.asp.att.net>
Source record: 42623

Compaq 10 V 1.5 A switching power supply. Brand new. $10 shipped.

Dan Reynolds KB9JLO

1062. RF DESIGN MAGAZINE SOFTWARE--> COIL.EXE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 01:39:58 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3D2CE039.144DCB87@gte.net>
Source record: 42624

Some years ago RF Design offered some programs on a 3.5" floppy. One of these was COIL.EXE. Of all the solenoid coil programs I have had- this was the easiest, most useful and dead accurate. Unfortunately the machine it was installed on died.
Anyone have a copy of this program and could send it- must have been quite small- perhaps 50K or less.

Thanks,
Dale W4OP

1063. Re: Aluminum Sheet Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 03:26:34 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D2CFBDB.76D5E3F9@bellatlantic.net>
Source record: 42625

Douglas Snowden wrote:
>
> Where do you homebrewers buy aluminum sheet?
> Stuff to make boxes and chassis out of ?
>
> Doug N4IJ

I get mine from a nearby scrap metal dealer.
The place also deals in surplus "stuff". I
got a Gonset GSB 101 linear amp there for $20.00.
These places are worth a visit, even if you're
not into rolling your own cabinets!

1064. Re: RF DESIGN MAGAZINE SOFTWARE--> COIL.EXE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 03:31:57 UTC
From: wa0goz@arrl.net
Message-ID: <3D2CFC2D.77B6@arrl.net>
Source record: 42626

Dale Parfitt wrote:
>
> Some years ago RF Design offered some programs on a 3.5" floppy. One of
> these was COIL.EXE. Of all the solenoid coil programs I have had- this
> was the easiest, most useful and dead accurate. Unfortunately the
> machine it was installed on died.
> Anyone have a copy of this program and could send it- must have been
> quite small- perhaps 50K or less.
>
> Thanks,
> Dale W4OP

Go here for all of the RFD programs.

http://communities.msn.com/ElectricalEngineering/files.msnw?fc_p=%2FRF%20Design%20Legacy%20Software&fc_a=0

Good luck.

Henry

1065. Re: Leader Sig Gen Circuits needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 04:11:38 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D2D066A.871F605A@bellatlantic.net>
Source record: 42627

Brian Keegan wrote:
>
> Anyone know of site for above circuits/manuals as I have a couple of sig
> gens that have given good service but have recently given up the ghost and I
> would like to repair them. Manuals and circuts have long since disapeared
> from my files

Try:
http://www.w7fg.com/

1066. Re: Can digital VFO's do this..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 04:16:12 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D2D068C.447B800B@netscape.net>
Source record: 42628

Richard Daventry wrote:
>
> Problem is though that when you change sidebands the C.O. changes slightly
> in this rig. And things change again when using CW, so that calls for a
> sophisticated display programability function. So, taking signals from C.O.
> and HF OSC might well be the best solution anyway.

Quite a few rigs will shift on the digital readout when selecting
between USB/LSB/CW because you really ARE changing freq. Of course it
will always be more accurate to sample the actual oscs rather than
re-create oscs specifically for a readout
-Bill

1067. Re: Where do I start

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 04:17:43 UTC
From: rhaub <rhaub@itc.com>
Message-ID: <3D2D06E7.ABDF92E0@itc.com>
Source record: 42629

ehsjr@bellatlantic.net wrote:

> rhaub wrote:
>
> > > >
> > >
> > > Whoa, Whoa, Whoa, slow up there, Rick.
> > >
> > > Steve is exactly on target. You are an exception - a
> > > very rare exception.
> >
> > I disagree. You could not be more wrong. You could try, But you would not be
> > successful. My point is that with dedication and study any one can build a 100% HB
> > station for little money.
>
> What are the specifics of this station - what do you have in mind?
> I called you an exception, because you said you built an excellent
> receiver and a very nice 100W transmitter for $200. Are you saying
> any one can build an excellent receiver and a very nice transmitter
> for that price?

Yes.

> Or are you talking about a receiver with poor
> selectivity and poor sensitivity with a high noise floor and
> bad IMD ?

Receiver
sensitivity
1.0000MHz .72uV
5.0000MHz .56uV
10.000MHz .36uV
20.000MHz .38uV
Falls off from there but thats ok, I generaly stay in the 80/40/20 meter bands

selectivity
+/- 3 kHz from center Frequecy (Fo) 12 dB
+/- 5 kHz " 35 dB
+/- 10 kHz " 60 dB
+/- 20 kHz " 70 dB

Noise is less than 10dB through most of the range but does run a bit higher on 80m

Is the transmitter SSB as well as CW, is it rock bound or
under VFO control?

CW/AM. I don't particulary care about SSB. I started out rock bound then moved to VFO when I
added AM. But the embedded designer in me would not leave it be so I made it digital so I could see the frequency on an LCD, although the VFO was FB.

> Note that I did not address the concept
> of building just any HF station. I used your terms - an
> excellent receiver and a very nice 100W transmitter.
>
> You must have some compelling evidence to be so vehement
> in your response - essentially, that I could not be more
> wrong if I tried.

That was actually a joke. I had assumed that you were somewhat well read. My mistake.

> Now here's what I said:
> "You are an exception - a very rare exception.
> MOST new hams will not be able
> to put together a station that includes an excellent HF
> receiver and a very nice 100W HF transmitter for 200 bucks,
> even buying an old transceiver."
> Ok. Show me where I am wrong. What percentage of new hams
> do you think can build an excellent receiver and a very nice
> 100W transmitter for $200 ?
>

Any new ham that will spend the time and make the effort. If 100% of all new hams had the will to do so then 100% could find the way.
Again here is what I said.

>My point is that with dedication and study any one can build a 100% HB
> station for little money.

I didn't say that I thought everyone should or would. I only said that anyone *can*. And if the original poster has that kind of willingness in him he could do it too.

>
> Not, you - can - do - it - but - if - you - have - the -
> > money - don't - bother. Although I only got my license a few years ago I got interested
> > in the hobby about 25 years ago. I remember talking to a number of hams at the time and
> > most of them built there first stations. The way they talked, building your own station
> > was a right-of-passage into the hobby. When did hamming go from building to buying? I
> > don't think that I am the rare exception, I think I am the interested ham.
> >
> > Rick KC0GIX
> >
>
> If you talk to a bunch of hams today, you'll find a marked
> difference. Got my extra in '78, so I'm very familiar with
> what ham's were doing 25 years ago, when many did brew their
> stations. I was one of them

I know that there is a difference in hams today and most do not want to build. I find that sad. I get the feeling that a lot of people stay away from the hobby because of lack of

funds
since they erroniously believe that you need a big bank roll to get into it. All the time ignoring the best part of the hobby, HB, scrounging, and putting forth as much effort to learn the dark art of radio as they have time for.

Rick KC0GIX

1068. Re: RF DESIGN MAGAZINE SOFTWARE--> COIL.EXE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 04:47:34 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <F58X8.78555$lm2.3402792@bin2.nnrp.aus1.giganews.com>
Source record: 42630

Yeah but you have to know the date to retrieve the right one. There are many, and there seems to be no description.

Any suggestions? Is there an index?

Bob

1069. HP 8601 output amp wtd

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 06:17:27 UTC
From: Don Vosper <don@vosperd.freeserve.co.uk>
Message-ID: <agj7nb$jk2$1@newsg1.svr.pol.co.uk>
Source record: 42631

Hello
I'm looking for the output amp for the HP8601A sweep generator, long out of production.
It's an 1820-0150 device made by Hewlett Packard. If anyone has any idea who might supply one pehaps they would like to get on touch. I would consider buying a complete instrument for spares if there's one available in the UK for a reasonable price.
Thanks
Don M5AKY
Bristol UK

1070. Re: RF DESIGN MAGAZINE SOFTWARE--> COIL.EXE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 06:28:23 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d2d2533.1403971@news.freeserve.net>
Source record: 42632

On Thu, 11 Jul 2002 01:39:58 GMT, Dale Parfitt <parinc@gte.net> wrote:

>Some years ago RF Design offered some programs on a 3.5" floppy. One of
>these was COIL.EXE. Of all the solenoid coil programs I have had- this
>was the easiest, most useful and dead accurate. Unfortunately the
>machine it was installed on died.
>Anyone have a copy of this program and could send it- must have been
>quite small- perhaps 50K or less.
>
Dale, you might like to look at this URL. It seems quite useful
http://www.geocities.com/homemade1234/coil.zip
but I don't think its the program you were looking for.
HTH MIke W, G8NXD aka M3MSM qthr
--

1071. Re: RF DESIGN MAGAZINE SOFTWARE--> COIL.EXE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 06:48:44 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D2D2A4C.75EFAB6D@clifto.com>
Source record: 42633

Bob wrote:
> Yeah but you have to know the date to retrieve the right one. There are
> many, and there seems to be no description.
>
> Any suggestions? Is there an index?

The very first page I hit on a Google search had a pointer to the program.

--
.signature in flux

1072. Re: RF DESIGN MAGAZINE SOFTWARE--> COIL.EXE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 07:07:42 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D2D2EBE.1060803@eznec.com>
Source record: 42634

A google search on '"rf design" coil.exe' brought one hit, a site that shows the following URL: http://www.alkeng.com/dload/coil.exe. I entered this URL in my browser and was prompted for where I would like coil.exe to be downloaded to on my machine. The downloaded file is 85 kB.

Roy Lewallen, W7EL

Dale Parfitt wrote:
> Some years ago RF Design offered some programs on a 3.5" floppy. One of
> these was COIL.EXE. Of all the solenoid coil programs I have had- this
> was the easiest, most useful and dead accurate. Unfortunately the
> machine it was installed on died.
> Anyone have a copy of this program and could send it- must have been
> quite small- perhaps 50K or less.
>
> Thanks,
> Dale W4OP
>

1073. Re: Can digital VFO's do this..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 08:45:52 UTC
From: Adri <tncdrn@tin.it>
Message-ID: <QAbX8.4059$C8.5460@tornado.fastwebnet.it>
Source record: 42635

author is Peter Rhodes
Adri

> Go on www.analog.com and download an app note AN557 by Ulrich Rhodes, and
> give many thanks to this guy.

1074. Re: Can digital VFO's do this..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 11:38:59 UTC
From: fred bartoli <toto@hotmail.toto>
Message-ID: <3d2d6e18$0$280$626a54ce@news.free.fr>
Source record: 42636

Adri <tncdrn@tin.it> a crit dans le message :
QAbX8.4059$C8.5460@tornado.fastwebnet.it...
> author is Peter Rhodes
> Adri
>

Oops, sorry for them. Got a bit tired.

Fred.

>
> > Go on www.analog.com and download an app note AN557 by Ulrich Rhodes,
and
> > give many thanks to this guy.
>
>
>

1075. Re: Where do I start

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 13:28:46 UTC
From: troglodite@aol.com
Message-ID: <20020711092846.01717.00000219@mb-fc.aol.com>
Source record: 42637

> I get the feeling that a lot of people stay away from the hobby because of
>lack of funds
>since they erroniously believe that you need a big bank roll to get into it.
>All the time
>ignoring the best part of the hobby, HB, scrounging, and putting forth as
>much effort to
>learn the dark art of radio as they have time for.

Good point. When I was first licensed back in 1954, I built all my own gear because I couldn't afford to do anything else. I also discovered I loved designing and building things. These days I lack the time and space to do much scratch building, but I love working with old tube gear. Restoration and use of antique radio gear can also be quite satisfying, and you don't have to spend a bundle if you don't want to. I have an all vintage HF station that is a lot of fun to operate. Takes me back to the days when things weren't so sophisticated.

Doug Moore KB9TMY (Formerly K6HWY)

1076. Re: Can digital VFO's do this..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 13:54:40 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3d2d8d2c$0$7668@echo-01.iinet.net.au>
Source record: 42638

I have a counter/PLL stabilizer that will do this
The main counter will count the VFO freq to 10 Hz resolution. There is a 4 bit interface to select various offsets to 10 Hz resolution - this will give 16 possible offsets, positive or negative. eg one bit could be used for USB/LSB and the the others as band select (ie 8 bands)
You can also stabilize your VFO with a "huff and puff" PLL scheme if you place a small varactor across the tank (enough to give about 5 KHz swing).
The board uses an AVR controller

see http://www.iinet.net.au/~richardh/VK6BRO.htm

There will be an article in Circuit Cellar soon.

Richard

"Richard Daventry" <nearlynews_email@ntlworld.com> wrote in message news:BVGW8.3724$Ae.149938@newsfep1-win.server.ntli.net...
> Hi. If I substitute the old regular VFO in my KW2000A, I can see that
> whenever the VFO output does up by 1khz, the readout must go down by 1 khz
> and vica versa.
>
> Also, for each band there must be a starting position or starting offset.
> For eg, on 160, when the VFO outputs 2700 khz, the VFO must read 1800 Khz
> the actual output frequency. Then, when the actual rf output frequency goes
> up the VFO readout must of course go up, but the VFO output has to go down
> by the same amount.
>
> And that must be repeated for every band, yet the starting offset will be
> different for each band. And the VFO must know when band has changed.
>
> I suppose a modern VFO unit can take care of these things.
>

1077. Homebrew SW receiver for the car?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 14:06:56 UTC
From: msenecal1@juno.com
Message-ID: <62bf14a6.0207110606.64d69cc5@posting.google.com>
Source record: 42639

I've got to replace the radio in my car, and I'm interested in replacing it with a homebrew SW receiver (built in an old car radio chassis), prefereably something with reasonable coverage up to ~30MHz. Has anyone done this before? I've found lots of good plans for SW radios, but none that appear to be suited for use in a car.

1078. Re: FS: HV DIODES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 14:09:24 UTC
From: Walter Treftz <penguino@atlantic.net>
Message-ID: <3D2D9194.C30BF9F5@atlantic.net>
Source record: 42640

Rcvd the diodes yesterday - Tks
Walt (N4GL)

Joe Hargis wrote:

> 1n5408 rated at 1200v min. at 1.5A only $.10 each + shipping
> Joe in MO. WS0E

1079. Re: Homebrew SW receiver for the car?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 15:18:32 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <clhX8.39087$iX5.1659862@bin3.nnrp.aus1.giganews.com>
Source record: 42642

You can use the cassette player as an input device to a regular car radio (RatShack has adapters), then just put together one of the QRP regen receivers from the ARRL Handbook.

"Matt Senecal" <msenecal1@juno.com> wrote in message news:62bf14a6.0207110606.64d69cc5@posting.google.com...
> I've got to replace the radio in my car, and I'm interested in
> replacing it with a homebrew SW receiver (built in an old car radio
> chassis), prefereably something with reasonable coverage up to ~30MHz.
> Has anyone done this before? I've found lots of good plans for SW
> radios, but none that appear to be suited for use in a car.

1080. Re: RF DESIGN MAGAZINE SOFTWARE--> COIL.EXE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 15:39:00 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3D2DA4DC.CD130A96@gte.net>
Source record: 42643

Roy Lewallen wrote:

> A google search on '"rf design" coil.exe' brought one hit, a site that
> shows the following URL: http://www.alkeng.com/dload/coil.exe. I entered
> this URL in my browser and was prompted for where I would like coil.exe
> to be downloaded to on my machine. The downloaded file is 85 kB.
>
> Roy Lewallen, W7EL
>

Roy's link was for the correct program- thanks to all who replied.

Dale W4OP

1081. Re: Homebrew SW receiver for the car?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 17:25:34 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3D2DBDD9.985C9E6A@gte.net>
Source record: 42644

Matt Senecal wrote:

> I've got to replace the radio in my car, and I'm interested in
> replacing it with a homebrew SW receiver (built in an old car radio
> chassis), prefereably something with reasonable coverage up to ~30MHz.
> Has anyone done this before? I've found lots of good plans for SW
> radios, but none that appear to be suited for use in a car.

MFJ and probably others (Ten Tec?) offer SW converters for car radios.
That way you get to retain the good audio system present in a car radio
and add just those bands you wish on the converter.

Dale W4OP

1082. FS: Ham items

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 19:02:34 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <dDkX8.41310$iX5.1791948@bin3.nnrp.aus1.giganews.com>
Source record: 42645
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

1. Gonset GSB-101 amplifier, modified for four 572B tubes, legal limit, needs completion but I have the parts. Make reasonable offer.

2. Gonset Tri-Band converter. $25 plus shipping.

3. Kenwood YK-88C-1 500 Hz CW filter for many radios like TS-930, 940, 440, 570, etc. $80 shipped.

4. Yaesu SP-101PB speaker/phone patch, excellent, with manual. $70 plus shipping.

5. Yaesu FT-208RH 2 meter HT with tone board, battery, wall charger, manual copy, antenna. $90 plus shipping.

6. KDK FM mobile transceiver, very nice 2 meter rig, with PL tones, mounting bracket, etc. $125 plus shipping.

7. Tektronix 1A2 dual trace plugin for 500- series oscilloscopes. $75 plus shipping.

73 de Bob K6DDX

1083. Re: Homebrew SW receiver for the car?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 19:02:35 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <fDkX8.41311$iX5.1791967@bin3.nnrp.aus1.giganews.com>
Source record: 42646

I have a Gonset Tri-Band converter that was designed to go ahead of a car radio to provide ham band (and some SW BC) reception. I'd like $25 for it. It's tubes, so needs a high voltage source maybe 150 V but I built a little transistor converter to run it. Great little unit.

73, Bob K6DDX

1084. Re: RF DESIGN MAGAZINE SOFTWARE--> COIL.EXE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 19:52:35 UTC
From: wa0goz@arrl.net
Message-ID: <3D2DE203.3826@arrl.net>
Source record: 42697

Bob wrote:
>
> Yeah but you have to know the date to retrieve the right one. There are
> many, and there seems to be no description.
>
> Any suggestions? Is there an index?
>
> Bob

Here you go

Henry

1085. Re: RF DESIGN MAGAZINE SOFTWARE--> COIL.EXE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 20:57:49 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207111257.4053429e@posting.google.com>
Source record: 42698

Hi Dale,

That's the one I've used, too. Recently I've needed some coils I could wind quite accurately, and I discovered an error in that program! The coil length, calculated from number of turns and pitch, was in error by one turn. So I went looking to see if http://64.130.134.245/saratogasoftware/ had a corrected version. Well, there was a new version, windows-ized and with a lot more machine screws for standard formers, but the error persisted. I emailed John (John Mezak, K2RDX, who wrote the prog.) about it, and he promptly corrected the mistake. The program now gives results even closer to what I measure with careful measurements on HP/Agilent equipment and in other ways for a few samples I tried. I highly recommend it. However, I feel obligated to point out that the program is now shareware.

If you want to avoid shareware, I find that PCAIRL gives very accurate results, too, though I don't like the way that results are presented quite as well. You may actually like the user interface better; it depends on how you like to go about winding coils. You can find it free at http://www.alkeng.com/.

Of course, Reg Edwards also has a coil program on his site. I didn't find its results to agree with my measurements quite as well as the two above, and still like K2RDX's program the best for accuracy and convenience with respect to the way I actually construct coils. There was also yet another one mentioned here just a couple days ago. Both it and Reg's are in metric measure, and the other two I mentioned above are "English" (American).

Cheers,
Tom

Dale Parfitt <parinc@gte.net> wrote in message news:<3D2CE039.144DCB87@gte.net>...
> Some years ago RF Design offered some programs on a 3.5" floppy. One of
> these was COIL.EXE. Of all the solenoid coil programs I have had- this
> was the easiest, most useful and dead accurate. Unfortunately the
> machine it was installed on died.
> Anyone have a copy of this program and could send it- must have been
> quite small- perhaps 50K or less.
>
> Thanks,
> Dale W4OP

1086. Re: Can digital VFO's do this..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-11 22:21:44 UTC
From: Richard Daventry <nearlynews_email@ntlworld.com>
Message-ID: <ownX8.3047$Ro6.200733@newsfep1-win.server.ntli.net>
Source record: 42699

Richard

Many thanks.

At the moment I'm torn between a digital display + synthesized VFO and a digital display + PLL scheme to keep the rigs own VFO on frequency (or even a new outboard VFO on frequency). I think that it's probably a simpler and cheaper project to just make a display + PLL.

Anyway there are probably a lot more, but to recap these are three solutions, the last I think too basic.

Synthesized VFO + readout
http://www.analog.com/library/applicationNotes/dataConverters/dds/AN557.pdf

PLL + readout
http://members.iinet.net.au/~richardh/vfostab.htm#Introduction

PLL + readout
http://hamradio.online.ru/dafco.htm

"Richard Hosking" <zaprichardh@iinet.net.au(remove the zap)> wrote in message news:3d2d8d2c$0$7668@echo-01.iinet.net.au...
> I have a counter/PLL stabilizer that will do this
> The main counter will count the VFO freq to 10 Hz resolution. There is a 4 > bit interface to select various offsets to 10 Hz resolution - this will give
> 16 possible offsets, positive or negative. eg one bit could be used for > USB/LSB and the the others as band select (ie 8 bands)
> You can also stabilize your VFO with a "huff and puff" PLL scheme if you > place a small varactor across the tank (enough to give about 5 KHz swing).
> The board uses an AVR controller
>
> see http://www.iinet.net.au/~richardh/VK6BRO.htm
>
> There will be an article in Circuit Cellar soon.
>
> Richard

1087. wtbt tune/load caps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-12 02:14:50 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3D2E3B9A.8080507@charter.net>
Source record: 42700

Looking for a couple of items......
tuning cap rated 10-1200pf @4kv
Load cap 50-1000pf 2kv
these are for a 3000k @ 3 amp transformer
i am going to use a GU-84B tube.
Trying to get together the parts i need for this amp.
any built one using this tube for hf 10-160 meters?
I have all sorts of stuff to trade on also have many caps smaller for
smaller amp projects some roller inductors etc.
the values listed above are on a schematic i found on this tube....if
someone has a better idea i am open to all sugestions.
Also will have to pick up a tube and socket ....really everything for
the RF deck. I have the plate transformer under control its a pole pig.
i could use a heater grid transformer.
thanks for looking
chris NI4L

--
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Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

1088. Re: Homebrew SW receiver for the car?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-12 03:37:44 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D2E4F08.F846417A@netscape.net>
Source record: 42701

Bob wrote:
>
> I have a Gonset Tri-Band converter that was designed to go ahead of a car
> radio to provide ham band (and some SW BC) reception. I'd like $25 for it.
> It's tubes, so needs a high voltage source maybe 150 V but I built a little
> transistor converter to run it. Great little unit.
>
> 73, Bob K6DDX

I've got a Clarion/Nissan 1995? stock AM/FM/SW/cassette radio I'll
sell. Tunes 2.9 to 21.9 in 5 kc steps. The caveat is that it is setup
for 9kc channel spacing on AM-BCB and I haven't been able to find a way
to change it. 50 bux+shipping.
-Bill WX4A

1089. Re: wtbt tune/load caps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-12 08:47:34 UTC
From: Peter Völpel <qro1750@compuserve.de>
Message-ID: <3D2E97A5.F25B1DA7@compuserve.de>
Source record: 42702

NI4L schrieb:

> i am going to use a GU-84B tube.
> Trying to get together the parts i need for this amp.
> any built one using this tube for hf 10-160 meters?

Hi Chris,

Please check the following URL:

http://i5uxj-2.cln.it/amp/amphf3/amp1.html

Good luck with your project

Peter, DF3KV

1090. Re: Homebrew SW receiver for the car?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-12 12:57:32 UTC
From: 2w8ji@contesting.com
Message-ID: <3d2ed1cc.88437097@news.akorn.net>
Source record: 42703

On Thu, 11 Jul 2002 15:18:32 GMT, "john walton" <jdwalton@comcast.net>
wrote:

>You can use the cassette player as an input device to a regular car radio
>(RatShack has adapters), then just put together one of the QRP regen
>receivers from the ARRL Handbook.

MFJ sells a crystal controlled 12Vdc SWBC convertor that outputs on
the AM BC band.

73 Tom

1091. CW

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-12 22:21:01 UTC
From: "Keith G. Wucherer, N2OBS" <wucherer@hotmail.com>
Message-ID: <hDIX8.21509$7k7.403775@twister.southeast.rr.com>
Source record: 42704

anyone have or know on the web i can get a cw beacon and cw transmitter for
2 meters ...schematics?

1092. Re: CW

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 02:16:30 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3D2F8D7E.66C0A5E6@bloomer.net>
Source record: 42705

The RSGB VHF/UHF Manual by Gessop has schematics of transmitters that
could be used for beacons or CW.

Scott
N0EDV

"Keith G. Wucherer, N2OBS" wrote:
>
> anyone have or know on the web i can get a cw beacon and cw transmitter for
> 2 meters ...schematics?

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

1093. 6 meter TPL amp FM to SSB Conversion?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 02:49:18 UTC
From: Bruce Nolte N3LSY <brucenol@abs.net>
Message-ID: <3D2F952E.7050003@abs.net>
Source record: 42707
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I have a TPL PA1-10 D commercial FM Amplifier, rated 80 watts for 35 to 50 Mhz, that I would like to modify for use on SSB on 6 meters. The amplifier works well with my FT-736 in FM mode, and can give me as much as 75 or 80 watts there. My real intrest on 6 meters is SSB, so any information on modifications for running SSB would be helpful.

1094. Re: Aluminum Sheet Source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 03:08:17 UTC
From: Bruce Nolte N3LSY <brucenol@abs.net>
Message-ID: <3D2F99A1.6060103@abs.net>
Source record: 42708

Douglas Snowden wrote:
> Where do you homebrewers buy aluminum sheet?
> Stuff to make boxes and chassis out of ?
>
> Doug N4IJ
>
>
>

Here is my .02 worth, try a good eclectic junkyard (i.e the junkyard wars type) that collects more than just old cars and trucks. I have a place near me called Petry's in Westminster MD that often gets some real nice aluminum scrap from an aircraft manufacturer, and will sell it to me for 50c per pound. I have gotten everything from 5/8 inch seamless aluminum tubing for antenna elements, to 1/4 inch aluminum plate for boom to mast clamps. It can be hit and miss, but the price is right if they got what you need.

1095. Relay design for AL-80B and IC-746

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 03:37:35 UTC
From: Larry Bratcher <lbratche@swbell.net>
Message-ID: <3gNX8.5042$6b6.1851965565@newssvr12.news.prodigy.com>
Source record: 42709

Anyone know of a site that shows a simple design for a radio to amp relay that will protect my 746?

1096. Finger stock ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 05:55:00 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <uiv4idff3s3s73@corp.supernews.com>
Source record: 42706

WHERE TO BUY ?

Doug N4IJ

1097. Re: CW

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 13:01:15 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d302467.8004530@news.freeserve.net>
Source record: 42710

On Fri, 12 Jul 2002 22:21:01 GMT, "Keith G. Wucherer, N2OBS"
<wucherer@hotmail.com> wrote:

>anyone have or know on the web i can get a cw beacon and cw transmitter for
>2 meters ...schematics?
>
here is a suitable URL
http://homepage.tinet.ie/~ei9gq/2m.html

hth Mike W, G8NXD aka M3MSM qthr

1098. Needed: Transverter 2 to 10/15

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 13:08:45 UTC
From: Eim Mulder <e.mulder@compaqnet.nl>
Message-ID: <agp8po$k6h$1@reader05.wxs.nl>
Source record: 42711

I am looking for a schematic of a 6/10/15m transverter wich I want to use into combination with my all mode 2m tranceiver.

73's.....Eim.....PA3CMD

1099. SL1612c IF amp datasheet ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 13:25:00 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d3029c4.9377789@news.freeserve.net>
Source record: 42712

I'm looking for an SL1612 IF amp datasheet on the web. anyone know of one?. Google fails

Due to its cost I'm concidering replacing it with an MC1350P, any comments appreciated.
thanks Mike W, G8NXD aka M3MSM qthr

1100. Re: Finger stock ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 13:28:31 UTC
From: "John H. Carver Jr." <jcarver@netusa1.net>
Message-ID: <VWVX8.610$o83.83327@newsfeed.slurp.net>
Source record: 42713

Try an office supply house.

--
John H. Carver Jr.
Mid-North Indiana
"Douglas Snowden" <snowden@peoplepc.com> wrote in message
news:uiv4idff3s3s73@corp.supernews.com...
> WHERE TO BUY ?
>
> Doug N4IJ
>
>
>
>

1101. Re: SL1612c IF amp datasheet ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 15:39:02 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1307021139280001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42714

In article <3d3029c4.9377789@news.freeserve.net>,
mike@corn2.freeserve.co.uk wrote:

> I'm looking for an SL1612 IF amp datasheet on the web. anyone know of
> one?. Google fails
>
> Due to its cost I'm concidering replacing it with an MC1350P, any
> comments appreciated.
> thanks Mike W, G8NXD aka M3MSM qthr

This is a Plessey part, I think, just based on the part number. I think that they were bought out and the SL1612 and other standard rf ic's were probably taken completely out of the product line of Plessey per se. Going to the website now, all they seem to have are microwave parts for 2.4 and 5.8 GHz. I could probably help you with the MC1350P, but I would need the data sheet for the 1612 so I can see its internal schematic, so you're in a Catch22 here. As a guess where to go now, try Phillips or Siemens and see if they may have bought out the rf ic's from Plessey. In the mean time, I'll look through my old stuff and try to find a schematic of something using this part.

Steve WB4CZR

1102. Re: Finger stock ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 15:46:16 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1307021146420001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42715

In article <VWVX8.610$o83.83327@newsfeed.slurp.net>, "John H. Carver Jr." <jcarver@netusa1.net> wrote:

> Try an office supply house.
>
> --
> John H. Carver Jr.
> Mid-North Indiana
> "Douglas Snowden" <snowden@peoplepc.com> wrote in message
> news:uiv4idff3s3s73@corp.supernews.com...
> > WHERE TO BUY ?
> >
> > Doug N4IJ
> >
> >
> >
> >

Finger stock in an office supply store? I doubt that. This is esoteric stuff. You need to go where you can get EMC materials. That may be a problem as these people tend to require bulk purchases. If you know an engineer or if you're an engineering student, I would look in the Gold Book or other source for the EMC vendors and get some samples. I used to have a sample kit, but got rid of it long ago.

Steve WB4CZR

1103. Re: Finger stock ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 16:15:21 UTC
From: Idontwantspam@net
Message-ID: <3d3051a5.685265@news.bellatlantic.net>
Source record: 42716

On Sat, 13 Jul 2002 15:46:16 GMT, motsteve@attbi.com (carltons) wrote:

>In article <VWVX8.610$o83.83327@newsfeed.slurp.net>, "John H. Carver Jr."
><jcarver@netusa1.net> wrote:
>
>> Try an office supply house.
>>
>> John H. Carver Jr.
>> Mid-North Indiana
>> "Douglas Snowden" <snowden@peoplepc.com> wrote in message
>> news:uiv4idff3s3s73@corp.supernews.com...
>> > WHERE TO BUY ?
>> >
>> > Doug N4IJ
>> >
>Finger stock in an office supply store? I doubt that. This is esoteric
>stuff. You need to go where you can get EMC materials. That may be a
>problem as these people tend to require bulk purchases. If you know an
>engineer or if you're an engineering student, I would look in the Gold
>Book or other source for the EMC vendors and get some samples. I used to
>have a sample kit, but got rid of it long ago.
>
>Steve WB4CZR

You may want to try vendors like McMaster-Carr. They will sell various
interesting materials in small quantities. It will cost a little more
per unit, but you don't need to buy a 50 year supply.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

1104. Re: Relay design for AL-80B and IC-746

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 17:06:13 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <3d305d22$1_2@newsa.ev1.net>
Source record: 42717

Stop in on my site, I have a couple of easy to build relay designs there.
www.qsl.net/kk5dr/

73 de Matt KK5DR

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Larry Bratcher" <lbratche@swbell.net> wrote in message
news:3gNX8.5042$6b6.1851965565@newssvr12.news.prodigy.com...
> Anyone know of a site that shows a simple design for a radio to amp relay
> that will protect my 746?
>
>
>
>

1105. Phase discriminator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 17:08:51 UTC
From: ON4JA <ON4JA@wanadoo.be>
Message-ID: <agpo2a$1adh1$1@sinclair.be.wanadoo.com>
Source record: 42718
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

ON4JA

is looking for a Collins Phase Discriminator CV 587 UR ,
a Directional Coupler CU 987 and a Coupler 180S-1

Thanks for help .

Emile
ON4JA@wanadoo.be

1106. Re: Finger stock ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 17:33:59 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3D306487.C7422683@ieee.org>
Source record: 42719

Douglas Snowden wrote:

> WHERE TO BUY ?
>
> Doug N4IJ

I guess it depends on how much you want, but I called the supplier (
don't remember
the name) and they sent me enough samples to do what I wanted.

Bill K7NOM

1107. Re: Where do I start

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 18:21:57 UTC
From: ogrowup@webtv.net
Message-ID: <1342-3D306FC5-40@storefull-2233.public.lawson.webtv.net>
Source record: 42721

I suggested taking the CW right off because I have a sneaking suspicion the mossbacks at the ARRL are going to fight to keep some sort of CW requirement in place no matter what happens at the WRC 2003 meetings. Also, although I don't operate CW, I had a VERY good CW teacher at the classes I attended. Out of 27 people who took the course, 27 passed both the written & CW tests for Tech +.

"Eagles may soar but weasels aren't sucked into jets."

1108. Help! Need help restoring Philco Transitone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 18:41:41 UTC
From: msenecal1@juno.com
Message-ID: <62bf14a6.0207131041.5d513233@posting.google.com>
Source record: 42720
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

I just recently came into a nice old Philco Transitone. I don't have pictures of it yet, but it's small, a dark brown bakelite, with a speaker on the left, and a squareish white and gold tuning display on the right. There are two knobs right under the display. The whole thing looks to be from the late 30's, and looks like something that would be on a detective's desk in a noir film.

The problem is that the speaker was completely shot. In order to take it out, I had to remove the speaker transfomer, which was riveted to the speaker. I accidentally clipped one of the leads too short, and I don't think I can re-use the transformer(but may try). I have a speaker that will fit, but I can't find a match for the transformer. It takes 4 leads, and is labeled 5575. I have no idea how to match it. Anyone have any suggestions or ideas?

Thanks,

Matt

1109. Re: Can digital VFO's do this..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 20:55:15 UTC
From: jeff <wd4nmq@earthlink.net>
Message-ID: <3D3093D1.FD30A1E9@earthlink.net>
Source record: 42722

A digital vfo would work in place of the older rig' normal vfo. But, it wouldn't show what the actual operating frequency was. Remember a rig's vfo operates in a certain 500 kHz band. If I remember right the Yaesu FT-101's vfo was 7.0-7.4 Mhz.
So your digital vfo would only need to work in the same frequency output as the original vfo. PLus yuou woiuld need to match impeadance and signal level.

The circuit in the article was a real good way to do digital display on older rigs. Because you actually counted the frequencies, either up or down, of all of the oscillators in the rig.

Even the later FT-101ZD and Kenwood TS-820S with digital displays simply counted the vfo frequency for the Khz and used the band switch to determine the Mhz. While theft would display vfo drift. They could not track drift in the other oscillators.

Richard Daventry wrote:
>
> ":-) Bill" <therealexray@netscape.net> wrote in message
> news:3D2B8FE7.C46BD21C@netscape.net...
> > Richard Daventry wrote:
> > >
> > >
> > > And that must be repeated for every band, yet the starting offset will
> be
> > > different for each band. And the VFO must know when band has changed.
> > >
> > > I suppose a modern VFO unit can take care of these things.
> >
> > This may explain it better...
> >
> > http://hamradio.online.ru/dafco.htm
> >
> > -Bill
> >
>
> Egads, that was well dredged up. Thanks.
>
> That article is a good solution, yet my hearts desire is really to use a
> digital VFO, not simply just digital readout. I figure someone somewhere
> must be using a digital VFO with old valved equipment. However, that
> article may be okay in providing a digital readout for the 2000A. But I do
> wonder if a digital VFO with readout can be made to work. Perhaps I ought to
> contact a digital VFO manufacturer and see whether their product can be made

> to work with the KW2000A I have. But there could be a homebrew project that
> not only provides digital readout, but incorporates a digital VFO as well.
> That would be ideal.
>
> Rich.

--
Jeff, wd4nmq
wd4nmq@earthlink.net
http://home.earthlink.net/~wd4nmq
iLink client node #10438, iLink sysop link node #14746

1110. Help With RS HTX 212

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 21:21:50 UTC
From: k9ike@aol.com
Message-ID: <20020713172150.02986.00000538@mb-cg.aol.com>
Source record: 42723

Working on a portable set up and i need to adjust power out to
low out put. at present the rig is 10/50 watts. need to reduce to run portable
on batteries with around 1/5 watts or less. how do i adjust? which pot?
thanks, Ike

1111. Re: Where do I start

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 21:34:15 UTC
From: hikezilla@yahoo.com
Message-ID: <662db5ea.0207131334.7694ea4e@posting.google.com>
Source record: 42724

Frank,

The WCARS VEC charges $8.00.

The ARRL VEC charges $10.00.

"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message
news:<W3fU8.1527$Mw4.48803@newsfep1-win.server.ntli.net>...
> > You will start as a Technican, provided you pass the test first.
> > Radio Shack has the ham radio starter kit. Then you need to find out when
> &
> > where the next testing session will be in your area. Then bring $6 to the
> > session, a photo ID, and pencil.
> > Good luck.
> ==========
> FCC approved test fee has been $ 10.- for some time.
>
> Frank gm0csz.kn6wh@ntlworld.com

1112. calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 22:44:42 UTC
From: "Clyde R. Shappee" <clydes@world.std.com>
Message-ID: <3D30AD5A.DC6CDDA7@world.std.com>
Source record: 42725

Hi,

If I understand correctly, a GPS receiver has a 1pps output that is precise.

What's the best way to use this as a standard to adjust/compare to a 10MHz standard?

Any advice is appreciated.

Clyde

KA1CRV

1113. FA: QRO AMP Builders B&W 850A Bandswitch / Tank

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 22:58:58 UTC
From: motg@stratos.net
Message-ID: <efd5c18c.0207131458.dd993dc@posting.google.com>
Source record: 42726
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Here's the link. Thanks for looking

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1365298441

1114. Help with Hamtronics TA-51

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 22:59:56 UTC
From: Paul@Rasdoc.com
Message-ID: <a8190e1f.0207131459.57e63bc@posting.google.com>
Source record: 42727

I just finished a HamTronics TA-51, and I can't seem to get it to
tune up.
If you have never seen a TA-51 the rest of this post won't make any
sense....

No matter what I do I can't get it to draw more than about 220ma and
produce about 0.8W.

I am running it at 13.6V (Measured at the board, < 75mv ripple)

All of the signals look normal However the output will just not load
up.

I am using an RF dummy load and it measures 50 ohms at the end of L14,
so the connections are good.

Looking at the collector of Q7 with a 150Mhz scope I see:
about 28V Pk to Pk or about 10V RMS

On the base of Q8 I see a about 3.5V pk tp pk

On the C50,C51 junction point I see:14V pk to Pk, but making
the measurement with the scope changes the operation of the unit.

The voltages around Q7 and Q8

Q7 e=0V
Q7 b=+0.14
Q7 c= 12.96

Q8 e=0V
Q8 b=0V
Q8 c= 12.93

Any Suggestions?

Paul Kl7JG

1115. Re: Finger stock ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 23:01:52 UTC
From: Dale Parfitt <parinc@gte.net>
Message-ID: <3D30AFA7.8574F4AD@gte.net>
Source record: 42728

Douglas Snowden wrote:

> WHERE TO BUY ?
>
> Doug N4IJ

Fair Radio has been showing 2 different sizes in their catalog- maybe
also on line.

Dale W4OP

1116. W8MMQ web page

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 23:14:03 UTC
From: Daniel Hicks <dahicks-NOSPAM@email.com>
Message-ID: <%u2Y8.516175$cQ3.45863@sccrnsc01>
Source record: 42729

Check out the W8MMQ amateur radio page:
http://www.w8mmq.com/

W8MMQ Radio Mods Page:
http://www.w8mmq.com/mods/
Over 1,200 radio mod files, updated regularly. If you can't find the mod you're looking for, try the /qrz_mods link on the page.

Radio Experimenter's Corner
http://www.w8mmq.com/radioex/
Tips and tricks for the radio experimenter. This site will feature regular updates.

73
Dan W8MMQ

1117. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-13 23:18:02 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3D30B529.9CAEBF17@ieee.org>
Source record: 42730

"Clyde R. Shappee" wrote:

> Hi,
>
> If I understand correctly, a GPS receiver has a 1pps output that is
> precise.
>
> What's the best way to use this as a standard to adjust/compare to a
> 10MHz standard?
>
> Any advice is appreciated.
>
> Clyde
>
> KA1CRV

I haven't built mine yet but I intend to do it this way;
Use the 1 pps to sample the 1 MHz from my standard (narrow pulse)
Feed that sample into a sample and hold circuit (charge a capacitor)

Connect that to an OP amp
Use the OP amp output to adjust the 10 MHz standard (in my case 5
MHz)

My GPS receiver can put out 100 pps as an option so I will use that
instead of the 1 pps.

I built a LORAN receiver using the above scheme and it works very well.
The
LORAN pulse rate is about 12 pps so the above should also work

Anyway that's what I am doing.

Bill K7NOM

1118. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 00:09:57 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agqfgk$85j$1@helle.btinternet.com>
Source record: 42731

There are for more convenient and accurate means of obtaining frequency and time standards than GPS.

There are world-wide standard frequ and time standards. All the way from VLF to 25 MHz. There is one at 10 MHz.

Most broadcast stations can be very accurate frequency standards.

Any communications radio receiver can be the comparator.

As a radio amateur you should be familiar with the procedure.

1119. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 00:14:22 UTC
From: dinoal7lz@aol.com
Message-ID: <20020713201422.09076.00000663@mb-fp.aol.com>
Source record: 42732

OR if you don't want to build a unit you can use a dedicated GPS timing/frequency standard by picking up a surplus HP Z3801A unit. See:

www.realhamradio.com

under projects for info. I've got two of them at the workbench and use the 10MHz reference standards to drive the test equipment for super accurate measurements. These units also provide the 1PPS output in addition to the 10MHz ref...the unit uses the GPS info to "discipline" a highly accurate oscillator that resides in a double oven.

Dino KLï¿½S/4

1120. FA: Variac

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 00:48:55 UTC
From: aokd5fxt@aol.com
Message-ID: <20020713204855.06988.00000420@mb-ml.aol.com>
Source record: 42733

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1366491011&r=0&t=0&show
Tutorial=0&ed=0&indexURL=0&rd=1

1121. Re: Help! Need help restoring Philco Transitone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 01:04:02 UTC
From: tbavis@rochester.rr.com
Message-ID: <3d30cc44.39709046@news-server>
Source record: 42734
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

On 13 Jul 2002 11:41:41 -0700, msenecal1@juno.com (Matt Senecal)
wrote:

>I just recently came into a nice old Philco Transitone. I don't have
>pictures of it yet, but it's small, a dark brown bakelite, with a
>speaker on the left, and a squareish white and gold tuning display on
>the right. There are two knobs right under the display. The whole
>thing looks to be from the late 30's, and looks like something that
>would be on a detective's desk in a noir film.
>
>The problem is that the speaker was completely shot. In order to take
>it out, I had to remove the speaker transfomer, which was riveted to
>the speaker. I accidentally clipped one of the leads too short, and I
>don't think I can re-use the transformer(but may try). I have a
>speaker that will fit, but I can't find a match for the transformer.
>It takes 4 leads, and is labeled 5575. I have no idea how to match it.
>Anyone have any suggestions or ideas?

If you have the exact model number, you can get a schematic diagram at
http://www.nostalgiaair.com (Click Riders, then find Philco, etc...)

It probably uses a 50L6 or similar for audio output. This will want a
2500 Ohm to 4 Ohm transformer (assuming 4 Ohm speaker...). If you can
find a speaker with attached transformer, it will more than likely be
OK. A 5K to 8 Ohm one would work perfectly as well. If the speaker
truly is shot, drill out the rivets and reuse the transformer - splice
to the leads if you need to.

Tom Bavis

1122. Re: new-basement construction grounding suggestions wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 02:21:42 UTC
From: "Richard F. Gillette P.E." <r.f.gillette@ieee.org>
Message-ID: <3D30E036.1C8C88E0@ieee.org>
Source record: 42738

You want a connection to the wire mesh in the concrete, it is a Uffer (may be spelled wrong) ground. The best way is to have a continuos bare wire loop around the basement in the concrete and bring out one point to ground everything. Ground rods will not come close, as the wire in the concrete will have a larger surface area.

Uncle Peter wrote:

> "Myron A Calhoun" <mcalhoun@ksu.edu> wrote in message
> news:af7jip$8jm@unix1.cc.ksu.edu...
> > , he volunteered that he could even leave "sleeves" in
> > the basement floorslab itself through which I could drive ground rods.
> > (In other words, he's quite cooperative!)
> >
>
> Better make sure your water table never rises above that point!! You don't
> want to provide a means for a temporarily high water table to enter the
> cellar.
>
> Pete

1123. Re: SL1612c IF amp datasheet ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 03:17:25 UTC
From: "Kenneth D. Grimm, K4XL" <kgrimm@adelphia.invalid>
Message-ID: <nqq1just556vat0hug7all31b60k5mp5fv@4ax.com>
Source record: 42735

On Sat, 13 Jul 2002 13:25:00 GMT, mike@corn2.freeserve.co.uk (Mike W)
wrote:

>I'm looking for an SL1612 IF amp datasheet on the web. anyone know of
>one?. Google fails
>
>Due to its cost I'm concidering replacing it with an MC1350P, any
>comments appreciated.
>thanks Mike W, G8NXD aka M3MSM qthr

I've scanned the pertinent pages from the Plessy book and will be
happy to send them to you as email attachments, or you can pick them
up as an ftp from ftp://bama.sbc.edu/downloads/utils/ The files are in
the sl1600c folder.
73,
Ken K4XL - Replace "invalid" with "net" to reply.
*** BoatAnchor Manual Archive ***
On the web at http://bama.sbc.edu or
FTP site info: bama.sbc.edu login: anonymous p/w: youremailadr

1124. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 03:43:22 UTC
From: "Clyde R. Shappee" <clydes@world.std.com>
Message-ID: <3D30F35A.493B4A35@world.std.com>
Source record: 42736

Ok,

So now I have to say what I am really trying to accomplish...

I picked up an HP-105 Quartz oscillator recently. The fine adjust had been monkeyed with. Understand, this unit, when I set the fine adjust to nominal is to the best of my ability to measure, better than anything in house.

I figure sometime I might borrow a GPS receiver and see how it is really doing. It is better than 1 part in 300 M to be sure.

Clyde

Reg Edwards wrote:

> There are for more convenient and accurate means of obtaining frequency and
> time standards than GPS.
>
> There are world-wide standard frequ and time standards. All the way from VLF
> to 25 MHz. There is one at 10 MHz.
>
> Most broadcast stations can be very accurate frequency standards.
>
> Any communications radio receiver can be the comparator.
>
> As a radio amateur you should be familiar with the procedure.

1125. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 07:32:57 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <1ID3NzBpkSM9EA6L@ifwtech.co.uk>
Source record: 42739

Clyde R. Shappee wrote:
>Hi,
>
>If I understand correctly, a GPS receiver has a 1pps output that is
>precise.
>
>What's the best way to use this as a standard to adjust/compare to a
>10MHz standard?
>
It isn't a two-transistor project, but there was an article in QEX or QST a few years ago, describing a unit for which boards are available. The name that springs to mind is Brooks Shira - try seaching the web, because a number of people have built the project and there's bound to be discussion about it.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)

1126. IEEE 488 to RS 232 or USB

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 09:29:25 UTC
From: Yrrah <harke.smits@hccnet.nl>
Message-ID: <agre8p$4jg$1@news.hccnet.nl>
Source record: 42737

Hi all,

Seeking a IEEE488 to either RS232 or USB converter. Preferably with
software, looking for a second owner. Want to automate my frequency
stability measurements icw a HP 5345A counter.
73 de Harke, PA0HRK

1127. Re: SL1612c IF amp datasheet ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 10:25:42 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d315182.4647984@news.freeserve.net>
Source record: 42740

On Sun, 14 Jul 2002 03:17:25 GMT, "Kenneth D. Grimm, K4XL"
<kgrimm@adelphia.invalid> wrote:

>On Sat, 13 Jul 2002 13:25:00 GMT, mike@corn2.freeserve.co.uk (Mike W)
>wrote:
>
>>I'm looking for an SL1612 IF amp datasheet on the web. anyone know of
>>one?. Google fails
>>
>>Due to its cost I'm concidering replacing it with an MC1350P, any
>>comments appreciated.
>>thanks Mike W, G8NXD aka M3MSM qthr
>
>I've scanned the pertinent pages from the Plessy book and will be
>happy to send them to you as email attachments, or you can pick them
>up as an ftp from ftp://bama.sbc.edu/downloads/utils/ The files are in
>the sl1600c folder.

Thankyou Ken, appreciated.

1128. Re: Help! Need help restoring Philco Transitone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 10:38:23 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <94dY8.629$_Q3.42314@news8-gui.server.ntli.net>
Source record: 42742
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

> It probably uses a 50L6 or similar for audio output. This will want a
> 2500 Ohm to 4 Ohm transformer (assuming 4 Ohm speaker...). If you can
> find a speaker with attached transformer, it will more than likely be
> OK. A 5K to 8 Ohm one would work perfectly as well. If the speaker
> truly is shot, drill out the rivets and reuse the transformer - splice
> to the leads if you need to.
====
A 5000 to 8 Ohms transformer has a winding ratio of sqrt 5000 /sqrt 8 = 25
to 1.
If the impedence ratio is 5000 to 4 the winding ratio is approx. 35 to 1.
If you can't find an audio transformer with a winding ratio in that order
of magnitude which can handle the anode current of the tube, you could
resort to another transformer ,say 110 V in , 3 - 5 V out, or 230 V in , 6-9
V out.
Acceptable sound quality ? ...I don't know ,but it is worth trying .

Note : Finding winding ratio of any unknown traansformer ; apply approx
1V -AC to secondary winding (which should have the lower resistance of the
two windings) ,measure voltage across both windings (preferably with a
digital AC voltmeter) and determine their ratio.
For this test you can use any low voltage AC source ,preferably a
transformer with a variac.
If you have an audio signal generator and an audio voltmeter (most digital
handheld AC voltmeters nowadays are OK for up to a few kHz) you can get
adequate info on your transformer's frequency response by varying the audio
frequency while measuring the output of the other winding.

Frank gm0csz.kn6wh@ntlworld.com

1129. Re: CW

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 10:45:10 UTC
From: "G. Skiffington" <skiffing@nbnet.nb.ca>
Message-ID: <3D3179D6.23D9@nbnet.nb.ca>
Source record: 42741

Hello Keith.....Why not use an old land mobile FM strip for the CW transmitter portion (no audio in = CW out).

Gord VE1AJF

1130. Re: Help! Need help restoring Philco Transitone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 14:31:39 UTC
From: Bill Harris <radioguyx@gbronline.com>
Message-ID: <3D316D77.DAB94A4B@gbronline.com>
Source record: 42743
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Frank Dinger wrote:

>
> Note : Finding winding ratio of any unknown traansformer ; apply approx
> 1V -AC to secondary winding (which should have the lower resistance of the
> two windings) ,measure voltage across both windings (preferably with a
> digital AC voltmeter) and determine their ratio.
> For this test you can use any low voltage AC source ,preferably a
> transformer with a variac.

Here will tell you all about impedance and winding ratio.

http://www.gbronline.com/radioguy/outimp.htm

1131. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 14:56:43 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3D31912B.96FFA908@ix.netcom.com>
Source record: 42745

Reg Edwards wrote:

> There are for more convenient and accurate means of obtaining frequency and
> time standards than GPS.

?????????

>
>
> There are world-wide standard frequ and time standards. All the way from VLF
> to 25 MHz. There is one at 10 MHz.
>
> Most broadcast stations can be very accurate frequency standards.
>
> Any communications radio receiver can be the comparator.
>
> As a radio amateur you should be familiar with the procedure.

It might just possibly be that the extra three orders of magnitude of accuracy
available from gps would be worth it, even to a radio amateur.....

GPSprojects Web Page

http://www.rt66.com/~shera/

is the link to the QST article, on the author's web page.
73
Dan ac6ao

1132. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 14:57:39 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <ags3h6klr1@nntp9.atl.mindspring.net>
Source record: 42744

"Reg Edwards" <g4fgq.regp@btinternet.com> Wrote:

> There are for more convenient and accurate means of obtaining
> frequency and time standards than GPS.
>
> There are world-wide standard frequ and time standards. All the
> way from VLF to 25 MHz. There is one at 10 MHz.

While there are indeed many frequency standards being transmitted, it is my understanding that due to multipath and such the accuracy of a calibration is limited to something like 1e-7 or if things go very well, 1e-8

Using 60 KHz from WWVB reduces multipath and so it tends to provide better accuracy than a signal ad 10 MHz. This is why calibration labs always used 60 KHz as the signal to calibrate to.

For that matter, it is simpler to construct a 60 KHz calibrations system than a GPS synchronized system.

But a good GPS lockup can get 1e-9 or better and so that is a more precise standard.

The circuitry involved is complex and more trouble than a typical amateur operator needs. For most hams, zero beating with a signal off the air is enough. Still, for precision, GPS is hard to beat.

Jim Pennell
N6BIU

1133. Re: SL1612c IF amp datasheet ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 15:21:24 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <ags4tjklb1@venus.btinternet.com>
Source record: 42746

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3d3029c4.9377789@news.freeserve.net...
> I'm looking for an SL1612 IF amp datasheet on the web. anyone know of
> one?. Google fails

I was looking for data on the SL560 and found this:

http://products.zarlink.com/obsolete_products/

The SL612 is there. It's similar to the SL1612.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

1134. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 15:26:56 UTC
From: Paul Breed <pbreed@netburner.com>
Message-ID: <9h53juciece9ub0puq19buuu7rq3p46b0q@4ax.com>
Source record: 42649

A lot of GPS units have some short term jitter in the 1pps signal.
the signal is specified as +/-1usec for a generic unit or 100nsec for
a timing unit.

For a single 1 sec interval 1usec is 1ppm while 100nsec is .1ppm
So the solution is to measure over a much longer period and
displine the osscilator.

The basic process:

Keep a counter counting the osscilator output.
At every pps sample this counter and see if the count is ahead or
behind where it should be.

Then use this error term to adjust a DAC controlling the osscilator
adjustment voltage.

The time period to sample over can be variable.
When you are just starting up the osscilator one can probably make
adjustmets every pps or every 10pps.
After everything is warmed up syncronized and stable then
one would set the adjustment time constant to a much longer interval.

I've seen syncronized Rb sources with this time constant measured in
days.

Paul (Kl7JG)

On Sun, 14 Jul 2002 08:32:57 +0100, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

>Clyde R. Shappee wrote:
>>Hi,
>>
>>If I understand correctly, a GPS receiver has a 1pps output that is
>>precise.
>>
>>What's the best way to use this as a standard to adjust/compare to a
>>10MHz standard?
>>
>It isn't a two-transistor project, but there was an article in QEX or
>QST a few years ago, describing a unit for which boards are available.
>The name that springs to mind is Brooks Shira - try seaching the web,
>because a number of people have built the project and there's bound to
>be discussion about it.

1135. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 15:36:12 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <MTgY8.354016$R61.337418@rwcrnsc52.ops.asp.att.net>
Source record: 42647

Dino is correct, the HP Z3801A unit is a great buy (A 6 channel Motorola Oncore GPS is inside !)

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1365847440

This dealer sells them now for $ 289.00 and had over 1,000 in stock (refurbished surplus from cellular site upgrades)

The K8CU site will fix you right up, how to jumper for RS-232 from RD-422 and a couple of sources for the 48 VDC power supply (e.g. Jameco)

Greg
w9gb

"Dino AL7LZ" <dinoal7lz@aol.com> wrote in message
news:20020713201422.09076.00000663@mb-fp.aol.com...
> OR if you don't want to build a unit you can use a dedicated GPS
> timing/frequency standard by picking up a surplus HP Z3801A unit. See:
>
> www.realhamradio.com
>
> under projects for info. I've got two of them at the workbench and use
the
> 10MHz reference standards to drive the test equipment for super accurate
> measurements. These units also provide the 1PPS output in addition to the
> 10MHz ref...the unit uses the GPS info to "discipline" a highly accurate
> oscillator that resides in a double oven.
>
> Dino KL�S/4

1136. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 15:52:04 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3D319E24.6D46E4B3@ieee.org>
Source record: 42648

Reg Edwards wrote:

> There are for more convenient and accurate means of obtaining frequency and
> time standards than GPS.
>
> There are world-wide standard frequ and time standards. All the way from VLF
> to 25 MHz. There is one at 10 MHz.
>
> Most broadcast stations can be very accurate frequency standards.
>
> Any communications radio receiver can be the comparator.
>
> As a radio amateur you should be familiar with the procedure.

I would like to see some numbers on the accuracy of the signals mentioned.

I intend to only use Loran (while it is available) or WWVB or GPS. all others
have questionable accuracy, according to my info.

Bill K7NOM

1137. Re: Help! Need help restoring Philco Transitone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 21:44:22 UTC
From: Dave Hills <dhills@mindspring.com>
Message-ID: <3D31F075.8ED6B0EF@mindspring.com>
Source record: 42650
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

An AC transformer like this won't work (well) unless you place an air gap (fish paper) between the core "E" and "I" sections. The DC plate current will otherwise saturate the core. This in turn could "roast" your output tube.

Dave

> resort to another transformer ,say 110 V in , 3 - 5 V out, or 230 V in , 6-9
> V out.
> Acceptable sound quality ? ...I don't know ,but it is worth trying .
>
> Note : Finding winding ratio of any unknown traansformer ; apply approx
> 1V -AC to secondary winding (which should have the lower resistance of the
> two windings) ,measure voltage across both windings (preferably with a
> digital AC voltmeter) and determine their ratio.
> For this test you can use any low voltage AC source ,preferably a
> transformer with a variac.
> If you have an audio signal generator and an audio voltmeter (most digital
> handheld AC voltmeters nowadays are OK for up to a few kHz) you can get
> adequate info on your transformer's frequency response by varying the audio
> frequency while measuring the output of the other winding.
>
> Frank gm0csz.kn6wh@ntlworld.com

1138. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-14 23:53:32 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <agt2tr$2ss$1@venus.btinternet.com>
Source record: 42651

How accurate would you like your local 10 MHz standard to be set to ?

What is it ? A BC109 transistor with an XT cut quartz crystal in a plastic project box?

Everybody at this end is suffering from delusions of accuracy. Are you ?

Reg.

1139. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 00:43:21 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <uj46lbpr7gvs48@corp.supernews.com>
Source record: 42652

Hey Reg, my Icom has a 1 Hz readout. That means it must be accurate to
+/- 0.5 Hz :-)

1140. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 01:04:02 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <agtaia$o60$1@nntp9.atl.mindspring.net>
Source record: 42653

"Reg Edwards" <g4fgq.regp@btinternet.com> Wrote:

> How accurate would you like your local 10 MHz standard to be
> set to ?
>
> What is it ? A BC109 transistor with an XT cut quartz crystal
> in a plastic project box?
>
> Everybody at this end is suffering from delusions of accuracy.
> Are you ?
> ---
> Reg.
>

======================

Actually, this IS the main question to consider first... As I mentioned, most hams would find calibrating to WWV more than enough.

Using WWVB or GPS involves somewhat more complex circuitry and may, or may not, be worth the trouble.

On the other hand, considering the name of this newsgroup, it may be fun to build a super accurate frequency standard even if it IS overkill :)

======================

In my case, I am dealing with 10 GHz (and higher) frequencies where a fraction of a PPM error multiplies to a large shift in absolute terms and that plays havoc with synchronizing both ends of a link.

I plan to construct the GPS system by Brooks Shera mentioned in QST a few years ago, check out his website for details:

http://www.rt66.com/~shera/index_fs.htm

Here is his original article from QST:

http://www.rt66.com/~shera/QST_GPS.pdf

=============

Oh yeah, I noticed the TAPR website claimed to be designing a plug in option for their TAPR project to give GPS derived accuracy but that preliminary announcement hasn't changed for quite a long time now. Anyone know if they are still going to offer this ?

Jim Pennell
N6BIU

1141. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 02:56:23 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3D3239D7.A795158@ieee.org>
Source record: 42654

Paul Breed wrote:

> A lot of GPS units have some short term jitter in the 1pps signal.
> the signal is specified as +/-1usec for a generic unit or 100nsec for
> a timing unit.
>
> For a single 1 sec interval 1usec is 1ppm while 100nsec is .1ppm
> So the solution is to measure over a much longer period and
> displine the osscilator.
>
> The basic process:
>
> Keep a counter counting the osscilator output.
> At every pps sample this counter and see if the count is ahead or
> behind where it should be.
>
> Then use this error term to adjust a DAC controlling the osscilator
> adjustment voltage.
>
> The time period to sample over can be variable.
> When you are just starting up the osscilator one can probably make
> adjustmets every pps or every 10pps.
> After everything is warmed up syncronized and stable then
> one would set the adjustment time constant to a much longer interval.
>
> I've seen syncronized Rb sources with this time constant measured in
> days.
>
> Paul (Kl7JG)

Good point on the jitter problem and the need for averaging. Also remember
that your
oscillator has some short term instability so in your averaging you can
reach the point
that you are not sure if the GPS signal is noisy or your oscillator is
noisy. At that point
(or before) you have to reduce the averaging interval.

I am not really a designer but build things anyway.

Bill K7NOM

>
>
> On Sun, 14 Jul 2002 08:32:57 +0100, "Ian White, G3SEK"
> <G3SEK@ifwtech.co.uk> wrote:

>
> >Clyde R. Shappee wrote:
> >>Hi,
> >>
> >>If I understand correctly, a GPS receiver has a 1pps output that is
> >>precise.
> >>
> >>What's the best way to use this as a standard to adjust/compare to a
> >>10MHz standard?
> >>
> >It isn't a two-transistor project, but there was an article in QEX or
> >QST a few years ago, describing a unit for which boards are available.
> >The name that springs to mind is Brooks Shira - try seaching the web,
> >because a number of people have built the project and there's bound to
> >be discussion about it.

1142. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 02:59:32 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3D323A94.43316C18@ieee.org>
Source record: 42655

Reg Edwards wrote:

> How accurate would you like your local 10 MHz standard to be set to ?
>
> What is it ? A BC109 transistor with an XT cut quartz crystal in a plastic
> project box?
>
> Everybody at this end is suffering from delusions of accuracy. Are you ?
> ---
> Reg.

Well I keep mine to an accuracy of one part in 10 E10. I set it better than
that
but I don't expect it to stay there. It drifts about one part in 10 E10 per
month.

Bill K7NOM

1143. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 03:12:41 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D323DA9.59581737@netscape.net>
Source record: 42656

Bill Janssen wrote:

> Well I keep mine to an accuracy of one part in 10 E10. I set it better than
> that
> but I don't expect it to stay there. It drifts about one part in 10 E10 per
> month.
>
> Bill K7NOM

What is the actual application utilizing this accuracy?
Bill WX4A

1144. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 03:44:31 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <zyrY8.537890$cQ3.48944@sccrnsc01>
Source record: 42657

Jim -

This is discussed on the TAC GPS SIG (sign up at the TAPR web site,
www.tapr.org)

BTW, Synergy has a sale on new Oncore VP receivers at $ 51.00 , great price
for one with Brooks' design.

http://www.synergy-gps.com/Excess_Inventory.pdf

Greg
w9gb

"Jim Pennell" <NoSpam@killspam.com> wrote in message
news:agtaia$o60$1@nntp9.atl.mindspring.net...
> "Reg Edwards" <g4fgq.regp@btinternet.com> Wrote:
>
> I plan to construct the GPS system by Brooks Shera mentioned in QST a
few
> years ago, check out his website for details:
>
> http://www.rt66.com/~shera/index_fs.htm
>
> Here is his original article from QST:
>
> http://www.rt66.com/~shera/QST_GPS.pdf
>
> =============
> Oh yeah, I noticed the TAPR website claimed to be designing a plug in
> option for their TAPR project to give GPS derived accuracy but that
> preliminary announcement hasn't changed for quite a long time now.
Anyone
> know if they are still going to offer this ?
>
> Jim Pennell
> N6BIU
>
>
>

1145. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 03:57:35 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <PKrY8.522094$352.88586@sccrnsc02>
Source record: 42658

I think that this chart answers that question for some:

http://home.teleport.com/~rewing/10mhzoscillatorstability.htm

":-) Bill" <therealexray@netscape.net> wrote in message
news:3D323DA9.59581737@netscape.net...
> Bill Janssen wrote:
>
> > Well I keep mine to an accuracy of one part in 10 E10. I set it better
than
> > that
> > but I don't expect it to stay there. It drifts about one part in 10 E10
per
> > month.
> >
> > Bill K7NOM
>
> What is the actual application utilizing this accuracy?
> Bill WX4A

1146. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 04:16:52 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D324CB4.37207E23@netscape.net>
Source record: 42659

w9gb wrote:
>
> I think that this chart answers that question for some:
>
> http://home.teleport.com/~rewing/10mhzoscillatorstability.htm

Maybe I didn't ask the question correctly.
What is the application requiring this stability?
-Bill

1147. More stuff to get rid of:

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 04:48:19 UTC
From: yeti@REMOVEcet.com
Message-ID: <3d3253f3.7538785@news.cet.com>
Source record: 42660
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Everything is "make offer":

* Motorola MOCAT model 4020 CB radio. This is the one with digital display and Extender button (proprietary noise-blanker). This radio is close to mint, works perfectly, with the original box. The mic is a bit sun-tanned.

* Hickok model 121 (cardmatic) mutual transconductance tube tester, includes cards for 322 tubes for many of the most common types. No manual included but one is on the net somewhere. Works fine. Weight approx 50 lbs.

* JVC model 3050, AM/FM/PB, 3" B/W TV, w/AC adapter, only defect is the antenna tip broken off.

* Tubes, all pulls, all tested strong.

6BG6GA, 6BQ6GA/6CU6, (2)6LF6, (3)6146 GE, 6146A Raytheon, 6146B RCA, (2)6AC7, 6H6, 6SN7-GTB, 12SL7-GT, 6V6GT matched pair

I also have hoards of miniatures. Let me know what you are looking for.

* Transformers, all are 120 VAC primary:

52C026 G (from Hallicrafters S-40)
640 VCT @ 100 mA (350 VDC with a 5Y3)
6.3 VAC @ 3 A, 5 VAC @ 2 A

F54-124 549-6426 (from Heathkit GW-22)
100 VAC @ 80 mA, 6.3 VAC @ 3 A

18-412 606136 (from I can't remember what)
545 VCT @ 100 mA, 6.3 VAC @ 2.5 A

1148. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 04:51:21 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <dxsY8.522676$352.89267@sccrnsc02>
Source record: 42661

I believe that Brooks Shera originally designed his for weak signal work at high frequency (~ 1.4 - 1.5 GHz).

Users, that I am aware of, use as reference for 500 MHz - 2.5 Ghz - 10 GHz work

Greg
w9gb

":-) Bill" <therealexray@netscape.net> wrote in message news:3D324CB4.37207E23@netscape.net...
> w9gb wrote:
> >
> > I think that this chart answers that question for some:
> >
> > http://home.teleport.com/~rewing/10mhzoscillatorstability.htm
>
> Maybe I didn't ask the question correctly.
> What is the application requiring this stability?
> -Bill

1149. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 08:05:20 UTC
From: Rex <notreally@hotmail.invalid>
Message-ID: <agtvmb$a3d$1@bob.news.rcn.net>
Source record: 42662

On Sun, 14 Jul 2002 23:12:41 -0400, ":-) Bill"
<therealexray@netscape.net> wrote:

>Bill Janssen wrote:
>
>> Well I keep mine to an accuracy of one part in 10 E10. I set it better than
>> that
>> but I don't expect it to stay there. It drifts about one part in 10 E10 per
>> month.
>>
>> Bill K7NOM
>
>What is the actual application utilizing this accuracy?
>Bill WX4A

I don't know about the original poster's needs, but the standard ham
reason for needing this accuracy is using the 10 MHz to stabilize
the frequency at 10 GHz or higher. This worsens the accuracy by a
factor of 10^3 or more. Typically we are using SSB which is fairly
narrow BW. At these frequencies there is enough uncertainty on
antenna pointing for longer contacts. If you can remove frequency
uncertainty to 10's of hertz or better contacts are much easier.

There are new digital modes which are even narrower in their BW. To
use these at 10 GHz or higher for long distance weak signal work
requires major stability and accuracy at the 10 MHz reference.

I know Bill, K7NOM is one of us, because I have talked with him on
10 GHz.

-Rex, KK6MK
[rexa -TheAtSign- Next4dnai -period- (comEnding)]

1150. SM0VPO Homepages Update

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 08:43:22 UTC
From: Harry SM0VPO <someone@microsoft.com>
Message-ID: <agu2umhig1@newstoo.ericsson.se>
Source record: 42663

Hi to everyone at RRAH,

It's been quite a few months since I last posted anything here, in fact it is about a year ago. Harry's Homebrew Homepages is now located at http://w1.859.telia.com/~u85920178/ where there are no banners to slow down the traffic. There are no outages due to excessive traffic since there is no bandwidth limit. It is just a bloody dificult URL to remember!

During the past year, I have been hounded by demands for payment to "freeservers.com" (or should that be "FEEservers"?) so I have moved the page http://sm0vpo.8m.com to http://w1.859.telia.com/~u85920178. Some of you may be aware that PMP3.NET was hacked and eventually closed down due to the misuse. This took away my free homepages that were kindly hosted by PMP3.NET.

There is a new messageboard too, also without banners. A new FAQ (Frequently Asked Questions) and FASQ (Frequently Asked Silly Questions). All the old ones have been kept, but some new ones have been added, Eg: "How many volts do I need to kill someone?". During the past 12 months, Harry's Homebrew homepages (http://w1.859.telia.com/~u85920178/) has had quite a few additions. Some of the latest project examples include:

EPROM AF Generator (still under construction).
WAV to EPROM conversion.
Many synthesiser projects.
DC-DC voltage converters (including 90v DC for battery portable radios
- still under construction
- JPG "skins" to be posted shortly when i get a round twitt.)
150mW FM TX (88MHz - 108MHz) (technique Ok for 145MHz).
Synthesised FM TX (88MHz - 108MHz) (technique Ok for 145MHz).
Antenna Z bridge for Spectrum Analyser.
Antenna Questions & Answers (Eg: "Size isn't everything!").

H.H.H. now has just three sites, but no mirror sites. they are all located at:

PROJECTS - http://w1.859.telia.com/~u85920178
Unlimited bandwidth, Full site, No advertising, SWE

VISITORS CIRCUITS - http://hem.spray.se/lythall
Selected visitors submitted circuits - SWE

PDF LIBRARY - http://hem.passagen.se/sm0vpo
Unlimited bandwidth, Full site, SWE

So perhaps I may have the pleasure of a visit from you. Whatever you do, have fun with antennas, homebrew, radio and electronics in general. Very

best regards from Harry Lythall - SM0VPO

1151. Re: IEEE 488 to RS 232 or USB

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 15:09:15 UTC
From: john graesser <graesser@tca.net>
Message-ID: <uj5p84qa2bk7b4@corp.supernews.com>
Source record: 42664

"Yrrah" <harke.smits@hccnet.nl> wrote in message
news:agre8p$4jg$1@news.hccnet.nl...
> Hi all,
>
> Seeking a IEEE488 to either RS232 or USB converter. Preferably with
> software, looking for a second owner. Want to automate my frequency
> stability measurements icw a HP 5345A counter.
> 73 de Harke, PA0HRK

The only two devices that have both a 488 and 232 port on them that I can think of were the Commodore Superpet, and the Osborne line of computers. Commodore used 488 as the interface to their disk drives and printers and the Superpet was the only model that also had a serial port built in. Osborne used the parallel port as either 488 or centronics interfaces.

Both of those solutions would involve using a 20+ year old computer as a protocol converter, can't you still find pc boards that offer 488 ports? I recall they used to be available in the back of magazines like Popular Electronics.
thanks, John.
KC5DWD

1152. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 15:22:07 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3D32E89F.B67521B8@ieee.org>
Source record: 42665

":-) Bill" wrote:

> w9gb wrote:
> >
> > I think that this chart answers that question for some:
> >
> > http://home.teleport.com/~rewing/10mhzoscillatorstability.htm
>
> Maybe I didn't ask the question correctly.
> What is the application requiring this stability?
> -Bill

The same application that requires me to use ham radio

Bill K7NOM

1153. Re: IEEE 488 to RS 232 or USB

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 15:25:18 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3D32E95E.DE87A707@ieee.org>
Source record: 42666

john graesser wrote:

> "Yrrah" <harke.smits@hccnet.nl> wrote in message
> news:agre8p$4jg$1@news.hccnet.nl...
> > Hi all,
> >
> > Seeking a IEEE488 to either RS232 or USB converter. Preferably with
> > software, looking for a second owner. Want to automate my frequency
> > stability measurements icw a HP 5345A counter.
> > 73 de Harke, PA0HRK
>
> The only two devices that have both a 488 and 232 port on them that I can
> think of were the Commodore Superpet, and the Osborne line of computers.
> Commodore used 488 as the interface to their disk drives and printers and
> the Superpet was the only model that also had a serial port built in.
> Osborne used the parallel port as either 488 or centronics interfaces.
>
> Both of those solutions would involve using a 20+ year old computer as a
> protocol converter, can't you still find pc boards that offer 488 ports? I
> recall they used to be available in the back of magazines like Popular
> Electronics.
> thanks, John.
> KC5DWD

There are RS232 to 488 converter boxes available from at least two companies
as I recall. Try National Instruments for starters.

Bill K7NOM

1154. Re: IEEE 488 to RS 232 or USB

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 15:58:15 UTC
From: fred bartoli <toto@hotmail.toto>
Message-ID: <3d32f0e0$0$558$626a54ce@news.free.fr>
Source record: 42667

Bill Janssen <billj@ieee.org> a crit dans le message :
3D32E95E.DE87A707@ieee.org...
>
>
> john graesser wrote:
>
> > "Yrrah" <harke.smits@hccnet.nl> wrote in message
> > news:agre8p$4jg$1@news.hccnet.nl...
> > > Hi all,
> > >
> > > Seeking a IEEE488 to either RS232 or USB converter. Preferably with
> > > software, looking for a second owner. Want to automate my frequency
> > > stability measurements icw a HP 5345A counter.
> > > 73 de Harke, PA0HRK
> >
> > The only two devices that have both a 488 and 232 port on them that I
can
> > think of were the Commodore Superpet, and the Osborne line of computers.
> > Commodore used 488 as the interface to their disk drives and printers
and
> > the Superpet was the only model that also had a serial port built in.
> > Osborne used the parallel port as either 488 or centronics interfaces.
> >
> > Both of those solutions would involve using a 20+ year old computer as a
> > protocol converter, can't you still find pc boards that offer 488 ports?
I
> > recall they used to be available in the back of magazines like Popular
> > Electronics.
> > thanks, John.
> > KC5DWD
>
> There are RS232 to 488 converter boxes available from at least two
companies
> as I recall. Try National Instruments for starters.
>

I remember having seen a lot from HP on ebay.

Fred.

> Bill K7NOM
>

1155. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 16:13:22 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D32F55F.1B91@pop.removethistomailme.net>
Source record: 42668

:-) Bill wrote:
>
> w9gb wrote:
> >
> > I think that this chart answers that question for some:
> >
> > http://home.teleport.com/~rewing/10mhzoscillatorstability.htm
>
> Maybe I didn't ask the question correctly.
> What is the application requiring this stability?
> -Bill

Lately, I've been running lots of GPIB automated tests to look for spurs and characterize the behavior of various loop filters at different frequencies in an octave-band microwave synthesizer design. This particular tinkering frenzy has been going on for several months. Because I keep my spectrum analyzer locked to GPS and my clock source calibrated against it, it's easy to do A/B comparisons on hundreds of screenshots taken months apart. In some cases, these readings are taken at 100 Hz/division or less, so it actually is nice to have < 1*10E-8 stability to keep the graphs from drifting off-center.

It's hardly mandatory -- I could get the same benefits by locking the analyzer to my signal generator's internal standard. In any event, a good OCXO from any number of manufacturers would be stable enough for what I'm doing at the moment. But it really doesn't cost that much more to set up your own GPS house standard and settle the whole what-frequency-am-I-on? question once and for all.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1156. Re: [Need] 144Mhz transverter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 18:43:31 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <wyIY8.19757$_n5.618792@newsfep2-win.server.ntli.net>
Source record: 42674

> does anyone know a link where I could find the diagram of a 28 > 144Mhz
> tranverter.
==========
An excellent design from G4DDK , 'The Suffolk 144 MHz transverter' including
PCBs ,with an elaborate description can be found in a book,edited by G3SEK
: "The VHF/UHF DX-book" ; ISBN 0 9520468 0 6 .
Suggest you check : www.ifwtech.com

Frank gm0csz.kn6wh@ntlworld.com

1157. N37 LF tube replacement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 19:30:31 UTC
From: Hans <hansf@introweb.nl>
Message-ID: <bg86juc938tmuo6uq90npi06faq0p578oj@4ax.com>
Source record: 42669

I am looking for a replacement for a N37 LF tube.
Any suggestions?

thanks in advance,

Hans

1158. Re: Help! Need help restoring Philco Transitone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 20:54:32 UTC
From: msenecal1@juno.com
Message-ID: <62bf14a6.0207151254.7d0ea059@posting.google.com>
Source record: 42670
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

I just identified it as a TH-16, built on a TH-4 chassis.

msenecal1@juno.com (Matt Senecal) wrote in message
news:<62bf14a6.0207131041.5d513233@posting.google.com>...
> I just recently came into a nice old Philco Transitone. I don't have
> pictures of it yet, but it's small, a dark brown bakelite, with a
> speaker on the left, and a squareish white and gold tuning display on
> the right. There are two knobs right under the display. The whole
> thing looks to be from the late 30's, and looks like something that
> would be on a detective's desk in a noir film.
>
> The problem is that the speaker was completely shot. In order to take
> it out, I had to remove the speaker transfomer, which was riveted to
> the speaker. I accidentally clipped one of the leads too short, and I
> don't think I can re-use the transformer(but may try). I have a
> speaker that will fit, but I can't find a match for the transformer.
> It takes 4 leads, and is labeled 5575. I have no idea how to match it.
> Anyone have any suggestions or ideas?
>
> Thanks,
>
> Matt

1159. Re: Help! Need help restoring Philco Transitone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 21:22:21 UTC
From: Bill Jeffrey <wjeffrey@alumNOSPAM.mit.edu>
Message-ID: <3D333CE8.42843A6C@alum.mit.edu>
Source record: 42671
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Matt Senecal wrote:
>
> I just identified it as a TH-16, built on a TH-4 chassis.
>
> msenecal1@juno.com (Matt Senecal) wrote in message
news:<62bf14a6.0207131041.5d513233@posting.google.com>...
> > I just recently came into a nice old Philco Transitone. I don't have
> > pictures of it yet, but it's small, a dark brown bakelite, with a
> > speaker on the left, and a squareish white and gold tuning display on
> > the right. There are two knobs right under the display. The whole
> > thing looks to be from the late 30's, and looks like something that
> > would be on a detective's desk in a noir film.
> >
> > The problem is that the speaker was completely shot. In order to take
> > it out, I had to remove the speaker transfomer, which was riveted to
> > the speaker. I accidentally clipped one of the leads too short, and I
> > don't think I can re-use the transformer(but may try). I have a
> > speaker that will fit, but I can't find a match for the transformer.
> > It takes 4 leads, and is labeled 5575. I have no idea how to match it.
> > Anyone have any suggestions or ideas?
> >
> > Thanks,
> >
> > Matt

The Philco TH-4 appears in Riders vol 11 Philco page 4 and 6.
The Philco TH-16 appears in Riders vol 12 Philco page 1.
You should be able to find both at http://www.nostalgiaair.org. Click on
the Riders Online link, scroll down to Philco, then down to your model
number.

Best regards

Bill Jeffrey
Remove NOSPAM from my address before e-mailing a reply.

1160. AM Broadcast RX Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 21:30:10 UTC
From: JASON A DUGAS <kb5urq@prodigy.net>
Message-ID: <C9HY8.925$c55.238834885@newssvr16.news.prodigy.com>
Source record: 42672

Hello, all...

I'm interested in home brewing an AM RX antenna for my stereo. It has a two-conductor input for an "AM Loop Antenna". If I build something do I have to worry about impeadance matching (i.e. balun, etc.)? Anyone know of some good design ideas? I'd like to be able to try some DX RX-- perhaps with a directional antenna.

Interested in hearing any ideas you might have..

Jason
KB5URQ

1161. gator bah

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 21:44:33 UTC
From: Webmaster <hostmaster@GATOR.COM>
Message-ID: <3D334244.A134B725@GATOR.COM>
Source record: 42673

Fucking spy-ware shit, fucking pricks cant stop installing their
crap in every damn program.
CUNTS are what they are

hostmaster@GATOR.COM

1162. Re: AM Broadcast RX Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-15 23:18:52 UTC
From: yeti@REMOVEcet.com
Message-ID: <3d3351c2.7172930@news.cet.com>
Source record: 42675

In <C9HY8.925$c55.238834885@newssvr16.news.prodigy.com>, "JASON A DUGAS" <kb5urq@prodigy.net> wrote:

>Hello, all...
>
>I'm interested in home brewing an AM RX antenna for my stereo. It has a
>two-conductor input for an "AM Loop Antenna". If I build something do I
>have to worry about impeadance matching (i.e. balun, etc.)? Anyone know of
>some good design ideas? I'd like to be able to try some DX RX-- perhaps
>with a directional antenna.
>
>Interested in hearing any ideas you might have..
>
>Jason
>KB5URQ

Different commercial stereos have different loop connections. Some of them are truly balanced inputs, but many of them are grounded on one side with the other side connected to the single-lead antenna input. Almost all of them are NOT tuned inputs, and the tuning is either digital or with an internal loopstick.

That being said, try building a large antenna loop of about 250 to 300 uH and run the leads into the house via 300 ohm twinlead (nothing important about the impedance, but the line has low capacitance). Hook up a 365 to 400 pF varicap across the twinlead to make a tank, and then down to the loop input. You can tune it inside, but you need to go outside to rotate the loop. That works pretty well.

You could also try the longwire approach: Use the same varicap with a loopstick (again, 250 to 300 uH), but wire them in series. Put one end in the air to your longwire antenna and the other end to a GOOD ground . Then wind a few turns of wire around the loopstick and into your loop inputs. How well this works depends on your antenna and your ground. I have used lots of things for antennas, such as a chain-link fence (ok), a barbed-wire fence (better), and even a large steel garage (not too bad at all). The ground should be water pipes at the very least; water pipes with a couple ground rods would be better.

And ALWAYS remember to use some form of lightning protection!!!

1163. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-16 00:24:53 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <1n62jugjn4gp39r2el3ti9u00j4n542t7i@4ax.com>
Source record: 42676

On Sat, 13 Jul 2002 23:43:22 -0400 "Clyde R. Shappee"
<clydes@world.std.com> wrote:

>Ok,
>
>So now I have to say what I am really trying to accomplish...
>
>I picked up an HP-105 Quartz oscillator recently. The fine adjust had been
>monkeyed with. Understand, this unit, when I set the fine adjust to nominal is
>to the best of my ability to measure, better than anything in house.
>
>I figure sometime I might borrow a GPS receiver and see how it is really doing.
>It is better than 1 part in 300 M to be sure.

Use the 1pps signal to gate a counter on and off while it counts
pulses from your oscillator. In one second it should count to
10,000,000 +/- 1 count. If you can divide the 1pps signal by 10 or 100
then you should be able to improve your accuracy by the same factor,
but you will have to start worrying about jitter in the divide by
circuit.

-

Jim Adney jadney@vwtype3.org
Madison, Wisconsin USA

1164. Re: AM Broadcast RX Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-16 00:48:15 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D336D4F.DB971B70@netscape.net>
Source record: 42677

"yeti@REMOVEcet.com" wrote:
>
> In <C9HY8.925$c55.238834885@newssvr16.news.prodigy.com>, "JASON A
> DUGAS" <kb5urq@prodigy.net> wrote:
>
> >Hello, all...
> >
> >I'm interested in home brewing an AM RX antenna for my stereo. It has a
> >two-conductor input for an "AM Loop Antenna". If I build something do I
> >have to worry about impeadance matching (i.e. balun, etc.)? Anyone know of
> >some good design ideas? I'd like to be able to try some DX RX-- perhaps
> >with a directional antenna.
> >
> >Interested in hearing any ideas you might have..
> >
> >Jason
> >KB5URQ

You didn't mention what brand of stereo and that may make a difference
as sometimes there was an external loop specific to the set. I had an
AIWA that used an external loop and thats how the rear panel was
marked...a little square thing with about 10 turns of wire on it that
you could mount wherever it was convenient and orient for best
reception. I don't recall that there was any internal loopstick
antenna. Its still around here somewhere if additional details would be
helpful.

-Bill

1165. Re: AM Broadcast RX Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-16 02:23:53 UTC
From: yeti@REMOVEcet.com
Message-ID: <3d338034.9834486@news.cet.com>
Source record: 42678

In <3D336D4F.DB971B70@netscape.net>, ":-) Bill"
<therealexray@netscape.net> wrote:

>"yeti@REMOVEcet.com" wrote:
>>
>> In <C9HY8.925$c55.238834885@newssvr16.news.prodigy.com>, "JASON A
>> DUGAS" <kb5urq@prodigy.net> wrote:
>>
>> >Hello, all...
>> >
>> >I'm interested in home brewing an AM RX antenna for my stereo. It has a
>> >two-conductor input for an "AM Loop Antenna". If I build something do I
>> >have to worry about impeadance matching (i.e. balun, etc.)? Anyone know of
>> >some good design ideas? I'd like to be able to try some DX RX-- perhaps
>> >with a directional antenna.
>> >
>> >Interested in hearing any ideas you might have..
>> >
>> >Jason
>> >KB5URQ
>
>You didn't mention what brand of stereo and that may make a difference
>as sometimes there was an external loop specific to the set. I had an
>AIWA that used an external loop and thats how the rear panel was
>marked...a little square thing with about 10 turns of wire on it that
>you could mount wherever it was convenient and orient for best
>reception. I don't recall that there was any internal loopstick
>antenna. Its still around here somewhere if additional details would be
>helpful.
>
>-Bill

The loop connections on modern receivers are connected to a few turns
on the loopstick (or the single-ended input of a ditigal tuner). I
haven't seen tuned external loops used on any commercial AM radio
since the old tube-type superhets. You can hook up just about any kind
of loop imaginable to one of these modern stereos and it will work to
some extent, and if it's tuned it will work a lot better than the
wideband loop that comes with the receiver.

1166. WTBT AC PANEL METERS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-16 03:31:49 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3D3393A5.5070406@charter.net>
Source record: 42679
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

Hello everyone i am in need of some AC panel meters i need 6 of them
0-250 or 0-350 vac.
I have all kinds of things to trade on. What do you have laying around
in your junkboxes?
chris NI4L

--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

1167. RF Output Power from Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-16 05:54:00 UTC
From: Al <none@none.com>
Message-ID: <ah0cdmnnr1@geraldo.cc.utexas.edu>
Source record: 42680

I've been looking at a couple of these miniature FM transmitter schematics on the web and I have been wondering if I could calculate the exact output power of them, then hopefully alter one for my needs. Would this be possible knowing little about the antenna? The antenna will probably end up being a quarter wavelength wire if that's any help. I mean, if there was some resistive load there, the output power would be obvious, but what about when there's just a wire that says 'Antenna'? Thanks.

Al

1168. Re: [Need] 144Mhz transverter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-16 06:46:23 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <vGmReaC$E8M9EAY8@ifwtech.co.uk>
Source record: 42681

Frank Dinger wrote:
>> does anyone know a link where I could find the diagram of a 28 > 144Mhz
>> tranverter.
>==========
>An excellent design from G4DDK , 'The Suffolk 144 MHz transverter' including
>PCBs ,with an elaborate description can be found in a book,edited by G3SEK
>: "The VHF/UHF DX-book" ; ISBN 0 9520468 0 6 .
>Suggest you check : www.ifwtech.com

The 'Suffolk' is a very good design, but it's only published in the
book, not on the web.

Web site - which has changed, see below - only contains the revised PCB
layouts and various minor updates to the book.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.co.uk/g3sek

1169. Re: Experience with charging Ni-MH batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-16 13:59:57 UTC
From: derek_toeppen@agilent.com
Message-ID: <2219e080.0207160559.3ed2c1f4@posting.google.com>
Source record: 42682

"Markus L" <uo9oew@tzk.pu> wrote in message
news:<m0mV8.126$Y72.339912@rdr1.wex.teleglobe.net>...

Recal the first battery pack vented when fast charged using a
negative delta voltage charge termination. A friend suggested
trickle charging and discharging several times (conditioning)
before fast charging. This worked on the first battery pack.
I then received a second pack. This time I trickle charged
and discharge before trying a fast charge. These are the
results.

I trickled charged 4 times at 0.05ma for 24 hours. Each time
I discharged to 6 volts (1 volt/cell) at 200ma, recording the
capacity delivered by the battery. Capacity numbers were
897ma-hr
939ma-hr
945ma-hr
943ma-hr
So the battery capacity improved with cycles and leveled about
945ma-hr.
I then increased the time by 2 hours to make sure I was reaching
the maximum capacity. Capacity numbers were
946ma-hr
948ma-hr
It appears that is the best the batteries will do.
I now fast charged with negative delta voltage termination at
550ma (1.72C), twice. Both charges went perfect. Maximum
battery temperature was 47C each time. Panasonic says this size
battery (A) should not be allowed to exceed 55C. Capacity numbers
were
905ma-hr
904ma-hr
This points out something Linear Technologies sayed in their
application note on charging Ni-MH. That is that when a charge
is termiated with negative delta voltage the battery is only
at 90 to 95%. Unlike Ni-Cd which will termiate at 100%. Linear
recommends toping off the charge with a trickle charge.
So I did a third 1.72C charged followed by 2 hours at 0.05ma
to top it off. Capacity number was
959ma-hr
I also fast recharged a fully charged battery to verify a voltage
peak would be detected and the battery would not be over stressed.
It detected a peak in 20 minutes. Although I did not record the
temperature, it felt no warmer than before. I plan to do this
again and quantify the temperature.

Derek Toeppen, WA0ZTI

> "Derek Toeppen" <derek_toeppen@agilent.com> wrote in message
> news:2219e080.0206281506.39496894@posting.google.com...
> > I am looking for experiences people have had with rapid
> > charging (C/2 to C) Ni-MH batteries using the negative
> > delta voltage charge termination technique.
>
> Read Appendix A of
> http://www.linear.com/pub/document.html?pub_type=app&document=65
> which is an excellent introduction into the different charge termination
> methods.
>
> Have built a charger based on ICS1702 made by http://www.galaxypower.com/
> Get the datasheet http://www.galaxypower.com/organization/ics1702.PDF and
> read about their charge termination. Never ever had a problem with this
> charger (batteries getting hot etc.). Am operating at C/2.
>
> 73, Markus HB9BRJ
>
> e-mail address rot13 encoded. Decode before replying.

1170. Re: RF Output Power from Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-16 16:49:57 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <V8YY8.176064$lm2.8618193@bin2.nnrp.aus1.giganews.com>
Source record: 42683

To calculate the output power you need to know the load impedance. If the impedance is mostly reactive, there won't be much antenna current. To maximize antenna current you will need to resonate the reactance.

Even if you do that, you still are faced with the probable mismatch of the remaining resistive component, as compared to the design of the amplifier.

The best way to get maximum out is to use an antenna of the correct impedance. The second best way is to use an impedance matcher to convert the actual antenna impedance into the best one for the amplifier. In both cases you will be able to figure out the power, but unless you know the impedance there is no way to make any calculations.

1171. Re: Experience with charging Ni-MH batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-16 19:44:50 UTC
From: derek_toeppen@agilent.com
Message-ID: <2219e080.0207161144.34c88e33@posting.google.com>
Source record: 42684

derek_toeppen@agilent.com (Derek Toeppen) wrote in message
news:<2219e080.0207160559.3ed2c1f4@posting.google.com>...
> "Markus L" <uo9oew@tzk.pu> wrote in message
news:<m0mV8.126$Y72.339912@rdr1.wex.teleglobe.net>...

Two corrections.

The trickle charge was 0.05a or 50ma. Not 0.05ma.
The fast charge was done at a rate of C/1.72. Not 1.72C.

>
> Recal the first battery pack vented when fast charged using a
> negative delta voltage charge termination. A friend suggested
> trickle charging and discharging several times (conditioning)
> before fast charging. This worked on the first battery pack.
> I then received a second pack. This time I trickle charged
> and discharge before trying a fast charge. These are the
> results.
>
> I trickled charged 4 times at 0.05ma for 24 hours. Each time
> I discharged to 6 volts (1 volt/cell) at 200ma, recording the
> capacity delivered by the battery. Capacity numbers were
> 897ma-hr
> 939ma-hr
> 945ma-hr
> 943ma-hr
> So the battery capacity improved with cycles and leveled about
> 945ma-hr.
> I then increased the time by 2 hours to make sure I was reaching
> the maximum capacity. Capacity numbers were
> 946ma-hr
> 948ma-hr
> It appears that is the best the batteries will do.
> I now fast charged with negative delta voltage termination at
> 550ma (1.72C), twice. Both charges went perfect. Maximum
> battery temperature was 47C each time. Panasonic says this size
> battery (A) should not be allowed to exceed 55C. Capacity numbers
> were
> 905ma-hr
> 904ma-hr
> This points out something Linear Technologies sayed in their
> application note on charging Ni-MH. That is that when a charge
> is termiated with negative delta voltage the battery is only
> at 90 to 95%. Unlike Ni-Cd which will termiate at 100%. Linear
> recommends toping off the charge with a trickle charge.

> So I did a third 1.72C charged followed by 2 hours at 0.05ma
> to top it off. Capacity number was
> 959ma-hr
> I also fast recharged a fully charged battery to verify a voltage
> peak would be detected and the battery would not be over stressed.
> It detected a peak in 20 minutes. Although I did not record the
> temperature, it felt no warmer than before. I plan to do this
> again and quantify the temperature.
>
> Derek Toeppen, WA0ZTI
>
> > "Derek Toeppen" <derek_toeppen@agilent.com> wrote in message
> > news:2219e080.0206281506.39496894@posting.google.com...
> > > I am looking for experiences people have had with rapid
> > > charging (C/2 to C) Ni-MH batteries using the negative
> > > delta voltage charge termination technique.
> >
> > Read Appendix A of
> > http://www.linear.com/pub/document.html?pub_type=app&document=65
> > which is an excellent introduction into the different charge termination
> > methods.
> >
> > Have built a charger based on ICS1702 made by http://www.galaxypower.com/
> > Get the datasheet http://www.galaxypower.com/organization/ics1702.PDF and
> > read about their charge termination. Never ever had a problem with this
> > charger (batteries getting hot etc.). Am operating at C/2.
> >
> > 73, Markus HB9BRJ
> >
> > e-mail address rot13 encoded. Decode before replying.

1172. garden sheds

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-16 19:48:23 UTC
From: lizscarff@hotmail.com
Message-ID: <da5fdeb5.0207161148.6d6a716e@posting.google.com>
Source record: 42685

I am British writer working on a feature about men and their sheds for M Magazine. Perhaps your shed is a second home, you use it for inventions or perhaps you have a comfy armchair, TV and a couple of beers. If you live in the UK and are interested in having your shed profiled in the magazine or would like more information please e-mail me on lizscarff@hotmail.com
Kind Regards
Liz

1173. Sequencer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-16 20:38:03 UTC
From: Robert Offer <robert@g1zjp.freeserve.co.uk>
Message-ID: <ah207t$4om$1@news7.svr.pol.co.uk>
Source record: 42686

Hi all,
I have a sequencer which has developed a fault. It looks like a kit which has been built by a former owner.
The PCB carries the etched characters CA printed on it and has positions 1-4 also etched onto the board -switched inputs/outputs. I suspect that the problem is probably in one of the two ICs which the unit uses. There is the heart of the problem, I have contacted RS technical and searched the net and can't find any info. Any suggestions, please? The references are:
RCA - CA339E
and
40308DC this chip also carries the number 8112
All sensible ideas very welcome
Thanks in advance
Bob
G1ZJP

1174. ISO: "Squashed Bug" construction technique info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-16 20:49:38 UTC
From: "Joseph A. DiVerdi" <diverdi@xtrsystems.com>
Message-ID: <diverdi-B31A57.14493816072002@europa.frii.com>
Source record: 42687

I'm searching for background info (citations, URLs, etc) on an electronic construction technique
known as "squashed bug". I believe that I did see a reference to this technique in an old ARRL
Handbook but can't be certain.

For those unfamiliar with this technique, it gets is name from the flattening out operation performed on ICs which are then attached (glued and/or selectively soldered) to a PC board (bare or
copper-clad). Often the flattening out is more accurately described as splayed out and it looks like
a cartoon drawing of a squashed insect.

Any reference info including pictures and/or descriptions would be greatly appreciated.

Best regards,
Joseph

--
Joseph A. DiVerdi, Ph.D., M.B.A. 970.221.3982 (voice)
http://xtrsystems.com 970.224.3723 (fax)
PGP Key ID: 0xD50A9E33

1175. Re: Sequencer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-16 21:26:51 UTC
From: Lars Bjoern Schaumburg-Muller OZ1CJX <lbsm@nospam.dk>
Message-ID: <3D348F9B.D50EA8BA@nospam.dk>
Source record: 42688

Robert Offer wrote:
>
> Hi all,
> I have a sequencer which has developed a fault. It looks like a kit which
> has been built by a former owner.
> The PCB carries the etched characters CA printed on it and has positions 1-4
> also etched onto the board -switched inputs/outputs. I suspect that the
> problem is probably in one of the two ICs which the unit uses. There is the
> heart of the problem, I have contacted RS technical and searched the net and
> can't find any info. Any suggestions, please? The references are:
> RCA - CA339E
> and
> 40308DC this chip also carries the number 8112
> All sensible ideas very welcome
> Thanks in advance
> Bob
> G1ZJP

Hi Bob
The sequencer is almost certainly the one published in several ARRL
handbooks, for instance on page 31-9 in the 1992 edition. It is designed
by Chip Angle, N6CA.
This should ease your search, but I can easily copy/scan the pages for
you if you need it.

Vy 73 de Lars / OZ1CJX

1176. Re: RF Output Power from Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-16 22:42:37 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207161442.1ff2f02c@posting.google.com>
Source record: 42689

It depends on how much else you know, I suppose... For example if the
miniature FM trnasmitter uses an MC13175 chip, the data sheet will
tell you that you can get up to 10 milliwatts out of it. If the
circuit has a tank in the output, you might try assuming a load that
would result in loaded-Q of 10 or so and estimate the power from that,
assuming the RF swings 2 times the DC applied, peak to peak. But as
they say, "YMMV" ... considerably in this case. Why not just build it
and measure it? Sometimes you can do that faster than you can
unscramble all the confusion in an incompletely documented design.

Cheers,
Tom

"Al" <none@none.com> wrote in message news:<ah0cdmnnr1@geraldo.cc.utexas.edu>...
> I've been looking at a couple of these miniature FM transmitter schematics
> on the web and I have been wondering if I could calculate the exact output
> power of them, then hopefully alter one for my needs. Would this be
> possible knowing little about the antenna? The antenna will probably end up
> being a quarter wavelength wire if that's any help. I mean, if there was
> some resistive load there, the output power would be obvious, but what about
> when there's just a wire that says 'Antenna'? Thanks.
>
> Al

1177. Re: garden sheds

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-16 22:48:44 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnaj98mb.1u0.QSB@animas.frontier.net>
Source record: 42690

On 16 Jul 2002 12:48:23 -0700, Gumbochutney scribbled:
> I am British writer working on a feature about men and their sheds for
> M Magazine. Perhaps your shed is a second home, you use it for
> inventions or perhaps you have a comfy armchair, TV and a couple of
> beers. If you live in the UK and are interested in having your shed
> profiled in the magazine or would like more information please e-mail
> me on lizscarff@hotmail.com
> Kind Regards
> Liz

LOL!! We've all seen the OT beer brewing postings here,
but this is a _new one_ .

Someone doing a Google Groups search on "shed" and/or "shack",
I guess.

Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

1178. Re: garden sheds

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-16 23:30:54 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ah2abd$k40$1@knossos.btinternet.com>
Source record: 42691

The first thing to do is explain what M-magazine is or the rest of the world is all floundering about in the dark as is usual in these careless, ill-written-to newsgroups.

1179. Re: RF Output Power from Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 00:36:57 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ah2e79jtf1@venus.btinternet.com>
Source record: 42692

RF output power is the peak volts (minus 1 or 2) squared, across the transistor collectors allowed by the DC power supply, divided by twice the load resistance presented to the points between which the peak volts occur.

Watts = Vpeak-squared / 2 / RloadOhms.

Where, it should be repeated, Vpeak is set by the DC power supply voltage.

And if you are unable to understand this simple relationship then you have no rights to be designing the circuitry.

On the other hand, practically anything will work after a fashion. There are many so-called professional designers who manage to make a living out of "anything will work after a fashion.". But they are no more than confidence tricksters obtaing money under false pretences..

It's a cruel world isn't it ?

1180. Re: ISO: "Squashed Bug" construction technique info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 00:58:36 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D34C1FD.E0E@pop.removethistomailme.net>
Source record: 42693

Joseph A. DiVerdi wrote:
>
> I'm searching for background info (citations, URLs, etc) on an electronic construction technique
> known as "squashed bug". I believe that I did see a reference to this technique in an old ARRL
> Handbook but can't be certain.
>
> For those unfamiliar with this technique, it gets is name from the flattening out operation
> performed on ICs which are then attached (glued and/or selectively soldered) to a PC board (bare or
> copper-clad). Often the flattening out is more accurately described as splayed out and it looks like
> a cartoon drawing of a squashed insect.
>
> Any reference info including pictures and/or descriptions would be greatly appreciated.
>

A superbe synthesis of the "ugly" and "squashed" (or "dead") bug schools
appears at http://www.qsl.net/ke5fx/tr503/110syn2.jpg. :) The DIP
packages have had their through-hole leads cut off and their tabs
flattened out, except the ones that go to the ground plane.

If you search on "dead bug construction" you'll probably find a lot more
examples. I don't think I've ever heard it called "squashed" before.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1181. Re: ISO: "Squashed Bug" construction technique info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 00:58:46 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D34C207.2C3A@pop.removethistomailme.net>
Source record: 42694

Joseph A. DiVerdi wrote:
>
> I'm searching for background info (citations, URLs, etc) on an electronic construction technique
> known as "squashed bug". I believe that I did see a reference to this technique in an old ARRL
> Handbook but can't be certain.
>
> For those unfamiliar with this technique, it gets is name from the flattening out operation
> performed on ICs which are then attached (glued and/or selectively soldered) to a PC board (bare or
> copper-clad). Often the flattening out is more accurately described as splayed out and it looks like
> a cartoon drawing of a squashed insect.
>
> Any reference info including pictures and/or descriptions would be greatly appreciated.
>

A superb synthesis of the "ugly" and "squashed" (or "dead") bug schools
appears at http://www.qsl.net/ke5fx/tr503/110syn2.jpg. :) The DIP
packages have had their through-hole leads cut off and their tabs
flattened out, except the ones that go to the ground plane.

If you search on "dead bug construction" you'll probably find a lot more
examples. I don't think I've ever heard it called "squashed" before.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1182. Re: RF Output Power from Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 01:34:35 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0207161734.7a64d1c9@posting.google.com>
Source record: 42695

"Al" <none@none.com> wrote in message news:<ah0cdmnnr1@geraldo.cc.utexas.edu>...
> I've been looking at a couple of these miniature FM transmitter schematics
> on the web and I have been wondering if I could calculate the exact output
> power of them, then hopefully alter one for my needs. Would this be
> possible knowing little about the antenna? The antenna will probably end up
> being a quarter wavelength wire if that's any help. I mean, if there was
> some resistive load there, the output power would be obvious, but what about
> when there's just a wire that says 'Antenna'? Thanks.
>
> Al

A horribly ballpark figure is to look at the specifications of the
output device - that at least will give you its theoretical maximum
DC input. From there, assuming its Class C work out the max. possible
output power. But as a previous posting said, unless you know the
antenna impedance etc. anything more than that is pure speculation.

1183. Re: RF Output Power from Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 01:56:37 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uj9jngkssmol00@corp.supernews.com>
Source record: 42696

"Andrew VK3BFA" <ablight@alphalink.com.au> wrote in message

> A horribly ballpark figure is to look at the specifications of the
> output device - that at least will give you its theoretical maximum
> DC input. From there, assuming its Class C work out the max. possible
> output power. But as a previous posting said, unless you know the
> antenna impedance etc. anything more than that is pure speculation.

Well, for an RF amp, 50 ohms is a pretty good guess most of the time, the
tricky bit is reflecting that back through the output network to figure out
what impedance the transistor is seeing.

..

1184. Re: Sequencer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 02:55:14 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <m05Z8.544857$352.93769@sccrnsc02>
Source record: 42547

Why don't you send Chip an e-mail message?
n6ca@ham-radio.com

Here is Chip's Home Page
http://www.ham-radio.com/n6ca/

Here is the Angle Linear Home Page
http://www.anglelinear.com/

TR Time Delay Generator
http://www.arrl.org/notes/hbk-templates/n6ca-tr.pdf

w9gb

"Robert Offer" <robert@g1zjp.freeserve.co.uk> wrote in message
news:ah207t$4om$1@news7.svr.pol.co.uk...
> Hi all,
> I have a sequencer which has developed a fault. It looks like a kit which
> has been built by a former owner.
> The PCB carries the etched characters CA printed on it and has positions
1-4
> also etched onto the board -switched inputs/outputs. I suspect that the
> problem is probably in one of the two ICs which the unit uses. There is
the
> heart of the problem, I have contacted RS technical and searched the net
and
> can't find any info. Any suggestions, please? The references are:
> RCA - CA339E
> and
> 40308DC this chip also carries the number 8112
> All sensible ideas very welcome
> Thanks in advance
> Bob
> G1ZJP
>
>

1185. looking for IC-T7H info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 03:36:06 UTC
From: N5BPF <dmccoy@lightwire.com>
Message-ID: <uj9pigiu2re49a@corp.supernews.com>
Source record: 42548
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Does anyone know or know where to find the protocol used by the IC T7H to communicate with it's remote control mike.

I was looking for a microcontroller project for my classes and thought building a remote control for this might be fun.

I asked ICOM and the denied any knowlege, Interesting comment.

Dwayne McCoy

N5BPF

1186. Re: ISO: "Squashed Bug" construction technique info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 04:50:08 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1707020050360001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42550

In article <3D34C207.2C3A@pop.removethistomailme.net>,
jmiles@pop.removethistomailme.net wrote:

> Joseph A. DiVerdi wrote:
> >
> > I'm searching for background info (citations, URLs, etc) on an
electronic construction technique
> > known as "squashed bug". I believe that I did see a reference to this
technique in an old ARRL
> > Handbook but can't be certain.
> >
> > For those unfamiliar with this technique, it gets is name from the
flattening out operation
> > performed on ICs which are then attached (glued and/or selectively
soldered) to a PC board (bare or
> > copper-clad). Often the flattening out is more accurately described as
splayed out and it looks like
> > a cartoon drawing of a squashed insect.
> >
> > Any reference info including pictures and/or descriptions would be
greatly appreciated.
> >
>
> A superb synthesis of the "ugly" and "squashed" (or "dead") bug schools
> appears at http://www.qsl.net/ke5fx/tr503/110syn2.jpg. :) The DIP
> packages have had their through-hole leads cut off and their tabs
> flattened out, except the ones that go to the ground plane.
>
> If you search on "dead bug construction" you'll probably find a lot more
> examples. I don't think I've ever heard it called "squashed" before.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

I prefer the dead bug method where you tack an ic down with rtv or
something similar and then leave the legs up where you can wire wrap to
them or fly leaded parts to the legs and tack solder.

If you want high frequency and good mechanical performance, then make a
two sided pcb (FR4 1.57mm thick) with solid copper on one side and small
pads at 2.54 mm spacing on the other side. If you place a few 2.54mm wide

buses on this side, you can also use these for B+, B- or 50 ohm microstrip lines. This last technique I used to use all the way to 900 MHz with no problem, but I also used some homemade via's strategically placed along with good grounding from the copper side to the buss/pad side. At Motorola in Plantation, FL we called this Z board and had it kept in the engineering stockroom. This works great for digital work also even at the 100 MHz or higher clock speeds. I would finally suggest that one of the busses be a continuous 2.54 mm wide buss all the way around the outer edge of the pad/buss side. This makes it easy to get a good ground from the solid side to the top side through copper foil or other conductive means (straps, wires, etc). I would normally draw a picture, but I don't have any drawing tools any more. Happy trails.

Steve Carlton WB4CZR
Plantation, FL

1187. DC power connector spec. for IC-706?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 04:53:20 UTC
From: "Paul N. Cowley" <pcowley@REMOVExmission.com>
Message-ID: <3D34F840.B1D5326A@REMOVExmission.com>
Source record: 42549

Can anyone help with information on equivalent connectors for the IC-706's DC power? I've browsed through Mouser and Newark, but am struggling with the pin configuration, size, etc...

I'm trying to install my rig in my car, but would like to leave the cord that came with the radio on my desktop Astron power supply.... and can't bring myself to pay the $30+ list price!

Thanks in advance!

KB7VML

1188. Where Can I Find Power Connector For Kenwood Mobile???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 05:14:53 UTC
From: xtx99@aol.com
Message-ID: <20020717011453.26138.00000135@mb-mj.aol.com>
Source record: 42551

Any help on where I can find this connector is appreciated (it's the power cord that connects to the other half of the power cord that is attached to the Kenwood dual band TM-G707A mobile 2 m/ 70 cm radio). I would prefer to just purchase quick disconnect female terminals, crimp them onto 10 gauge wire and insert them into this connector (instead of splicing them onto a power cord with the wire and quick disconnect female terminals already attached). I have placed 2 pictures of the connector on my webpage (http://members.aol.com/xtx99/index.html)and would appreciate and suggestions. Radio Shack didn't have it. I'm saving the original power cord for base operation and temporarily carefully inserting disconnects into the connector for mobile operation (thank God for fuses!!) Thanks

1189. Re: RF Output Power from Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 07:45:35 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D35209F.10105@eznec.com>
Source record: 42552

This makes assumptions about the waveform. I've made class C amplifiers which put out about 7 or 8 watts that have a peak voltage of around 35 volts when using a 12 volt DC supply. I doubt that the load presented to the transistor is purely resistive. Efficiency of these is typically around 85%.

But I'm afraid I'm one of those who have no rights to design such circuitry, since I don't know where the "simple relationship" comes from and what assumptions must be made for it to hold. Do you?

Roy Lewallen, W7EL

Reg Edwards wrote:
> RF output power is the peak volts (minus 1 or 2) squared, across the
> transistor collectors allowed by the DC power supply, divided by twice the
> load resistance presented to the points between which the peak volts occur.
>
> Watts = Vpeak-squared / 2 / RloadOhms.
>
> Where, it should be repeated, Vpeak is set by the DC power supply voltage.
>
> And if you are unable to understand this simple relationship then you have
> no rights to be designing the circuitry.
>
> On the other hand, practically anything will work after a fashion. There are
> many so-called professional designers who manage to make a living out of
> "anything will work after a fashion.". But they are no more than confidence
> tricksters obtaing money under false pretences..
>
> It's a cruel world isn't it ?
>
>

1190. Re: Experience with charging Ni-MH batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 09:11:46 UTC
From: Markus L <uo9oew@lnubb.pbz>
Message-ID: <3d3534b4$0$231$4d4ebb8e@read-nat.news.nl.uu.net>
Source record: 42553

Hi Derek

Your methods and results make sense. The ICS1702 chip used in my homebrew charger (and possibly others as well) does an automatic 2-hour top-off after the fast charge. In addition to that, I have built a PIC-based front-end running automatic sequences of fast chg - top-off chg - discharge until the discharge time does not increase any more. In my experience this does a very good job for conditioning cells which idled around unused for several years. Normally it takes between 3 and 6 cycles for the capacity to saturate.

73, Markus HB9BRJ
--
e-mail address is ROT13 encoded. Decode before replying.

1191. Re: RF Output Power from Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 10:12:25 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ah3fu9$qe3$1@helle.btinternet.com>
Source record: 42554

Al, if you can find out what the DC collector current of the PA might be, another way of estimating RF power output is to assume the PA is around 60 percent efficient (on FM at VHF), then Pout = 0.6 of DC supply volts times DC collector current.

The power rating of the output transistor might provide an additional clue.

On the other hand, if you only want to alter the power output to suit your own application, just copy the circuit and use a transistor of appropriate power rating.

Reg, G4FGQ

1192. Re: DC power connector spec. for IC-706?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 11:03:04 UTC
From: "Gary P. Fiber" <foo@bar.invalid>
Message-ID: <3ljajugnmp4humtbn4dingfu3qhg36be14@4ax.com>
Source record: 42555

On Tue, 16 Jul 2002 22:53:20 -0600, "Paul N. Cowley"
<pcowley@REMOVExmission.com> wrote:

>Can anyone help with information on equivalent connectors for the
>IC-706's DC power? I've browsed through Mouser and Newark, but am
>struggling with the pin configuration, size, etc...
>
>I'm trying to install my rig in my car, but would like to leave the cord
>that came with the radio on my desktop Astron power supply.... and can't
>bring myself to pay the $30+ list price!
>
>Thanks in advance!
>
>KB7VML

So just order the connector and pins from Icom, both are available
without the power cord.

Gary K8IZ

1193. Re: ISO: "Squashed Bug" construction technique info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 11:26:23 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <kCcZ8.1519$Dh3.68083@newsfep1-win.server.ntli.net>
Source record: 42556

> I prefer the dead bug method where you tack an ic down with rtv or
> something similar and then leave the legs up where you can wire wrap to
> them or fly leaded parts to the legs and tack solder.
>
> If you want high frequency and good mechanical performance, then make a
> two sided pcb (FR4 1.57mm thick) with solid copper on one side and small
> pads at 2.54 mm spacing on the other side. If you place a few 2.54mm wide
> buses on this side, you can also use these for B+, B- or 50 ohm microstrip
> lines. This last technique I used to use all the way to 900 MHz with no
> problem, but I also used some homemade via's strategically placed along
> with good grounding from the copper side to the buss/pad side. At
> Motorola in Plantation, FL we called this Z board and had it kept in the
> engineering stockroom. This works great for digital work also even at the
> 100 MHz or higher clock speeds. I would finally suggest that one of the
> busses be a continuous 2.54 mm wide buss all the way around the outer edge
> of the pad/buss side. This makes it easy to get a good ground from the
> solid side to the top side through copper foil or other conductive means
> (straps, wires, etc). I would normally draw a picture, but I don't have
> any drawing tools any more. Happy trails.
==========
In connection with the above it is perhaps useful to highlight availability
of the 'island' cutter ,also called the NJ-Islander ,as supplied through the
New Jersey QRP Club and in the UK through the G-QRP Club.
This rotary diamond tipped end mill (used with an electric drill in a
stand)with a shaft of Dia 0.125 inch,cuts islands of Dia 0.2 inch in pcb
leaving copper islands of Dia 0.14 inch.
A superb way of making RF circuits with only very little copper being
removed.

Frank gm0csz.kn6wh@ntlworld.com

1194. Tracking Child

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 13:54:01 UTC
From: jcw <jcwilley@ih2000.net>
Message-ID: <ujatq7hb9925bd@corp.supernews.com>
Source record: 42557

Hi,
I want to build or buy a tracking device. no matter how small or large.
Any body know where I can find?
I want to build or buy for my children. for safety.
Thank You,
john

1195. Re: Tracking Child

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 14:56:16 UTC
From: "Christopher.Cox" <cobox.nospam@netexp.nospam.net>
Message-ID: <3D358582.7030908@netexp.nospam.net>
Source record: 42558

http://www.wherifywireless.com/corp_home.htm

jcw wrote:

> Hi,
> I want to build or buy a tracking device. no matter how small or large.
> Any body know where I can find?
> I want to build or buy for my children. for safety.
> Thank You,
> john
>
>
>

1196. ANN: Jackson Brothers catalogue online

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 14:58:11 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <ah40m6$prsbs$1@ID-61331.news.dfncis.de>
Source record: 42559

Since 1923 Jackson Brothers have manufactured variable capacitors and accessories such as tuning drives and dials. Jackson Brothers are now owned and distributed by Mainline Electronics Group and the full catalogue is online at <http://www.mainlinegroup.co.uk/jacksonbrothers/index.htm>.

73's

Hans Summers, G0UPL
<http://www.HansSummers.Com>

1197. Re: DC power connector spec. for IC-706?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 15:06:10 UTC
From: N9BC <brentc316@yahoo.com>
Message-ID: <3d358610$0$13946$39cecf19@nnrp1.twtelecom.net>
Source record: 42560

Check out http://www.pl-259.com/page4.html He has some there.

-Brent
N9BC

"Paul N. Cowley" <pcowley@REMOVExmission.com> wrote in message
news:3D34F840.B1D5326A@REMOVExmission.com...
> Can anyone help with information on equivalent connectors for the
> IC-706's DC power? I've browsed through Mouser and Newark, but am
> struggling with the pin configuration, size, etc...
>
> I'm trying to install my rig in my car, but would like to leave the cord
> that came with the radio on my desktop Astron power supply.... and can't
> bring myself to pay the $30+ list price!
>
> Thanks in advance!
>
> KB7VML
>

1198. Re: Tracking Child

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 16:17:28 UTC
From: jcw <jcwilley@ih2000.net>
Message-ID: <ujb67u85lf8j82@corp.supernews.com>
Source record: 42561

Thank , I aready check out before but it's expsenvise.
Thank,
john

Christopher.Cox wrote in message <3D358582.7030908@netexp.nospam.net>...
>http://www.wherifywireless.com/corp_home.htm
>
>jcw wrote:
>
>> Hi,
>> I want to build or buy a tracking device. no matter how small or large.
>> Any body know where I can find?
>> I want to build or buy for my children. for safety.
>> Thank You,
>> john
>>
>>
>>
>

1199. NICE BIG PLATE TRANSFORMER

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 17:00:54 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3D35A2C6.6050300@charter.net>
Source record: 42562

I have a really nice BIG transformer. GE model 81g465 rated 1.1KVA. 115v in 4620kv@750miliamps center tap. so that would be about 2310v x 2 @ 350 miliamps this baby will pull 2 seperate power supplies @ 2.5kv. Will pull like 2 4-400A or 2 4-800. weighs about 65 or 70 lbs really nice. Looking for offers on this ....Can ship if i have to. Location North Carolina
http://chris28681.tripod.com/ here are some other items i have for sale..

--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

1200. Re: ISO: "Squashed Bug" construction technique info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 17:04:28 UTC
From: Sylvan Butler <Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnajb8ss.u03.Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 42563

On Wed, 17 Jul 2002 04:50:08 GMT, carltons <motsteve@attbi.com> wrote:
> 100 MHz or higher clock speeds. I would finally suggest that one of the
> busses be a continuous 2.54 mm wide buss all the way around the outer edge

Exactly 1/10inch or would 2.5mm or even 2mm or 3mm be OK ? :)

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Palladium, TCPA and Senator Fritz Hollings, NOW!
http://www.cl.cam.ac.uk/users/rja14/tcpa-faq.html

1201. Re: Where Can I Find Power Connector For Kenwood Mobile???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 17:07:51 UTC
From: Sylvan Butler <Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnajb937.u03.Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 42564

On 17 Jul 2002 05:14:53 GMT, Xtx99 <xtx99@aol.com> wrote:
> Any help on where I can find this connector is appreciated (it's the power cord
> that connects to the other half of the power cord that is attached to the
> Kenwood dual band TM-G707A mobile 2 m/ 70 cm radio). I would prefer to just

I'd check www.powerwerx.com for a proper connector to make an
adaptor to anderson powerpole. Or else (after factory warranty on
the radio is gone) replace the factory connector with powerpole
connector. (I'd preserve the factory connector and perhaps even put
powerpole on it also, so I could connect the radio to a factory
power cable if so desired.)

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Palladium, TCPA and Senator Fritz Hollings, NOW!
http://www.cl.cam.ac.uk/users/rja14/tcpa-faq.html

1202. Re: NICE BIG PLATE TRANSFORMER

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 18:42:01 UTC
From: Peter Völpel <qro1750@compuserve.de>
Message-ID: <3D35BA79.218D87AB@compuserve.de>
Source record: 42565

NI4L schrieb:
>
> I have a really nice BIG transformer. GE model 81g465 rated 1.1KVA. 115v
> in 4620kv@750miliamps center tap.

Hi,

Probably there is something wrong in your description.
If my math is right that transformer should be rated 3.46 megawatts :-)

Peter

1203. Re: ISO: "Squashed Bug" construction technique info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 18:52:28 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <M1jZ8.106564$UT.6887005@bgtnsc05-news.ops.worldnet.att.net>
Source record: 42566

0.1 inches is the spacing of DIP components, so it would be a good idea to stick with that spacing. The larger SMD components have a 50 mil pitch between leads.

Pete KE9OA

Sylvan Butler <Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid> wrote in message news:slrnajb8ss.u03.Znospam+noZs_0207@hpb13799Z.Zboi.hpZ.com.invalid...
> On Wed, 17 Jul 2002 04:50:08 GMT, carltons <motsteve@attbi.com> wrote:
> > 100 MHz or higher clock speeds. I would finally suggest that one of the
> > busses be a continuous 2.54 mm wide buss all the way around the outer edge
>
> Exactly 1/10inch or would 2.5mm or even 2mm or 3mm be OK ? :)
>
> sdb
>
> --
> | Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
> | Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
> They that can give up essential liberty to obtain a little temporary
> safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
> Stop Palladium, TCPA and Senator Fritz Hollings, NOW!
> http://www.cl.cam.ac.uk/users/rja14/tcpa-faq.html

1204. EB63 amp. any good?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 22:12:29 UTC
From: Damon Wascom <kc5cqw@excite.com>
Message-ID: <ujbquehqoo5e45@corp.supernews.com>
Source record: 42567

Anyone have any knowledge of the EB63 2-30MHZ amp. sold by Communication-Concepts? I'm thinking of building one once I get an FT-817. I would like to hunt for my own parts but I don't know how to etch a pc board. Comm.-Con. sells it as a full kit for $102.60 w/shipping w/o the heatsink. Is this a good amp? What do I need to etch my own boards? I have a photo mask for the layout I need for this amp.
Thanks, Damon KC5CQW

1205. Re: EB63 amp. any good?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-17 23:50:12 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <UonZ8.18103$_51.15503@rwcrnsc52.ops.asp.att.net>
Source record: 42568

"Damon Wascom" <kc5cqw@excite.com> wrote in message
news:ujbquehqoo5e45@corp.supernews.com...
> Anyone have any knowledge of the EB63 2-30MHZ amp. sold by
> Communication-Concepts? I'm thinking of building one once I get an FT-817.
I
> would like to hunt for my own parts but I don't know how to etch a pc
board.
> Comm.-Con. sells it as a full kit for $102.60 w/shipping w/o the heatsink.
> Is this a good amp? What do I need to etch my own boards? I have a photo
> mask for the layout I need for this amp.
> Thanks, Damon KC5CQW
>
>

1206. Re: EB63 amp. any good?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-18 00:01:26 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <qznZ8.72794$uw.37584@rwcrnsc51.ops.asp.att.net>
Source record: 42569

> Anyone have any knowledge of the EB63 2-30MHZ amp. sold by
> Communication-Concepts? I'm thinking of building one once I get an FT-817.
I
> would like to hunt for my own parts but I don't know how to etch a pc
board.
> Comm.-Con. sells it as a full kit for $102.60 w/shipping w/o the heatsink.
> Is this a good amp? What do I need to etch my own boards? I have a photo
> mask for the layout I need for this amp.

It's a fine amplifier, although it's getting a bit long in the tooth by now, I've built several and not encountered any problems with them. Order a couple sheets of PnP Blue from Techniks in New Jersey, and follow their instructions for the board. I believe Brad Thompson still has some suitable transformers. If he's out, get back with me and I can fix you up with one. FeCl4 available from Radio Shack.

Brad.Thompson@Valley.Net

Techniks

P.O. Box 463

Ringoes, NJ 08551

908-788-8249

GL

W4ZCB
>
>

1207. Re: NICE BIG PLATE TRANSFORMER

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-18 00:44:35 UTC
From: robrk <robrkx@nidhog.net>
Message-ID: <3D360F73.EC164742@nidhog.net>
Source record: 42570

If you can pick it up...it ain't BIG.

NI4L wrote:
>
> I have a really nice BIG transformer. GE model 81g465 rated 1.1KVA. 115v
> in 4620kv@750miliamps center tap. so that would be about 2310v x 2 @ 350
> miliamps this baby will pull 2 seperate power supplies @ 2.5kv. Will
> pull like 2 4-400A or 2 4-800. weighs about 65 or 70 lbs really nice.
> Looking for offers on this ....Can ship if i have to. Location North
> Carolina
> http://chris28681.tripod.com/ here are some other items i have for
> sale..
>
> --
> NI4L CUSTOM RESONANT DIPOLE
> LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
> Made with the same components used by our military forces today
> Custom made to YOUR FREQUENCY of operation
> Let me take the hassle out of making a RESONANT DIPOLE for you.
> Click here for more info... http://www.angelfire.com/nb/ni4l/

1208. Re: garden sheds

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-18 01:07:41 UTC
From: Idontwantspam@net
Message-ID: <3d36148c.10319503@news.bellatlantic.net>
Source record: 42571

On 16 Jul 2002 22:48:44 GMT, Allodoxaphobia <QSB@QRM-QRN.net> wrote:

>On 16 Jul 2002 12:48:23 -0700, Gumbochutney scribbled:
>> I am British writer working on a feature about men and their sheds for
>> M Magazine. Perhaps your shed is a second home, you use it for
>> inventions or perhaps you have a comfy armchair, TV and a couple of
>> beers. If you live in the UK and are interested in having your shed
>> profiled in the magazine or would like more information please e-mail
>> me on lizscarff@hotmail.com
>> Kind Regards
>> Liz
>
>LOL!! We've all seen the OT beer brewing postings here,
>but this is a _new one_ .
>
>Someone doing a Google Groups search on "shed" and/or "shack",
>I guess.
>
Some hams do have their shack in an outside building like a shed.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

1209. Investigation about RF-Bridges

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-18 04:51:19 UTC
From: Peter Thoms <048191-0001@t-online.de>
Message-ID: <ah671m$m59$01$1@news.t-online.com>
Source record: 42574

Hallo NG,

I am curious about following publications:

W. N. Tuttle: Proc. Inst. Radio Engrs., NY 28 1940 S.23
D. B. Sinclair: Proc. Inst. Radio Engrs., NY 28 1940 S.310

Where can I get copies?

vy 73 de Peter, DL6LAT

1210. Re: Where do I start

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-18 05:03:49 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D364C7D.BCC7CED1@bellatlantic.net>
Source record: 42572

rhaub wrote:
>
> ehsjr@bellatlantic.net wrote:
>
> > rhaub wrote:
> >
> > > > > >
> > > > >
> > > > > Whoa, Whoa, Whoa, slow up there, Rick.
> > > > >
> > > > > Steve is exactly on target. You are an exception - a
> > > > > very rare exception.
> > > >
> > > > I disagree. You could not be more wrong. You could try, But you would not be
> > > > successful. My point is that with dedication and study any one can build a 100% HB
> > > > station for little money.
> > >
> > What are the specifics of this station - what do you have in mind?
> > I called you an exception, because you said you built an excellent
> > receiver and a very nice 100W transmitter for $200. Are you saying
> > any one can build an excellent receiver and a very nice transmitter
> > for that price?
>
> Yes.
>
> > Or are you talking about a receiver with poor
> > selectivity and poor sensitivity with a high noise floor and
> > bad IMD ?
>
> Receiver
> sensitivity
> 1.0000MHz .72uV
> 5.0000MHz .56uV
> 10.000MHz .36uV
> 20.000MHz .38uV
> Falls off from there but thats ok, I generaly stay in the 80/40/20 meter bands

That is abysmal performance for a so called "excellent" receiver.
See the QST product reviews for the numbers I posted below.
http://www.arrl.org/members-only/prodrev/bymfg.html

Per the product reviews:
For a circa '80 Kenwood TS 180, sensitivity is .25uv
For a circa '85 ICOM 745 sensitivity is less than .15 uv
For a circa '90 Ten Tec Omni V sensitivity is .15 uv

For a circa '95 ICOM 736 is less than .15uv

Clearly, we are talking about two different things
when we say "excellent receiver".

We do agree on one point you made:
"the best part of the hobby," (is) "HB, scrounging, and putting
forth as much effort to learn the dark art of radio as they have
time for."

1211. Re: ISO: "Squashed Bug" construction technique info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-18 05:54:54 UTC
From: "Joseph A. DiVerdi" <diverdi@xtrsystems.com>
Message-ID: <diverdi-B0CF04.23545417072002@europa.frii.com>
Source record: 42573

In article <3D34C207.2C3A@pop.removethistomailme.net>,
John Miles <jmiles@pop.removethistomailme.net> wrote:

> <snip>
>
> A superb synthesis of the "ugly" and "squashed" (or "dead") bug schools
> appears at http://www.qsl.net/ke5fx/tr503/110syn2.jpg. :) The DIP
> packages have had their through-hole leads cut off and their tabs
> flattened out, except the ones that go to the ground plane.
>
> If you search on "dead bug construction" you'll probably find a lot more
> examples. I don't think I've ever heard it called "squashed" before.
>
> -- jm

Thanks to all for the helpful comments. :)

--
Joseph A. DiVerdi, Ph.D., M.B.A. 970.221.3982 (voice)
http://xtrsystems.com 970.224.3723 (fax)
PGP Key ID: 0xD50A9E33

1212. ** FLEA at MIT ** Sunday July 21st Cambridge MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-18 11:03:59 UTC
From: w1gsl@mit.edu
Message-ID: <3d36a09f$0$3951$b45e6eb0@senator-bedfellow.mit.edu>
Source record: 42575
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.info,sci.electronics.misc,ne.forsale,ne.general,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

This coming Sunday....

!! ** More Buyers PARKING is available ** for details see
http://web.mit.edu/w1gsl/Public/flyer

*** !!!! In our Traditional GARAGE and lot !!!! ****
so come rain or shine or super heat the Flea is on !!!

********* $1 buyers discount with hardcopy of this notice ********

COMPUTERS - ELECTRONICS - HAM RADIO - COMPUTERS - ELECTRONICS - HAM RADIO

FLEA all SUMMER at MIT
Sunday July 21st 2002
9AM-2PM

Come to the city for a great flea - plenty of free parking.

MIT's electronics and ham radio flea will take
place on the third Sunday of each month this summer,
April thru October.

There is tailgate space for over 600 sellers and
free, off-street parking for >2000 cars!

Buyers admission is $5 (you get $1 off if
you're lucky enough to have a copy of our ad)
and sellers spaces are $20 for the first and
$15 for each additional at the gate.

The flea will be held at the corner of Albany and
Main streets in Cambridge; right in the Kendall
Square area from 9AM to 2PM, with sellers set-up
time starting at 7AM.

*** Attention Sellers ***
Prepaid vendors.. Season Pass or monthly,
will be admitted FIRST.
Separate lines will form prior to gate opening
for prepaid and nonprepaid vendors

!! RAIN or SHINE !! Have no fear of rain, a covered
well illuminated tailgate area is available for all
sellers (6'8" clearance).

Talk-in: 145.23- (PL 88.5) W1BOS/R and
W1XM/R-449.725/444.725 (PL 114.8/2A).

Sponsors: MIT Electronics Research Society
MIT UHF Repeater Association (W1XM)
MIT Radio Society (W1MX)
Harvard Wireless Club (W1AF)

For more info / advanced reservations 617 253 3776

********** $1 buyers discount with hard copy of this notice ************

<<<<<<<<<<<<<<<<<<<<<<< cut here >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Mail the coupon below by the 5th of the month to be a Prepaid Vendor.

FLEA at MIT 2002 Rates

SELLERS

This year each vendor must have a Cambridge Vendor License.
We will do all the paperwork to get the one day Cambridge licenses.
To keep the spaces affordable we are discounting your first space.
To use your spaces the named vendor MUST be present.
Rates include one admission per space.

Advance $17 First space - includes $10 Cambridge Vendor License
$12 Additional Spaces
Must be received by the 5th of the month.

Gate Admission $20 First Space - includes $10 Cambridge Vendor License
$15 Additional Spaces
Admission is after the prepaid vendors

Early Bird Buyer -Admission after the prepaid vendor line is admitted. ~ 7:15AM
** You may not sell. **
$15 per person at the gate.

****************************** cut here ******************************

FLEA at MIT 2002 Advance Space Application

____April ____May ____June ____ July ____Aug ___Sept ____Oct
@ $17 for the first each month + $12 each additional

Name _____ Call _____ $ Included_____

Address _____ Phone _____ Make Check to
The MIT Radio Society
City _____ State _____ Zip _____ PO Box 397082
Cambridge MA 02139
E-mail _____

****
Steve Finberg W1GSL w1gsl@mit.edu
PO Box 82 MIT Br Cambridge MA 02139-7082 617 258 3754
****

1213. Re: Where Can I Find Power Connector For Kenwood Mobile???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-18 15:18:34 UTC
From: Bill Grimwood <bill@grimwood.net>
Message-ID: <6OCZ8.494$xg4.277@news.webusenet.com>
Source record: 42578

My local electronics store has them. go to a good one and you will probably find them.

K1WEG

"Xtx99" <xtx99@aol.com> wrote in message news:20020717011453.26138.00000135@mb-mj.aol.com...
> Any help on where I can find this connector is appreciated (it's the power cord
> that connects to the other half of the power cord that is attached to the
> Kenwood dual band TM-G707A mobile 2 m/ 70 cm radio). I would prefer to just
> purchase quick disconnect female terminals, crimp them onto 10 gauge wire and
> insert them into this connector (instead of splicing them onto a power cord
> with the wire and quick disconnect female terminals already attached). I have
> placed 2 pictures of the connector on my webpage (
> http://members.aol.com/xtx99/index.html)and would appreciate and suggestions.
> Radio Shack didn't have it. I'm saving the original power cord for base
> operation and temporarily carefully inserting disconnects into the connector
> for mobile operation (thank God for fuses!!) Thanks
>
>
>

1214. antenna for HT

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-18 16:22:12 UTC
From: Matt <mthomas@biocontrolsys.com>
Message-ID: <ujdqic17rg8v03@corp.supernews.com>
Source record: 42576

I want to build a 2m/70cm J-pole that I saw in QST a couple of years ago. I'd like to be able to use it with my IC-T7H handheld. Will I need to build/buy some kind of antenna tuner for this to work, or will it work better than the whip without that? Or will it cause the HT to explode/melt/fry/etc?

Thanks,
Matt

1215. Re: antenna for HT

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-18 17:09:30 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <eDCZ8.147984$iB1.8369225@bin4.nnrp.aus1.giganews.com>
Source record: 42577

Should work just fine.

73, Bob K6DDX

1216. Strange oscillator.....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-18 21:16:15 UTC
From: JCM <menardjc@wanadoo.fr>
Message-ID: <ah7b85sb2@wanadoo.fr>
Source record: 42579

I have built the following oscillator found at:
http://jnaudin.free.fr/cnr/negosc.htm

```
+ --1 k resistor------A--------II--------------
220 pF C
12 Volts O
I
L
- ----------------------B-----------------------
```

A: to emitter of a 2N914
B: to collector of the 2N914
Base of 2N914 not connected
Coil is from a 455 kHz IF transformer
Result: 300 kHz sine wave.
Max frequency with a smaller coil 1.8 MHz

All transistors are not equal:
2N2222 ok up to 100 kHz max with larger capacitor and coil.
BF245 and many other BF... do not oscillate.
PNPs reverse connected do not oscillate.

How can this "thing" oscillate ? some kind of a "tunnel" effect ?
Nothing found in available semiconductors literature.
Thanks in advance for an explanation of this mystery.

JCM

1217. Re: Strange oscillator.....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-18 23:01:34 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ah7hcd$mr0$1@helle.btinternet.com>
Source record: 42580

JCM, there's no mystery.

Stop worrying about an open-circuit base. Your circuit is not breaking any fundamental laws of physics.

No device is perfect. There are ALWAYS internal leakage resistances and capacitances, inductances even, which you are not showing on the complete circuit diagram.

Complete the circuit. Don't forget to include the input impedance of the oscilloscope, or whatever measuring instruments you use, and you have an oscillator.

Sometimes they oscillate and sometimes they don't. It all depends on circuit and transistor imperfections.

Some people call them parasitic components.

Just design the circuit properly, take parasites into account, lump them with the others, and you won't have any problems.

========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================

> Thanks in advance for an explanation of this mystery.
>
> JCM

1218. Another HT antenna Q

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-18 23:39:35 UTC
From: akwusmc@aol.com
Message-ID: <3d37511d.78253148@news.tn.comcast.giganews.com>
Source record: 42581

All,

I'm in the process of putting together a simple wire ground plane antenna for 144mhz (ARRL antenna book, 18th Ed, p18-17, figure 25).

The verticle element is 12g copper wire, and is straight in the book, but I'd like to put a loop at the end so I can hang it in a tree outside the bedroom window.

Do I need to trim the wire to length based on the length of the wire from connector to top-of-loop, or is the actual length of the wire (even if looped) what's important? I hope I asked that well!

TIA, and 73

Anthony

1219. Re: Strange oscillator.....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-18 23:50:17 UTC
From: Alan Melia <Alan.Melia@btinternet.com>
Message-ID: <ah7k7oqqg1@helle.btinternet.com>
Source record: 42582

Hi, The 2N914 is a fairly vintage transistor it was around in the early 1960s. I think it was one of the first Fairchild commercial silicon planar devices. I know we at the Post Office ResD at Dollis Hill did some reliability testing on them for use in submerged cable systems

I suspect it may depend on the manufacturer of the device, and even then not all 2N914 will necessarily oscillate. The 'reversed' transistor is operating in 'avalanche mode', which has a characteristic like a neon tube, with hysteresis between the switch on and switch off points. If you replace the the C and L by a short piece of open ended coax you will get a very narrow fast pulse, possibly only a few nsecs wide, with very fast edges. It is an ideal harmonic generator., and were used in the 1960s as sample pulse generators sor sampling oscilloscopes. The base is usually biased in these circuits but it could be that it will work open. Ferranti used to make devices specially for this service and I think that their 'alter ego' now called Zetek still do. More modern transistors since the advent of epitaxy, may have higher avalanche voltages than 12v....try them with say 24 volts. Ian Hickman has written an article in Electronics World (the old and much more famous Wireless World) a couple of years ago, and covers the subject in one of his books.

Cheers de Alan G3NYK
alan.melia (at) btinternet.com

JCM wrote in message ...
>I have built the following oscillator found at:
>http://jnaudin.free.fr/cnr/negosc.htm
>
>+ --1 k resistor------A--------II--------------
> 220 pF C
> 12 Volts O
> I
> L
>- ----------------------B----------------------
>
>A: to emitter of a 2N914
>B: to collector of the 2N914
>Base of 2N914 not connected
>Coil is from a 455 kHz IF transformer
>Result: 300 kHz sine wave.
>Max frequency with a smaller coil 1.8 MHz
>
>All transistors are not equal:
>2N2222 ok up to 100 kHz max with larger capacitor and coil.
>BF245 and many other BF... do not oscillate.

>PNPs reverse connected do not oscillate.
>
>How can this "thing" oscillate ? some kind of a "tunnel" effect ?
>Nothing found in available semiconductors literature.
>Thanks in advance for an explanation of this mystery.
>
>JCM
>
>

1220. Re: Another HT antenna Q

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-18 23:59:20 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D375658.721361B1@netscape.net>
Source record: 42583

akwusmc@aol.com wrote:
>
> All,
>
> I'm in the process of putting together a simple wire ground plane
> antenna for 144mhz (ARRL antenna book, 18th Ed, p18-17, figure 25).
>
> The verticle element is 12g copper wire, and is straight in the book,
> but I'd like to put a loop at the end so I can hang it in a tree
> outside the bedroom window.
>
> Do I need to trim the wire to length based on the length of the wire
> from connector to top-of-loop, or is the actual length of the wire
> (even if looped) what's important? I hope I asked that well!
>
> TIA, and 73
>
> Anthony

I would suggest using an insulator of some sort between the antenna and
the tree!
If you loop it and CLOSE the loop the overall dimension should remain
very close. I'd knock off about a quarter inch just based on gut
instinct.

-Bill

1221. Re: Another HT antenna Q

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-19 00:07:34 UTC
From: akwusmc@aol.com
Message-ID: <3d375802.80018168@news.tn.comcast.giganews.com>
Source record: 42584

On Thu, 18 Jul 2002 19:59:20 -0400, ":-) Bill"
<therealexray@netscape.net> wrote:

>
>I would suggest using an insulator of some sort between the antenna and
>the tree!

Something like a dogbone?

>If you loop it and CLOSE the loop the overall dimension should remain
>very close. I'd knock off about a quarter inch just based on gut
>instinct.
>
>-Bill

Sorry, I should have mentioned I would be using a closed loop. I
suppose a more accurate question would be: Is the radiating length the
length overall, or the length of the element wire?!

Thanks, Bill

Anthony

1222. Re: Where Can I Find Power Connector For Kenwood Mobile???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-19 14:17:48 UTC
From: nx7u@mindspring.com
Message-ID: <3d381f75.853383@nntp.mindspring.com>
Source record: 42585

http://www.powerwerx.com has an excellent selection of various OEM
power cords/plugs etc.

On Thu, 18 Jul 2002 10:18:34 -0500, "Bill Grimwood"
<bill@grimwood.net> wrote:

>My local electronics store has them. go to a good one and you will probably
>find them.
>
>K1WEG
>
>
>"Xtx99" <xtx99@aol.com> wrote in message
>news:20020717011453.26138.00000135@mb-mj.aol.com...
>> Any help on where I can find this connector is appreciated (it's the power
>cord
>> that connects to the other half of the power cord that is attached to the
>> Kenwood dual band TM-G707A mobile 2 m/ 70 cm radio). I would prefer to
>just
>> purchase quick disconnect female terminals, crimp them onto 10 gauge wire
>and
>> insert them into this connector (instead of splicing them onto a power
>cord
>> with the wire and quick disconnect female terminals already attached). I
>have
>> placed 2 pictures of the connector on my webpage (
>> http://members.aol.com/xtx99/index.html)and would appreciate and
>suggestions.
>> Radio Shack didn't have it. I'm saving the original power cord for base
>> operation and temporarily carefully inserting disconnects into the
>connector
>> for mobile operation (thank God for fuses!!) Thanks
>>
>>
>>
>
>
>

1223. HM-75A microphone Schematic needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-19 15:03:55 UTC
From: N5BPF <DONTdmccoy@SPAMlightwire.MEcom>
Message-ID: <ujgainjmg5f6fd@corp.supernews.com>
Source record: 42586
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Does anyone have such a thing

DMc

N5BPF

1224. Re: Homebrew SW receiver for the car?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-19 15:15:42 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <y2WZ8.110611$UT.7107114@bgtnsc05-news.ops.worldnet.att.net>
Source record: 42587

I've got a design that you could fit into a car radio chassis, but you could count on at least 100 hours work to complete the job. It runs on anything from 12 to 15 volts, and it is a general coverage design. Unfortunately, I don't have any more PC boards to send out, but maybe the design will give you some ideas.

Pete KE9OA

Tom W8JI <2w8ji@contesting.com> wrote in message news:3d2ed1cc.88437097@news.akorn.net...
> On Thu, 11 Jul 2002 15:18:32 GMT, "john walton" <jdwalton@comcast.net>
> wrote:
>
> >You can use the cassette player as an input device to a regular car radio
> >(RatShack has adapters), then just put together one of the QRP regen
> >receivers from the ARRL Handbook.
>
> MFJ sells a crystal controlled 12Vdc SWBC convertor that outputs on
> the AM BC band.
>
> 73 Tom

1225. Re: Homebrew SW receiver for the car?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-19 15:19:17 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <V5WZ8.110613$UT.7107844@bgtnsc05-news.ops.worldnet.att.net>
Source record: 42588

Hi Bill,
There probably is a small slide switch hidden inside the unit.
It may be located on the microcontroller board.

Pete KE9OA

:-) Bill <therealexray@netscape.net> wrote in message
news:3D2E4F08.F846417A@netscape.net...
> Bob wrote:
> >
> > I have a Gonset Tri-Band converter that was designed to go ahead of a
car
> > radio to provide ham band (and some SW BC) reception. I'd like $25 for
it.
> > It's tubes, so needs a high voltage source maybe 150 V but I built a
little
> > transistor converter to run it. Great little unit.
> >
> > 73, Bob K6DDX
>
> I've got a Clarion/Nissan 1995? stock AM/FM/SW/cassette radio I'll
> sell. Tunes 2.9 to 21.9 in 5 kc steps. The caveat is that it is setup
> for 9kc channel spacing on AM-BCB and I haven't been able to find a way
> to change it. 50 bux+shipping.
> -Bill WX4A

1226. Re: Homebrew SW receiver for the car?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-19 15:30:23 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D38308F.DE4FC91@netscape.net>
Source record: 42589

Pete Gianakopoulos wrote:
>
> Hi Bill,
> There probably is a small slide switch hidden inside the unit.
> It may be located on the microcontroller board.
>
> Pete KE9OA

Nope. Been thru it with a fine toothed comb. Not even any jumpers to restrap. Maybe different pin connections to the chip would do it but I'm lacking any info. I've seen some that have a special key-punch procedure to switch 'bands' but I've not hit any magic combination.

-Bill

1227. Re: Strange oscillator.....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-19 15:49:13 UTC
From: JCM <menardjc@wanadoo.fr>
Message-ID: <ah9ceu$r0$1@wanadoo.fr>
Source record: 42590

Thank you Reg and Alan, I know have a scientific explanation of what seemed to be a little bit "magic" !!!

73 from F8ND

"JCM" <menardjc@wanadoo.fr> a crit dans le message de news:
ah7b85sb2@wanadoo.fr...
> I have built the following oscillator found at:
> http://jnaudin.free.fr/cnr/negosc.htm
>
> + --1 k resistor------A--------II----------
> 220 pF C
> 12 Volts O
> I
> L
> - ----------B----------
>
> A: to emitter of a 2N914
> B: to collector of the 2N914
> Base of 2N914 not connected
> Coil is from a 455 kHz IF transformer
> Result: 300 kHz sine wave.
> Max frequency with a smaller coil 1.8 MHz
>
> All transistors are not equal:
> 2N2222 ok up to 100 kHz max with larger capacitor and coil.
> BF245 and many other BF... do not oscillate.
> PNPs reverse connected do not oscillate.
>
> How can this "thing" oscillate ? some kind of a "tunnel" effect ?
> Nothing found in available semiconductors literature.
> Thanks in advance for an explanation of this mystery.
>
> JCM
>
>

1228. FS C-Band LNB Down converter unused

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-19 16:22:23 UTC
From: tonyS2@aol.com
Message-ID: <61e40296.0207190822.48ba2619@posting.google.com>
Source record: 42591

```
Priced for quick turnover
View at www.pearlone.com
Tony S
Alex Va
```

1229. FS: TUBES, receiving, TV, & special purpose

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-19 22:06:15 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <r30_8.42098$L02.761998@news1.west.cox.net>
Source record: 42592
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Several thousand tubes available, priced from $.35 each. Email
w6krc@arrl.net for a detailed list.

1230. FA: TNC/KPC-9612 & 50W VHF Xcvr IC-281H

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-19 23:01:43 UTC
From: k6sde <spam_m@e.not>
Message-ID: <3D389A58.ECD0DCC2@e.not>
Source record: 42593

LAST FEW DAYS...ends Monday, 7/22/02.

Great TNC/Controller, 9600/1200 baud (with cables for the
IC-281H below)

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1366376376

or
KPC-9612

Very nice 50W 2 meter XCVR, IC-281H, with 440 receiver
(works on 9600 baud)

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1366428399

or
IC-281H 50 W VHF Xcvr

Win the auction for both and I pay the shipping.

Thank you for looking.

1231. "Low cost" Spectrum Analysers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-19 23:35:24 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3D38A2F7.1EAFC2E1@alma.demon.co.uk>
Source record: 42594
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Has anyone (particularly in the UK) construcuted one of these designs or considered consrtucting one? I am particularly intersted in the G4PMK design as featured in Radcom and the RSGB book "Test Equipment for the Radio Amateur".

My RF experience is very low, but my digital is very high. I have a number of satellite tuners. They are digitally controlled using a I2C bus. They are used to tune 950MHz to 1350MHz. I was wondering whether I could modify one in some way. Is it possible to convert 0->100MHz (say) to 950MHz->1050MHz with a circuit that can be constructed by an amateur? Perhaps I could use a second tuner to generate the 950MHz mixer frequency. Software could be used to scan the band. Since the tuner is a digitally controlled PLL, the accuracy should be very high.

A great help is that I have the schematics of these particular tuner modules. Following the mixer is a 495.5MHz SAW filter with a 32MHz bandwidth. There is then some more circuitry which includes a 495.5MHz oscillator, which I assume is some kind of mixer. The final output is I and Q. These outputs are normally used for the QPSK demodulation. I assume that I will need to add the same kind of filter and log amplifier in order to find the signal of interest?

If anyone is interested in this area, please get in touch. I have a spare tuner if someone is really interested.

regards...

--Gary

1232. Re: Homebrew SW receiver for the car?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 04:19:56 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <Mx5_8.40655$lu6.2291749@bgtnsc04-news.ops.worldnet.att.net>
Source record: 42595

I sounds like a pretty cool radio. I wonder what chipset it uses. Motorola had the MC13030 dual-conversion AM receiver on a chip, that was aimed at the auto radio market for awhile, but unfortunately, they discontinued it. A shame, because it was a good chip. I built a MW radio based on that design, and it was a winner.
I think Phillips also had a chipset aimed at the auto market. I wonder if your radio is a dual-conversion design.
Anyway, your price sounds good. If you want to sell it, I can send you cash; just e-mail me directly.

Pete

:-) Bill <therealexray@netscape.net> wrote in message news:3D38308F.DE4FC91@netscape.net...
> Pete Gianakopoulos wrote:
> >
> > Hi Bill,
> > There probably is a small slide switch hidden inside the unit.
> > It may be located on the microcontroller board.
> >
> > Pete KE9OA
>
> Nope. Been thru it with a fine toothed comb. Not even any jumpers to
> restrap. Maybe different pin connections to the chip would do it but
> I'm lacking any info. I've seen some that have a special key-punch
> procedure to switch 'bands' but I've not hit any magic combination.
>
> -Bill

1233. Re: Can digital VFO's do this..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 04:33:54 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <SK5_8.40675$lu6.2293542@bgtnsc04-news.ops.worldnet.att.net>
Source record: 42596

I've been using the AD9851 for awhile. The unit has a 30MHz tuning range, and the display always shows 0 to 30MHz.
You can tailor it to any I.F. just by entering the offset in the hard code. If you have a 45MHz I.F. and enter that offset, the DDS will tune from 45 to 75MHz; if you enter a 10.7MHz offset, the DDS will then tune from 10.7 to 40.7MHz.....and so on.....
I would be glad to send details of this synthesizer to interested parties, including the source code and the hex code. Jeff Woods, formerly of Kachina wrote the code.

Pete KE9OA

:-) Bill <therealexray@netscape.net> wrote in message news:3D2C30C5.BDCAFE53@netscape.net...
> Richard Daventry wrote:
>
> > > The A model is the same scheme. Unless I misunderstand the article, readout
> > of the display simply goes from 0 to 200. When VFO outputs 2500 Khz readout
> > is 200, when 2700 readout is 0. What I need is a display that will give the
> > whole frequency, like 14250.1 Khz. And for each band. Don't know know yet
> > how that would be accomplished, but I will in the end.
> > > Rich
>
> For a counter it would be done much the way it is done in the radio...by
> taking a bit of signal from the carrier oscillator and from the LO for
> the individual bands.
> -Bill

1234. Re: Homebrew SW receiver for the car?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 05:21:49 UTC
From: ":-) Bill" <therealexray@netscape.net>
Message-ID: <3D38F36D.33679198@netscape.net>
Source record: 42497

Pete Gianakopoulos wrote:
>
> I sounds like a pretty cool radio. I wonder what chipset it uses.

I took off a couple covers to try and answer your chipset question but I'll bail from further disassembly given that the radio is now sold...fortunately to a chap in the UK where the 9kc split won't be an issue.

This radio is from St. Kitts, the local dealer there (TDC) imports directly from Japan generally requiring cars with Left-hand drive and English gauges. Miles instead of km on the speedo, for instance. Radio be damned.

Quite a few of these radios show up as 'surplus' given that the two main local stations are on 555kc and 895kc. The problem is catching them before they hit the trash barrel.

No doubt there is a way to reprogram the thing, and my bet is that it can be done thru a button sequence but I have not been able to do so.

If you seriously want one, I can alert my 'car teefing' buddies to find another one.

Regards, Bill

thatMotorola
> had the MC13030 dual-conversion AM receiver on a chip, that was aimed at the
> auto radio market for awhile, but unfortunately, they discontinued it. A
> shame, because it was a good chip. I built a MW radio based on that design,
> and it was a winner.
> I think Phillips also had a chipset aimed at the auto market. I wonder if
> your radio is a dual-conversion design.
> Anyway, your price sounds good. If you want to sell it, I can send you
> cash; just e-mail me directly.
>
> Pete
>
> :-) Bill <therealexray@netscape.net> wrote in message
> news:3D38308F.DE4FC91@netscape.net...
> > Pete Gianakopoulos wrote:
> > >
> > > Hi Bill,
> > > There probably is a small slide switch hidden inside the
> unit.
> > > It may be located on the microcontroller board.

> > >
> > > Pete KE9OA
> >
> > Nope. Been thru it with a fine toothed comb. Not even any jumpers to
> > restrap. Maybe different pin connections to the chip would do it but
> > I'm lacking any info. I've seen some that have a special key-punch
> > procedure to switch 'bands' but I've not hit any magic combination.
> >
> > -Bill

1235. Re: "Low cost" Spectrum Analysers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 07:05:30 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <t6FRh6A6uQO9EAK7@ifwtech.co.uk>
Source record: 42499
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Gary Morton wrote:
>Has anyone (particularly in the UK) construcuted one of these designs
>or considered consrtucting one? I am particularly intersted in the
>G4PMK design as featured in Radcom and the RSGB book "Test Equipment
>for the Radio Amateur".
>

G4PMK regards that design as obsolete, but unfortunately can't prevent
RSGB from re-publishing it.

For a modern and much improved design, search the web for W7ZOI's pages.
His article about a spectrum analysers and accessory tracking generator
was published in QST, but there's probably more detail on the web.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)

1236. Re: "Low cost" Spectrum Analysers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 08:04:59 UTC
From: "Brain Rarey"
Message-ID: <3d391e1a$2_1@mk-nntp-1.news.uk.worldonline.com>
Source record: 42498
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

I'd be interested, however, 32 MHz is too wide
a bandwidth - you might as well use an Abortion
Wavemeter!

With that tuning range, an even better analyser covering
up to 400 MHz is possible.

I suspect that a problem will exist with the synthesizer
being programmable in steps the size of the channel spacing
which for an HF analyser might represent several harmonically
related bands.

Gary Morton <gary@alma.demon.co.uk> wrote in message
news:3D38A2F7.1EAFC2E1@alma.demon.co.uk...
> My RF experience is very low, but my digital is very high. I have a
> number of satellite tuners. They are digitally controlled using a I2C
> bus. They are used to tune 950MHz to 1350MHz. I was wondering whether I
> could modify one in some way. Is it possible to convert 0->100MHz (say)
> to 950MHz->1050MHz with a circuit that can be constructed by an amateur?
> Perhaps I could use a second tuner to generate the 950MHz mixer
> frequency. Software could be used to scan the band. Since the tuner is a
> digitally controlled PLL, the accuracy should be very high.
> A great help is that I have the schematics of these particular tuner
> modules. Following the mixer is a 495.5MHz SAW filter with a 32MHz
> bandwidth. There is then some more circuitry which includes a 495.5MHz
> oscillator, which I assume is some kind of mixer. The final output is I
> and Q. These outputs are normally used for the QPSK demodulation. I
> assume that I will need to add the same kind of filter and log amplifier
> in order to find the signal of interest?
> If anyone is interested in this area, please get in touch. I have a
> spare tuner if someone is really interested.

1237. Re: "Low cost" Spectrum Analysers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 09:51:45 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3d393184$0$21883@echo-01.iinet.net.au>
Source record: 42500
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

We are *still* building a DDS/PLL LO which would be suitable for such an analyser. John Miles is in the process of writing up the results
Frequency is digitally settable to 1 Hz or better with step times less than 1 msec. Freq span is 1-2 GHz for the current components though others could be substituted for other ranges from about 100 MHz to 2.5 GHz. Phase noise performance is good for such a simple oscillator. There have been a few problems at close to multiples of the DDS clock frequency with sidebands appearing - esp at near 2 GHz. However this could be got around by varying the DDS clock with software You could drive a ring diode mixer followed by a roofing filter at 1000 MHz or so and you would have a front end for a receiver/spec analyser for 0-800 MHz or so.You could follow this with your tuner as the 2nd IF. I suspect the tuner frequency step size may be quite large which would restrict its frequency resolution as a front end.
An alternative scheme might be to use the DDS/PLL board as a 2nd LO with fine freq steps to mix the output of the 495.5 MHz filter down to a lower IF where narrow filters could be used to give good frequency resolution.
You could follow this with an Analog devices Log amp. Finally a PC could be used to drive it all and display the results. It would be an interesting project but not a trivial undertaking! Perhaps a group could be formed to work on it cooperatively.

See http://www.qsl.net/ke5fx/synth.html
for details of the DDS/PLL board

Richard

"Gary Morton" <gary@alma.demon.co.uk> wrote in message
news:3D38A2F7.1EAFC2E1@alma.demon.co.uk...
> Has anyone (particularly in the UK) construcuted one of these designs or
> considered consrtucting one? I am particularly intersted in the G4PMK
> design as featured in Radcom and the RSGB book "Test Equipment for the
> Radio Amateur".
>
> My RF experience is very low, but my digital is very high. I have a
> number of satellite tuners. They are digitally controlled using a I2C
> bus. They are used to tune 950MHz to 1350MHz. I was wondering whether I
> could modify one in some way. Is it possible to convert 0->100MHz (say)
> to 950MHz->1050MHz with a circuit that can be constructed by an amateur?
> Perhaps I could use a second tuner to generate the 950MHz mixer
> frequency. Software could be used to scan the band. Since the tuner is a
> digitally controlled PLL, the accuracy should be very high.
>
> A great help is that I have the schematics of these particular tuner
> modules. Following the mixer is a 495.5MHz SAW filter with a 32MHz

> bandwidth. There is then some more circuitry which includes a 495.5MHz
> oscillator, which I assume is some kind of mixer. The final output is I
> and Q. These outputs are normally used for the QPSK demodulation. I
> assume that I will need to add the same kind of filter and log amplifier
> in order to find the signal of interest?
>
> If anyone is interested in this area, please get in touch. I have a
> spare tuner if someone is really interested.
>
> regards...
>
> --Gary

1238. Re: Tracking Child

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 13:23:30 UTC
From: Dick Carroll <dickc58@att.net>
Message-ID: <3C7F8EB5.F9CDAB87@att.net>
Source record: 42501

Talk of a device that's way ahead of it's time.....GPS receivers still need a clear view of at least part of the sky, don't they? Think the kids will stay out in the clear all the time? And the whole world sure isn't wired for PCS yet, by a whole lot. But it's a neat little device. Problem is, it produces raised expectations which aren't likely to be realized.

Dick

"Christopher.Cox" wrote:

> http://www.wherifywireless.com/corp_home.htm
>
> jcw wrote:
>
> > Hi,
> > I want to build or buy a tracking device. no matter how small or large.
> > Any body know where I can find?
> > I want to build or buy for my children. for safety.
> > Thank You,
> > john
> >
> >
> >

1239. speaker controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 15:03:26 UTC
From: Big Ron <bigron@runREMOVEbox.com>
Message-ID: <4huijugol0faf7v6te1t1ph1pen811ovit@4ax.com>
Source record: 42502

I'm wanting to build a device that accepts two audio outputs (scanner and transceiver) and puts it out to one speaker. Some kind of audio mixer would work, but what I think would be even better would be one in which the scanner gets muted when the transceiver receives, a mixer with a priority. I need this to be relatively small, as it will be in my car. First off, does anyone know if something like this is produced commercially? Second, if not, can anyone give me some pointers on how to accomplish it? A mixer should be fairly easy, but the priority idea I'm not sure.

1240. Re: Homebrew SW receiver for the car?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 15:56:59 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <fLf_8.112385$UT.7239016@bgtnsc05-news.ops.worldnet.att.net>
Source record: 42503

That's ok Bill; I figured that if yours was still available, I would buy it.
Thanks anyway! I am glad that the radio found a good home!

Pete

:-) Bill <therealexray@netscape.net> wrote in message
news:3D38F36D.33679198@netscape.net...
> Pete Gianakopoulos wrote:
> >
> > I sounds like a pretty cool radio. I wonder what chipset it uses.
>
> I took off a couple covers to try and answer your chipset question but
> I'll bail from further disassembly given that the radio is now
> sold...fortunately to a chap in the UK where the 9kc split won't be an
> issue.
>
> This radio is from St. Kitts, the local dealer there (TDC) imports
> directly from Japan generally requiring cars with Left-hand drive and
> English gauges. Miles instead of km on the speedo, for instance. Radio
> be damned.
>
> Quite a few of these radios show up as 'surplus' given that the two main
> local stations are on 555kc and 895kc. The problem is catching them
> before they hit the trash barrel.
>
> No doubt there is a way to reprogram the thing, and my bet is that it
> can be done thru a button sequence but I have not been able to do so.
>
> If you seriously want one, I can alert my 'car teefing' buddies to find
> another one.
>
> Regards, Bill
>
>
> thatMotorola
> > had the MC13030 dual-conversion AM receiver on a chip, that was aimed at
the
> > auto radio market for awhile, but unfortunately, they discontinued it.
A
> > shame, because it was a good chip. I built a MW radio based on that
design,
> > and it was a winner.
> > I think Phillips also had a chipset aimed at the auto market. I wonder
if
> > your radio is a dual-conversion design.

> > Anyway, your price sounds good. If you want to sell it, I can send you
> > cash; just e-mail me directly.
> >
> > Pete
> >
> > :-) Bill <therealexray@netscape.net> wrote in message
> > news:3D38308F.DE4FC91@netscape.net...
> > > Pete Gianakopoulos wrote:
> > > >
> > > > Hi Bill,
> > > > There probably is a small slide switch hidden inside the
> > unit.
> > > > It may be located on the microcontroller board.
> > > >
> > > > Pete KE9OA
> > >
> > > Nope. Been thru it with a fine toothed comb. Not even any jumpers to
> > > restrap. Maybe different pin connections to the chip would do it but
> > > I'm lacking any info. I've seen some that have a special key-punch
> > > procedure to switch 'bands' but I've not hit any magic combination.
> > >
> > > -Bill

1241. FS:ALMOST MINT Hallicrafters HA-26 VFO for 6/2 meters,Manual & box

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 16:07:29 UTC
From: rlucch2098@aol.com
Message-ID: <20020720120729.06988.00001881@mb-ml.aol.com>
Source record: 42504

Hi Fellas;
I have for SALE:
Halli HA-26 6&2 meter VFO, Very Excellent with Maniual & box.
Price is $50 + UPS.
Pics>>
http://www.myradioroom.com/hallivfo1.jpg
http://www.myradioroom.com/hallivfo2.jpg
http://www.myradioroom.com/hallivfo3.jpg
Thanks es 73....Rich WA2RQY (1961)
RLUCCH2098@aol.com
"Keep those heaters on"

1242. FS: 4 nice Big Panel Meters, 2-Simpson, 2 Weston! W/pics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 16:09:12 UTC
From: rlucch2098@aol.com
Message-ID: <20020720120912.06988.00001886@mb-ml.aol.com>
Source record: 42505

Hi Fellas;
I have for SALE:
These 4 nice meters, all have been check with very low voltage to make sure the movement is not "open"
From left to right>>
Simpson 0-100Mils DC
Simpson 0-150Mils DC
Weston 301 , 100-0-100 Mils
Weston 506, VU meter.
The larger ones are 3" square & for a 2-1`3/16" hole
The one smaller one is 2-3/8" square & for a 2" hole.
Pics>>
http://www.myradioroom.com/4meters1.jpg
http://www.myradioroom.com/4meters2.jpg
Price is $40.00 PPD
Thanks es 73....Rich WA2RQY (1961)
RLUCCH2098@aol.com
"Keep those heaters on"

1243. Re: Tracking Child

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 16:16:40 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ujj377cdhfkoba@corp.supernews.com>
Source record: 42506

On the somewhat positive side, most GPS receivers transmit the last known position and date/time of that fix when they loose satellite coverage. You may at least know where and when he went into the woods, house, etc.

1244. Frequeny Standard

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 16:54:23 UTC
From: Andrew Tyler <andrew@tyler39.freeserve.co.uk>
Message-ID: <ahc4dc$b7m$1@news5.svr.pol.co.uk>
Source record: 42507

I'm looking for a circuit diagram for a MSF (60 KHz) locked frequency standard. One was published in Radcom in about 1997 - 8, but any other design would be useful. Can anyone help ?

Best 73's
Andy G1GKN

1245. Re: speaker controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 17:28:41 UTC
From: "Russell Hltn"
Message-ID: <ahc6k3$d16$1@nntp-m01.news.aol.com>
Source record: 42508

One disadvantage of having both come from the same speaker is that you'll have problem figuring out over which radio the message you just heard came over.

I'd suggest thinking about simply placing more then one speaker in the car in such a way that you know by the direction which one is which.

The mute is a good idea. It shouldn't be too hard to build. It's just a vox circuit that runs on speaker leads instead of mic. But once you'd used a relay to open the speaker, it would be a minor detail to use the relay to switch signal sources.

"Big Ron" <bigron@runREMOVEbox.com> wrote in message news:4huijugol0faf7v6te1t1ph1pen811ovit@4ax.com...
> I'm wanting to build a device that accepts two audio outputs (scanner
> and transceiver) and puts it out to one speaker. Some kind of audio
> mixer would work, but what I think would be even better would be one
> in which the scanner gets muted when the transceiver receives, a mixer
> with a priority. I need this to be relatively small, as it will be in
> my car. First off, does anyone know if something like this is
> produced commercially? Second, if not, can anyone give me some
> pointers on how to accomplish it? A mixer should be fairly easy, but
> the priority idea I'm not sure.

1246. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 19:50:05 UTC
From: "Clyde R. Shappee" <clydes@world.std.com>
Message-ID: <3D39BEED.45D4492C@world.std.com>
Source record: 42509

No.

I have a new standard that is far above anything I own already, or have built.
It will meet my needs for years to come.

Someday I may have access to a GPS receiver, and desire to understand the
principles in the required comparison. It is the method I want to explore.

That is all.

Clyde

Reg Edwards wrote:

> How accurate would you like your local 10 MHz standard to be set to ?
>
> What is it ? A BC109 transistor with an XT cut quartz crystal in a plastic
> project box?
>
> Everybody at this end is suffering from delusions of accuracy. Are you ?
> ---
> Reg.

1247. Re: calibration from GPS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 19:55:39 UTC
From: "Clyde R. Shappee" <clydes@world.std.com>
Message-ID: <3D39C03B.C8303237@world.std.com>
Source record: 42510

Thanks... This is what I was looking for.

Very interesting.

Clyde

Jim Pennell wrote:

> "Reg Edwards" <g4fgq.regp@btinternet.com> Wrote:
>
> > How accurate would you like your local 10 MHz standard to be
> > set to ?
> >
> > What is it ? A BC109 transistor with an XT cut quartz crystal
> > in a plastic project box?
> >
> > Everybody at this end is suffering from delusions of accuracy.
> > Are you ?
> > ---
> > Reg.
> >
>
> ======================
>
> Actually, this IS the main question to consider first... As I mentioned,
> most hams would find calibrating to WWV more than enough.
>
> Using WWVB or GPS involves somewhat more complex circuitry and may, or
> may not, be worth the trouble.
>
> On the other hand, considering the name of this newsgroup, it may be fun
> to build a super accurate frequency standard even if it IS overkill :)
>
> ======================
>
> In my case, I am dealing with 10 GHz (and higher) frequencies where a
> fraction of a PPM error multiplies to a large shift in absolute terms and
> that plays havoc with synchronizing both ends of a link.
>
> I plan to construct the GPS system by Brooks Shera mentioned in QST a few
> years ago, check out his website for details:
>
> http://www.rt66.com/~shera/index_fs.htm
>
> Here is his original article from QST:

>
> http://www.rt66.com/~shera/QST_GPS.pdf
>
> ==========
>
> Oh yeah, I noticed the TAPR website claimed to be designing a plug in
> option for their TAPR project to give GPS derived accuracy but that
> preliminary announcement hasn't changed for quite a long time now. Anyone
> know if they are still going to offer this ?
>
> Jim Pennell
> N6BIU

1248. How do you mount LEDs to a chassis?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 20:12:06 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0207201212.50f61d9@posting.google.com>
Source record: 42511
Cross-posted to: sci.electronics,sci.electronics.basics,rec.radio.amateur.homebrew,sci.electronics.components

When you build an electronics project that uses LEDs, how do you mount these devices? I find LEDs tricky to work with, because those leads are long, uninsulated, and fragile.

I would like to hear your favorite methods.

Jason Hsu, AG4DG
usenet@@@jasonhsu.com
http://www.jasonhsu.com/ham_radio-technical.html

1249. Re: speaker controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 20:28:51 UTC
From: w4pqwhs@aol.com
Message-ID: <20020720162851.04014.00000400@mb-ft.aol.com>
Source record: 42513

>
>I'm wanting to build a device that accepts two audio outputs (scanner
>and transceiver) and puts it out to one speaker.

I used a system in a Van Mobile some years ago that worked well..Take a good sized toroid ,1 1/2 inch diameter or so , put three equal windings equalley spaced ,about 10 turns each ..one to spkr one to BC radio one to scanner radio..set the scanner volume higher than BC ,when squelch opens it will over ride BC enough to be heard.Not perfect but it worked for me. good luck,,
Harold w4pqw

1250. Re: How do you mount LEDs to a chassis?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 20:28:56 UTC
From: HKJ <xx.hkj.xx@mailme.dk>
Message-ID: <ahch6f$41r$1@news.cybercity.dk>
Source record: 42512
Cross-posted to: sci.electronics,sci.electronics.basics,rec.radio.amateur.homebrew,sci.electronics.components

"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0207201212.50f61d9@posting.google.com...
> When you build an electronics project that uses LEDs, how do you mount
> these devices? I find LEDs tricky to work with, because those leads
> are long, uninsulated, and fragile.
>
> I would like to hear your favorite methods.

One of:

Use glue (Hot melt glue is very easy to work with).

Use a led mounting cap (Also easy to use).

Use a led lamp that can be mounted (Very easy, but at a price).

1251. Re: How do you mount LEDs to a chassis?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 20:54:47 UTC
From: John Larkin <John@0.com>
Message-ID: <66jjjuc5mfg2vnf9gdlufkm1o3v0nu2qsq@4ax.com>
Source record: 42514
Cross-posted to: sci.electronics,sci.electronics.basics,rec.radio.amateur.homebrew,sci.electronics.components

On 20 Jul 2002 13:12:06 -0700, jason_hsu@my-deja.com (Jason Hsu)
wrote:

>When you build an electronics project that uses LEDs, how do you mount
>these devices? I find LEDs tricky to work with, because those leads
>are long, uninsulated, and fragile.
>
>I would like to hear your favorite methods.
>
>Jason Hsu, AG4DG
>usenet@@@jasonhsu.com
>http://www.jasonhsu.com/ham_radio-technical.html

We most always mount them on a PC board which is in turn bolted to the
box or panel. Ideally this is the main board in the system, but if
that's not practical, we do a little auxiliary board (with pushbuttons
or whatever as needed) and connect that with a ribbon cable. If you're
building by hand, you can use some sort of proto or perf board, solder
the LEDs to that, and run wires or ribbon cable off the board.

The other thing you can do for one-offs is wire-wrap #30 insulated
wire to the LED pins. That avoids soldering and lead stress.

John

1252. Re: speaker controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 21:16:19 UTC
From: bergrud@enteract.com
Message-ID: <3d39d1f7.592749178@news.enteract.com>
Source record: 42515

They make something like that for private arcraft pilots. It allows more combinations than you need but the circuits would be the same. The one I saw a few years ago only had a couple basic ICs. I think there is an IC that is a mixer and onother that provides attenuation or volume control with the mute built in. The purpose of the box I saw was to allow the pilot to talk to his passengers headsets via open mic but when he keyed his transceiver mic the passengers were muted. There was a short time delay and even a stereo input jack so you could listen to CD player, but transceiver audio instantly muted stereo then when then transmissions ended the stereo would fade back on to the level it was at. If I find a schematic I will post it.

Kevin

On Sat, 20 Jul 2002 08:03:26 -0700, Big Ron <bigron@runREMOVEbox.com> wrote:

>I'm wanting to build a device that accepts two audio outputs (scanner >and transceiver) and puts it out to one speaker. Some kind of audio >mixer would work, but what I think would be even better would be one >in which the scanner gets muted when the transceiver receives, a mixer >with a priority. I need this to be relatively small, as it will be in >my car. First off, does anyone know if something like this is >produced commercially? Second, if not, can anyone give me some >pointers on how to accomplish it? A mixer should be fairly easy, but >the priority idea I'm not sure.

1253. Re: How do you mount LEDs to a chassis?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 21:51:46 UTC
From: "Sir Charles W. Shults III" <aichip@cfl.rr.com>
Message-ID: <SXk_8.87166$XH.2135284@twister.tampabay.rr.com>
Source record: 42516
Cross-posted to: sci.electronics,sci.electronics.basics,rec.radio.amateur.homebrew,sci.electronics.components

Another method that can work in a pinch is to drill a hole in the chassis
that the LED will fit in snugly, and then apply a drop of superglue to the back.
While this is not very "professional", it does work and is okay for hobby
prototypes or "one-off" items.
My preferred method is the plastic LED mount that comes in either one or two
pieces. The one piece models click in through the front and the LED clicks into
the back pretty securely by flaring out the four tabs.
The two part model clicks into the front of the panel in the same manner,
but once the LED is in, the plastic collar snaps over the back and securely
holds everything in place.

Cheers!

Chip Shults
My robotics, space and CGI web page - http://home.cfl.rr.com/aichip

1254. Re: "Low cost" Spectrum Analysers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 22:41:07 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3D39E7BF.250D0148@alma.demon.co.uk>
Source record: 42517
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Richard Hosking wrote:
>
> We are *still* building a DDS/PLL LO which would be suitable for such an
> analyser. John Miles is in the process of writing up the results
> Frequency is digitally settable to 1 Hz or better with step times less than
> 1 msec. Freq span is 1-2 GHz for the current components though others could
> be substituted for other ranges from about 100 MHz to 2.5 GHz. Phase noise
> performance is good for such a simple oscillator. There have been a few
> problems at close to multiples of the DDS clock frequency with sidebands
> appearing - esp at near 2 GHz. However this could be got around by varying
> the DDS clock with software You could drive a ring diode mixer followed by
> a roofing filter at 1000 MHz or so and you would have a front end for a
> receiver/spec analyser for 0-800 MHz or so.You could follow this with your
> tuner as the 2nd IF. I suspect the tuner frequency step size may be quite
> large which would restrict its frequency resolution as a front end.
> An alternative scheme might be to use the DDS/PLL board as a 2nd LO with
> fine freq steps to mix the output of the 495.5 MHz filter down to a lower IF
> where narrow filters could be used to give good frequency resolution.
> You could follow this with an Analog devices Log amp. Finally a PC could be
> used to drive it all and display the results. It would be an interesting
> project but not a trivial undertaking! Perhaps a group could be formed to
> work on it cooperatively.
>

Hi Richard,

the tuner lo goes from 1430 to 1930MHz. Step size is 62.5kHz, but I wonder if this can be changed by changing the 4MHz reference xtal to something smaller.

There is a second mixer which takes the 495MHz +/- 16MHz signal band and mixes it with 495MHz phase shifted to give the I and Q outputs. My understanding is poor, but I wonder if I can just put the I (or Q) output into the 10.7MHz filter and following circuitry as described in the low cost spectrum analyser? In this way I would be grabbing just a slice of the spectrum.

I know the tuner works great as a spectrum analyser when connected to a standard LNB. I have plotted in software a graph of frequency vs AGC for Astra in order to see the transponders. This is when the tuner is connected in its standard application to a QPSK digital decoder chip. The AGC value can be read in software.

The oscillator is unfamiliar to me(!). The oscillator transistor is in emitter follower configuration with a small C (1pF) from C to E and E to

B. The tuning coil is a stretch of PCB track about 2mm wide and 1.5cm long (curled up a little). There is a varacter tuning diode at each end. If I cut this track and attach a very small loop of wire (to make the inductor longer) what's the chance that it will still oscillate. I calculate that the current inductance is around 1nH, does this make sense given the dimensions?

Can anyone identify this type of oscillator so that I can do a google search for information?

I was hoping that I could change the oscillator to run 500MHz upwards. Perhaps losing a gig at the bottom end is asking too much!

input 0 to 500MHz (via LPF)
\
+--> 495MHz IF (32MHz BW) \
/ +-> 10.7MHz IF --> demod/log
AMP.
/ 495MHz fixed LO ---- /
/
/
digital local oscillator (500MHz-1GHz) <- I need to hack the LO

Is this feasible or have I made a fundemental mistake somewhere?

I have a 50MHz scope and a 600MHz frequency counter. Can I use these bits of kit to measure (even see if it is there) the tuner lo at the normal frequency range? If I can measure the lo (in some way) as it stands then I should be able to check whether it still oscillates when I hack the inductor.

Anyone in Bristol who is interested in microwaves???

regards...

--Gary

1255. Re: How do you mount LEDs to a chassis?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-20 22:44:30 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <3d39e6d9_2@newsa.ev1.net>
Source record: 42518
Cross-posted to: sci.electronics,sci.electronics.basics,rec.radio.amateur.homebrew,sci.electronics.components

There are plastic hole inserts that you could use, or a fancy metal holder,
both can be found at Radio Shack.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0207201212.50f61d9@posting.google.com...
> When you build an electronics project that uses LEDs, how do you mount
> these devices? I find LEDs tricky to work with, because those leads
> are long, uninsulated, and fragile.
>
> I would like to hear your favorite methods.
>
> Jason Hsu, AG4DG
> usenet@@@jasonhsu.com
> http://www.jasonhsu.com/ham_radio-technical.html

1256. Re: How do you mount LEDs to a chassis?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 00:46:52 UTC
From: tempest <tempest@midsouth.rr.com>
Message-ID: <0wn_8.19669$Qg.8466930@twister.midsouth.rr.com>
Source record: 42519
Cross-posted to: sci.electronics,sci.electronics.basics,rec.radio.amateur.homebrew,sci.electronics.components

I built a hyperdrive so I could travel to Uranus.

I used the little plastic LED mounting grommets for the hyperspace field inverter stability indicator. The voice coil and spatial alignment matrix next to it was, of course, an issue, but the LED faired well.

Even though a high-output dynamo was near causing an inverse spatial field flux, I was able to get it in the aux. plate using a cordless drill and a small bit.

Umbriel is wonderful in the spring.

"Jason Hsu" <jason_hsu@my-deja.com> wrote in message news:f7d9a152.0207201212.50f61d9@posting.google.com...
> When you build an electronics project that uses LEDs, how do you mount
> these devices? I find LEDs tricky to work with, because those leads
> are long, uninsulated, and fragile.
>
> I would like to hear your favorite methods.
>
> Jason Hsu, AG4DG
> usenet@@@jasonhsu.com
> http://www.jasonhsu.com/ham_radio-technical.html

1257. Re: "Low cost" Spectrum Analysers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 02:12:57 UTC
From: hello_nasty@hotmail.com
Message-ID: <7578ddcf.0207201812.3ed0be3d@posting.google.com>
Source record: 42520
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Gary Morton <gary@alma.demon.co.uk> wrote in message
news:<3D38A2F7.1EAFC2E1@alma.demon.co.uk>...
> Has anyone (particularly in the UK) construcuted one of these designs or
> considered consrtucting one? I am particularly intersted in the G4PMK
> design as featured in Radcom and the RSGB book "Test Equipment for the
> Radio Amateur".
>

Here is an example of a low cost homebrew spectrum analyzer:

http://www.qsl.net/n9zia/spec/index.html

1258. FS: UNBUILT HEATHKIT IT-11 CAP TESTER, well almost :-)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 03:02:30 UTC
From: rlucch2098@aol.com
Message-ID: <20020720230230.17058.00000039@mb-fv.aol.com>
Source record: 42521

Hi Fellas;
I have for SALE:
Like New(mint), Heathkit IT-11 Capacitor tester.
I checked the manual for the parts & they are all there except the Fuse holder & a few resistors.
The Fellow became a SK but not until he started on the kit, well just about!
He only started on the chassis components, really nothing soldered to speak of, he just started.
I did'nt bother counting all the little screws as they were in a bag & would have taken hours :-)
Everything else, Transformers, switches, sockets, knobs, etc has been accounted for!
Price is $200.00ppd or B/O, Conus.
Click on links for Pics>>
http://www.myradioroom.com/unbuilt-1.jpg
http://www.myradioroom.com/unbuilt-2.jpg
http://www.myradioroom.com/unbuilt-3.jpg
http://www.myradioroom.com/unbuilt-4.jpg
http://www.myradioroom.com/unbuilt-5.jpg

Thanks es 73....Rich WA2RQY (1961)
RLUCCH2098@aol.com
"Keep those heaters on"

1259. Re: How do you mount LEDs to a chassis?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 04:04:38 UTC
From: cooperjim@aol.com
Message-ID: <20020721000438.19331.00000308@mb-me.aol.com>
Source record: 42522

I have used a black rubber gromment that fits the led package snuggly. Drilled a hole in the chassis, mounted the grommet into the hole and placed the led in it.

I sometimes cut the leads to about a half inch and solder wire to them with about a quarter inch overlap joint. Then put heat shrink over the joints. (Yeah, you have to put the heat shrink over the wire first then slide it on. Unless you have some of the 4 dimensional wire that you can slip on after the joint is soldered hi hi)

For PCBs, I like Manhattan style construction. I glue a couple of pads to the base PCB, cut the leads of the led to about a half inch and bend a foot on each lead. Then I solder them to the pads. (Remember which lead is which as many leds show their polarity by having the plus led a little longer. I generally check to make sure I have the right polarity at the time I mount them.)

Hope this is of some help.

73
Jim Cooper NE6O
CooperJim@aol.com

>"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
>news:f7d9a152.0207201212.50f61d9@posting.google.com...
>> When you build an electronics project that uses LEDs, how do you mount
>> these devices? I find LEDs tricky to work with, because those leads
>> are long, uninsulated, and fragile.
>>
>> I would like to hear your favorite methods.
>>
>> Jason Hsu, AG4DG
>> usenet@@@jasonhsu.com
>>

1260. Re: speaker controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 05:41:42 UTC
From: "Russell Hltn"
Message-ID: <ahdhirsth2@nntp-m01.news.aol.com>
Source record: 42523

Now that you mention that, I understand there are some audio systems
for motorcycles that prioritize the signal sources - Intercom, 2 way,
broadcast band.

<bergrud@enteract.com> wrote in message
news:3d39d1f7.592749178@news.enteract.com...
> They make something like that for private arcraft pilots. It allows
> more combinations than you need but the circuits would be the same.

1261. Re: How do you mount LEDs to a chassis?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 07:10:21 UTC
From: Bruce Lane <feedspammerstosharks.4.spamvac@spamgourmet.com>
Message-ID: <MPG.17a3fe397d240b7498994b@news.drizzle.com>
Source record: 42524

In article <f7d9a152.0207201212.50f61d9@posting.google.com>,
jason_hsu@my-deja.com says...

> When you build an electronics project that uses LEDs, how do you mount
> these devices? I find LEDs tricky to work with, because those leads
> are long, uninsulated, and fragile.

<snip>

Call me picky, but my favorite is the Dialco mounts with the
cartridge-style LED lamps. They come in a variety of input voltage
ratings, all with a built-in limiting resistor, and you can make use of a
given voltage rating on a higher input simply by adding another resistor.

I do, of course, realize that this is one of the most expensive
ways to go about it IF the materials are purchased at the new/retail
level. However, I'm fortunate to have a good local source for surplus
pieces.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

1262. Re: "Low cost" Spectrum Analysers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 09:28:00 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3D3A7F5C.91150FD3@alma.demon.co.uk>
Source record: 42525
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Mario wrote:
>
> Gary Morton <gary@alma.demon.co.uk> wrote in message
news:<3D38A2F7.1EAFC2E1@alma.demon.co.uk>...
> > Has anyone (particularly in the UK) construcuted one of these designs or
> > considered consrtucting one? I am particularly intersted in the G4PMK
> > design as featured in Radcom and the RSGB book "Test Equipment for the
> > Radio Amateur".
> >
>
> Here is an example of a low cost homebrew spectrum analyzer:
>
> http://www.qsl.net/n9zia/spec/index.html

Thanks for the pointer. I done a lot of searches, but I didn't find this
page. Perhaps I should also search on analy<z>er!

--Gary

1263. Re: How do you mount LEDs to a chassis?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 09:39:57 UTC
From: Graham <grahame9@btinternet.com>
Message-ID: <ahdvhdfdv1@paris.btinternet.com>
Source record: 42526
Cross-posted to: sci.electronics,sci.electronics.basics,rec.radio.amateur.homebrew,sci.electronics.components

> I built a hyperdrive so I could travel to Uranus.
>
> I used the little plastic LED mounting grommets for the hyperspace field
> inverter stability indicator. The voice coil and spatial alignment matrix
> next to it was, of course, an issue, but the LED faired well.
>
> Even though a high-output dynamo was near causing an inverse spatial field
> flux, I was able to get it in the aux. plate using a cordless drill and a
> small bit.
>
> Umbriel is wonderful in the spring.
>

I was there myself testing my bicolored LED indicator which lets me know if either my Tachyon Field Inverter is about to collapse - or if my eggs are hardboiled. I used a quick two-part black LED clip which securely mounts it into a suitability sized hole - which is far better than super-glue or blue-tak which can become unstuck as you pass the asterioid belt and it gets a bit chilly. (Blue-tak tends to peel away at low tempreatures or when the cockpit becomes steamed up when you are cooking your dinner (hence the bicolor LED)!

Graham

>
> "Jason Hsu" <jason_hsu@my-deja.com> wrote in message
> news:f7d9a152.0207201212.50f61d9@posting.google.com...
> > When you build an electronics project that uses LEDs, how do you mount
> > these devices? I find LEDs tricky to work with, because those leads
> > are long, uninsulated, and fragile.
> >
> > I would like to hear your favorite methods.
> >
> > Jason Hsu, AG4DG
> > usenet@@@jasonhsu.com
> > http://www.jasonhsu.com/ham_radio-technical.html
>
>

1264. IY5PIS on line

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 10:00:34 UTC
From: "IK5ZTT, Paolo" <ik5ztt@libero.it>
Message-ID: <6Dv_8.11445$s74.305787@twister1.libero.it>
Source record: 42527

Un evento particolare per il prossimo 23 Luglio: dopo l'incontro di venerdi
in Firenze,

marted&#65533; p.v. si terr&#65533; un incontro alla Villa Medicea di Coltano (PI) tra il
Ministro

M. Gasparri, Ministro per le Comunicazioni, le rappresentative locali,
esponenti del mondo tecnico scientifico, con la Signora Elettra Marconi,
figlia di Guglielmo, madrina dell'evento, un dibattito dal tema "Coltano,
riaccendiamo il segnale, proposte per il recupero del centro radio e del
centro produzione RAI". Coltano, infatti, e' rimasto l'unico luogo al mondo
a versare in stato di abbandono, tra quelli che hanno fatto la storia della
Radio e di Guglielmo Marconi.

Per l'occasione le sezione ARI di Pisa attiver&#65533; una stazione speciale, dal
nominativo IY5PIS,

dalle immediate vicinanze del centro marconiano dalle ore 15.00 locali; le
frequenze preferenziali

saranno 7.030 (CW), 28.470 (FONIA), 14.270, 21.270 (FONIA) sperando in una
propagazione favorevole per collegamenti a lunga distanza.

Una stazione packet sar&#65533; allestita per monitorare la attivit&#65533;.

Altre "stazioni marconiane" hanno aderito a questo evento (KM1CC, GX0MWT,
IY4FGM, VO1MRC, VO1AA, GB2LD, GB2GM.) e garantiscono la loro presenza in
frequenza per il pomeriggio del prossimo 23 luglio.

Un ringraziamento a queste e chiunque altro collega che vorra' contattarci.

A presto,

Paolo IK5ZTT, ik5ztt@amsat.org

www.qsl.net/ik5ztt

==========
73s de IK5ZTT Paolo Barsotti, Pisa
300 nice Links at: www.qsl.net/ik5ztt
for OM or not, ik5ztt@amsat.org

1265. Re: How do you mount LEDs to a chassis?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 10:01:52 UTC
From: "Watson A.Name" <alondra101@hotmail.com>
Message-ID: <MPG.17a4278d25199ba9899fe@news.la.sbcglobal.net>
Source record: 42528
Cross-posted to: sci.electronics,sci.electronics.basics,rec.radio.amateur.homebrew,sci.electronics.components

In article <0wn_8.19669$Qg.8466930@twister.midsouth.rr.com>,
tempest@midsouth.rr.com talked about...
> I built a hyperdrive so I could travel to Uranus.
>
> I used the little plastic LED mounting grommets for the hyperspace field
> inverter stability indicator. The voice coil and spatial alignment matrix
> next to it was, of course, an issue, but the LED faired well.
>
> Even though a high-output dynamo was near causing an inverse spatial field
> flux, I was able to get it in the aux. plate using a cordless drill and a
> small bit.
>
> Umbriel is wonderful in the spring.

Engaging that hyperdrive must be a real kick in your anus!

If you don't like messing with mounting LEds to the enclosure, then you can do it like a lot of equipment has it done recently. You put the surface mount LEDs on the circuit board, and then use a short length of clear plastic rod to pipe the light to the exterior of the enclosure. In one case, the Cisco IP phone, when the phone rings, the earpiece of the handset flashes bright red. I said to myself, how the hell did they get the handset to light up when, like every other phone, there are only four wires to the handset? Upon closer inspection I found that the handset has a piece of clear plastic thru the earpiece, and the LED is in the cradle of the base unit, and shines _thru_ the handset.

Sort of like Warp Drive!

[snip]

--
@@F@r@o@m@@O@r@a@n@g@e@@C@o@u@n@t@y@,@@C@a@l@,@@w@h@e@r@e@@
My email address is whitelisted. *All* email sent to it
goes directly to the trash unless you put NOSPAM in the
Subject: line. alondra101 <at> hotmail.com
Don't be ripped off by the big book dealers. Go to the URL
that will give you a choice and save you money(up to half).
http://www.everybookstore.com You'll be glad you did!
Just when you thought you had all this figured out, the gov't
changed it: http://physics.nist.gov/cuu/Units/binary.html
@@t@h@e@@a@f@f@l@u@e@n@t@@m@e@e@t@@t@h@e@@E@f@f@l@u@e@n@t@@

1266. Re: "Low cost" Spectrum Analysers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 11:08:45 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3d3a9518$0$23663@echo-01.iinet.net.au>
Source record: 42529
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Gary Morton" <gary@alma.demon.co.uk> wrote in message
news:3D39E7BF.250D0148@alma.demon.co.uk...
> Richard Hosking wrote:
> >
> > We are *still* building a DDS/PLL LO which would be suitable for such an
> > analyser. John Miles is in the process of writing up the results
snip

> Hi Richard,
>
> the tuner lo goes from 1430 to 1930MHz. Step size is 62.5kHz, but I
> wonder if this can be changed by changing the 4MHz reference xtal to
> something smaller.

You might be able to get step size down a bit by reducing the reference
freq. Bear in mind however that the loop filter will be designed with (among
other things) the reference freq in mind - so reference sidebands may become
a problem. I assume it is a single loop PLL - in this case there is a limit
to the minimum step size set by lockup time and the loop filter. Also you
would have to change the main divider ratios in software

>
> There is a second mixer which takes the 495MHz +/- 16MHz signal band and
> mixes it with 495MHz phase shifted to give the I and Q outputs. My
> understanding is poor, but I wonder if I can just put the I (or Q)
> output into the 10.7MHz filter and following circuitry as described in
> the low cost spectrum analyser? In this way I would be grabbing just a
> slice of the spectrum.

The I and Q outputs will have to be 90 degree phase shifted relative to one
another (they are already in phase quadrature)
and summed to give a single sideband output. Otherwise you will get an IF
image at +/- 10.7 MHz from the carrier (21.4 MHz from your wanted signal).
The 16 MHz bandwidth filter is not going to give adequate attenuation.
You could do this with a phase shift circuit at 10.7 MHz (eg a 2 section
polyphase). Opposite sideband suppression will depend on phase and amplitude
accuracy in the front end. I would think it would be difficult to achieve
more than 40 dB suppression at these frequencies.

> I know the tuner works great as a spectrum analyser when connected to a
> standard LNB. I have plotted in software a graph of frequency vs AGC for
> Astra in order to see the transponders. This is when the tuner is
> connected in its standard application to a QPSK digital decoder chip.
> The AGC value can be read in software.

The AGC is quite a good approximation to a log amp in many systems - maybe
you dont have to do any more!

>
> The oscillator is unfamiliar to me(!). The oscillator transistor is in
> emitter follower configuration with a small C (1pF) from C to E and E to
> B. The tuning coil is a stretch of PCB track about 2mm wide and 1.5cm
> long (curled up a little). There is a varacter tuning diode at each end.
> If I cut this track and attach a very small loop of wire (to make the
> inductor longer) what's the chance that it will still oscillate. I
> calculate that the current inductance is around 1nH, does this make
> sense given the dimensions?
>
> Can anyone identify this type of oscillator so that I can do a google
> search for information?

Is it a grounded base circuit? The inductor would go from collector to VCC
and the base is grounded to RF but has DC bias

>
> I was hoping that I could change the oscillator to run 500MHz upwards.
> Perhaps losing a gig at the bottom end is asking too much!

I suspect it might be easier to use a new VCO - maybe one of the
Minicircuits series

> input 0 to 500MHz (via LPF)
> \
> +--> 495MHz IF (32MHz BW) \
> / +-> 10.7MHz IF --> demod/log
> AMP.
> / 495MHz fixed LO ---- /
> /
> /
> digital local oscillator (500MHz-1GHz) <- I need to hack the LO
>
> Is this feasible or have I made a fundemental mistake somewhere?

What aboiut any front end filters?

> I have a 50MHz scope and a 600MHz frequency counter. Can I use these
> bits of kit to measure (even see if it is there) the tuner lo at the
> normal frequency range? If I can measure the lo (in some way) as it
> stands then I should be able to check whether it still oscillates when I
> hack the inductor.

You will have to make some sort of detector
A spec analyser to 2 GHz would be nice.... :)

Richard

1267. Re: How do you mount LEDs to a chassis?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 11:15:12 UTC
From: Lars Bjoern Schaumburg-Muller OZ1CJX <lbsm@nospam.dk>
Message-ID: <3D3A97C0.257591F7@nospam.dk>
Source record: 42530
Cross-posted to: sci.electronics,sci.electronics.basics,rec.radio.amateur.homebrew,sci.electronics.components

Jason Hsu wrote:
>
> When you build an electronics project that uses LEDs, how do you mount
> these devices? I find LEDs tricky to work with, because those leads
> are long, uninsulated, and fragile.
>
> I would like to hear your favorite methods.
>
> Jason Hsu, AG4DG
> usenet@@@jasonhsu.com
> http://www.jasonhsu.com/ham_radio-technical.html

I have often used a small piece of MiniMount (Selfadhesive PCB strips)
I put it close to the hole and bend the LED pins back and solder them on
the pads. It can also carry a current limiting resistor etc. if needed.

Vy 73 de Lars / OZ1CJX

1268. Re: Strange oscillator.....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 14:42:58 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2107021043280001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42531

In article <ah9ceu$r0$1@wanadoo.fr>, "JCM" <menardjc@wanadoo.fr> wrote:

> Thank you Reg and Alan, I know have a scientific explanation of what seemed
> to be a little bit "magic" !!!
>
> 73 from F8ND
>
> "JCM" <menardjc@wanadoo.fr> a crit dans le message de news:
> ah7b85sb2@wanadoo.fr...
> > I have built the following oscillator found at:
> > http://jnaudin.free.fr/cnr/negosc.htm
> >
> > + --1 k resistor------A--------II----------
> > 220 pF C
> > 12 Volts O
> > I
> > L
> > - ----------B----------
> >
> > A: to emitter of a 2N914
> > B: to collector of the 2N914
> > Base of 2N914 not connected
> > Coil is from a 455 kHz IF transformer
> > Result: 300 kHz sine wave.
> > Max frequency with a smaller coil 1.8 MHz
> >
> > All transistors are not equal:
> > 2N2222 ok up to 100 kHz max with larger capacitor and coil.
> > BF245 and many other BF... do not oscillate.
> > PNPs reverse connected do not oscillate.
> >
> > How can this "thing" oscillate ? some kind of a "tunnel" effect ?
> > Nothing found in available semiconductors literature.
> > Thanks in advance for an explanation of this mystery.
> >
> > JCM
> >
> >

Looking at the original web page, I can safely say that I've never seen a
more obfuscated explaination of operation since De Forest's
non-explaination of the vacuum tube. How does one get negative resistance
in the low voltage curve of Vceo? It eventually will get low resistance
at or near breakdown, but up to this point, current is slowly increasing

and eventually the resistance will go low, but not negative or am I missing some portion of this discussion?

Steve WB4CZR

1269. FA Popular Electronics magazines, 12 months for 1963, 1962, 1957, and 1961 (48 issues)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 16:03:56 UTC
From: Jim <jbollit@ix.netcom.com>
Message-ID: <ahem19$92c$1@slb2.atl.mindspring.net>
Source record: 42532
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.shortwave

Popular Electronics Magazines 48 issues in all (12 months for the 4 years listed.

Loaded with alot of boat anchor articles and shortwave articles. Brings back memories of the "good ol' days"

If interested, take a look at:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1366821100&ssPageName=ADME:B:LC:US:1

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1366823582&ssPageName=ADME:B:LC:US:1

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1366814939&ssPageName=ADME:B:LC:US:1

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1366818746&ssPageName=ADME:B:LC:US:1

Jim

1270. Transmitter Explanation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 16:47:54 UTC
From: Al <none@none.com>
Message-ID: <aheojf$lt2$1@geraldo.cc.utexas.edu>
Source record: 42534
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I have been looking at the schematic below to try and understand what is going on. It is a baby monitor
transmitter. It's basically a mic amplifier with AGC, a modulator, and some kind of RF output section. I'm
only interested in the top half of the circuit, the modulator and PA. Could someone give me a brief overview
of what's going on? I would really appreciate any help. BTW, what are the FT129 and FT130?

https://gullfoss2.fcc.gov/prod/oet/forms/blobs/retrieve.cgi?attachment_id=59951&native_or_pdf=pdf

Al

1271. Re: "Low cost" Spectrum Analysers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 16:47:57 UTC
From: mikea@mikea.ath.cx
Message-ID: <1BB_8.10515$r65.542465266@newssvr17.news.prodigy.com>
Source record: 42533
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

In <3d3a9518$0$23663@echo-01.iinet.net.au> (rec.radio.amateur.homebrew), Richard Hosking wrote:

: The I and Q outputs will have to be 90 degree phase shifted relative to one
: another (they are already in phase quadrature)

Erm ... I had thought that Q was phase shifted 90 degrees
relative to I already, and that was what "quadrature" meant. Of
course, I'm probably showing my ignorance here, as usual.

--
"Salesman genes. Lies built right into the DNA."
-- Walter Jon Williams, _Whirlwind_

1272. Re: Help! Need help restoring Philco Transitone

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 17:16:53 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <90C_8.157021$DB.5305868@news1.east.cox.net>
Source record: 42535
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

You can use a small 6 or 12 volt filament transformer as a temporary fix.
Despite what others may say about core saturation -- it WILL work.

What lead did you cut short? If the secondary, peel back the insulation
and find the lead -- should be about 18 gauge enamel and easy to
splice.

Pete

"Matt Senecal" <msenecal1@juno.com> wrote in message
news:62bf14a6.0207131041.5d513233@posting.google.com...
> I just recently came into a nice old Philco Transitone. I don't have
> pictures of it yet, but it's small, a dark brown bakelite, with a
> speaker on the left, and a squareish white and gold tuning display on
> the right. There are two knobs right under the display. The whole
> thing looks to be from the late 30's, and looks like something that
> would be on a detective's desk in a noir film.
>
> The problem is that the speaker was completely shot. In order to take
> it out, I had to remove the speaker transfomer, which was riveted to
> the speaker. I accidentally clipped one of the leads too short, and I
> don't think I can re-use the transformer(but may try). I have a
> speaker that will fit, but I can't find a match for the transformer.
> It takes 4 leads, and is labeled 5575. I have no idea how to match it.
> Anyone have any suggestions or ideas?
>
> Thanks,
>
> Matt

1273. Re: How do you mount LEDs to a chassis?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 18:34:47 UTC
From: dplatt@radagast.org
Message-ID: <ujlvm7mpbjlfa7@corp.supernews.com>
Source record: 42536
Cross-posted to: sci.electronics,sci.electronics.basics,rec.radio.amateur.homebrew,sci.electronics.components

>We most always mount them on a PC board which is in turn bolted to the
>box or panel. Ideally this is the main board in the system, but if
>that's not practical, we do a little auxiliary board (with pushbuttons
>or whatever as needed) and connect that with a ribbon cable. If you're
>building by hand, you can use some sort of proto or perf board, solder
>the LEDs to that, and run wires or ribbon cable off the board.

There's a neat trick used in the mounting of the direction-indicator LEDs in the Ramsey Electronics doppler direction finder kit. They're simply soldered to the main PCB, with fairly long leads which carry them up to the front panel. The plastic panel simply has holes drilled in it. No clips or adhesive are used.

Getting all of the LEDs mounted at exactly the same height above the board (an inch or so) would seem to be a nightmare, but it's actually easy. You drop the LEDs into the PCB holes (checking the polarity, of course!), then put the PCB temporarily into position into the top side of the cabinet. Holding the two together, you turn them over... and the LEDs drop down and (with a little bit of wiggling) drop into the holes in the cabinet top. The raised rim around the base of each LED stops them from falling through the front panel. Voila - they're all in position, and perfectly aligned. Solder the leads to the PCB, clip off the excess, and you're done.

It's a slick trick - less expensive than using clips (allows for a more compact pattern of LEDs, too), less messy than hot glue, and much easier than trying to adjust the LED heights by hand. It should work in any situation where you're mounting a bunch of LEDs, and can manage to have a PC board in a reliable position an inch or two behind the panel.

--
Dave Platt <dplatt@radagast.org> AE6EO
Hosting the Jade Warrior home page: http://www.radagast.org/jade-warrior
I do _not_ wish to receive unsolicited commercial email, and I will
boycott any company which has the gall to send me such ads!

1274. Re: Transmitter Explanation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 18:48:24 UTC
From: Rory Davis <n7cr@nospambellsouth.net>
Message-ID: <EdD_8.123949$JU3.57607000@e3500-atl1.usenetserver.com>
Source record: 42537
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"Al" <none@none.com> wrote in message news:aheojf$lt2$1@geraldo.cc.utexas.edu...
> I have been looking at the schematic below to try and understand what is going on. It is a baby monitor
> transmitter. It's basically a mic amplifier with AGC, a modulator, and some kind of RF output section. I'm
> only interested in the top half of the circuit, the modulator and PA. Could someone give me a brief overview
> of what's going on? I would really appreciate any help. BTW, what are the FT129 and FT130?

What you have here is a very simple FM transmitter.

Q2 is a Colpitts oscillator controlled by crystals X1 or X2, selected by SW1. Varactor D1 and inductor T3 along with mislabeled R8
(should be R6) are the FM reactance modulator circuit. The capacitance of D1 changes with varying voltage applied via R7. Voltage
divider R8/R9 (near the op-amp) sets the DC offset of this voltage, setting the unmodulated frequency of the oscillator, and the
audio signal shifts this voltage applied to D1 above and below the DC offset point, changing D1's capacitance and hence the
frequency of the oscillator. The unmodulated frequency will be below the crystal's self-resonant frequency.

Tuned transformer T2 couples the signal generated by Q2 to the next stage, and most likely is resonated at a multiple of X1 or X2's
frequency by C4. Its main purpose is to filter spurious signals generated by the oscillator. T2's secondary winding is coupled to RF
amp Q1 through the small value (6 pF) capacitor C5. BTW, there are two C5's in this schematic. The 100nF C5 is a bypass capacitor,
and along with R3 reduces the amount of RF transferred to the DC supply line. Capacitors C7 and C8 are the RF feedback network for
the Colpitts oscillator. R4 provides emitter bias and R5 provides base bias for Q2. These two resistors set the DC operating point
of Q2 for proper operation.

Q1 is configured as a common-emitter class C amplifier, with operating bias set by R1. The output of Q1 is filtered by resonant transformer T1 (along with C1). T1 also acts as an impedance matching network along with L1
to couple the amplified signal to the antenna. C2 and R2 provide the same function as C5 and R3 described above.

73/Rory N7CR

1275. New Antenna Page

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 20:20:51 UTC
From: John Tait <bravo@iol.ie>
Message-ID: <DIE_8.1689$lC5.13733@news.iol.ie>
Source record: 42538

I have added a new page to my website at http://www.iol.ie/~bravo/ on the subject of my Low Band TX and RX Antennae..
http://www.iol.ie/~bravo/low_band_antennae.htm (Vertical Dipoles and K9AY array)
It may be of interest to those who do NOT have space for 4 Square Arrays, a 200ft tower, Beverages etc., and who like to roll their own..
Vy 73
de
John EI7BA

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.375 / Virus Database: 210 - Release Date: 10/07/2002

1276. Icom IC-W31A info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 22:19:16 UTC
From: KC8SSG <kc8ssg@qsl.net>
Message-ID: <ErG_8.198$934.2646@news>
Source record: 42539
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I need some more info on this.I would like to find any mods too!

--
KC8SSG

1277. Spice model of BFY90 wanted?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-21 23:33:52 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3D3B459D.A2DE4D7B@alma.demon.co.uk>
Source record: 42540

Has anyone got a spice model of this transistor?

It appears to be obselete, however it is used as the front end in an UHF prescaler kit from Maplins. I am interested to check theory (using spice) against measurement (using kit at work). It's part of my on-going experimentation.

Actually I am trying to find a design of a high impedance amplifier which will take a few 10's of mV and turn it into a signal to drive a LS logic gate input. I'd like it to work upto 60MHz (lower limit is not too important). The Maplin design may be a starting point for a new design.

regards...

--Gary

1278. Re: How do you mount LEDs to a chassis?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-22 00:56:37 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D3B5845.5060506@eznec.com>
Source record: 42541
Cross-posted to: sci.electronics,sci.electronics.basics,rec.radio.amateur.homebrew,sci.electronics.components

One tip when mounting leaded LEDs to a circuit board -- make sure the hole spacing is the same as the lead spacing. Bend the LED leads before soldering if necessary to make them match the hole spacing. The reason is that soldering softens the LED plastic via heat conducted along the leads. If there's any stress on the leads when you solder them, the LED can be internally damaged. Sometimes this doesn't show up as an immediate failure, but as a shortened LED lifetime.

Roy Lewallen, W7EL

1279. Re: Transmitter Explanation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-22 01:26:57 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <3D3B5F41.B2534A0D@flash.net>
Source record: 42542
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Well, after waiting and waiting, and 1Mb of download was reached with no
apparent end in sight, I stopped the download, with my 56k modem.
Perhaps you could give the file size as a warning if you expect folks to
go to the trouble of retrieving this file in order to give comments.
Maybe someone with a broadband connection and time to spare can comment.
Steve

Al wrote:
>
> I have been looking at the schematic below to try and understand what is going on. It is
a baby monitor
> transmitter. It's basically a mic amplifier with AGC, a modulator, and some kind of RF
output section. I'm
> only interested in the top half of the circuit, the modulator and PA. Could someone give
me a brief overview
> of what's going on? I would really appreciate any help. BTW, what are the FT129 and
FT130?
>
> https://gullfoss2.fcc.gov/prod/oet/forms/blobs/retrieve.cgi?attachment_id=59951&native_o
r_pdf=pdf
>
> Al

1280. Re: Transmitter Explanation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-22 05:18:58 UTC
From: Al <none@none.com>
Message-ID: <ahg4k3$b8m$1@geraldo.cc.utexas.edu>
Source record: 42543
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Sorry, I too use a dial-up modem but didn't even think about the file size issue. It looks like it is about
1.1 megs to download. That's pretty ridiculous considering it a one page diagram. I'll mention it from now
on when relevant. Thanks though.

Al

"Steve Ratzlaff" <sratzlaf@flash.net> wrote in message news:3D3B5F41.B2534A0D@flash.net...
> Well, after waiting and waiting, and 1Mb of download was reached with no
> apparent end in sight, I stopped the download, with my 56k modem.
> Perhaps you could give the file size as a warning if you expect folks to
> go to the trouble of retrieving this file in order to give comments.
> Maybe someone with a broadband connection and time to spare can comment.
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> > of what's going on? I would really appreciate any help. BTW, what are the FT129 and FT130?
> >
> > https://gullfoss2.fcc.gov/prod/oet/forms/blobs/retrieve.cgi?attachment_id=59951&native_or_pdf=pdf
> >
> > Al

1281. Re: Transmitter Explanation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-22 05:48:18 UTC
From: Al <none@none.com>
Message-ID: <ahg6b7$c1k$1@geraldo.cc.utexas.edu>
Source record: 42544
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

If I were to build a transmitter similar to the one shown in this circuit, what would be the best way to stop
it transmitting entirely from a 5v CMOS uC and why? Would it be as simple as adding a FET or relay between
the power supply and transmitter or is there a better way? What impact would this have on normal operation?

Al

"Rory Davis" <n7cr@nospambellsouth.net> wrote in message
news:EdD_8.123949$JU3.57607000@e3500-atl1.usenetserver.com...
>
> "Al" <none@none.com> wrote in message news:aheojf$lt2$1@geraldo.cc.utexas.edu...
> > I have been looking at the schematic below to try and understand what is going on. It is a baby monitor
> > transmitter. It's basically a mic amplifier with AGC, a modulator, and some kind of RF output section.
I'm
> > only interested in the top half of the circuit, the modulator and PA. Could someone give me a brief
overview
> > of what's going on? I would really appreciate any help. BTW, what are the FT129 and FT130?
>
> What you have here is a very simple FM transmitter.
>
> Q2 is a Colpitts oscillator controlled by crystals X1 or X2, selected by SW1. Varactor D1 and inductor T3
along with mislabeled R8
> (should be R6) are the FM reactance modulator circuit. The capacitance of D1 changes with varying voltage
applied via R7. Voltage
> divider R8/R9 (near the op-amp) sets the DC offset of this voltage, setting the unmodulated frequency of the
oscillator, and the
> audio signal shifts this voltage applied to D1 above and below the DC offset point, changing D1's
capacitance and hence the
> frequency of the oscillator. The unmodulated frequency will be below the crystal's self-resonant frequency.
>
> Tuned transformer T2 couples the signal generated by Q2 to the next stage, and most likely is resonated at a
multiple of X1 or X2's

> frequency by C4. Its main purpose is to filter spurious signals generated by the oscillator. T2's secondary
winding is coupled to RF
> amp Q1 through the small value (6 pF) capacitor C5. BTW, there are two C5's in this schematic. The 100nF C5
is a bypass capacitor,
> and along with R3 reduces the amount of RF transferred to the DC supply line. Capacitors C7 and C8 are the
RF feedback network for
> the Colpitts oscillator. R4 provides emitter bias and R5 provides base bias for Q2. These two resistors set
the DC operating point
> of Q2 for proper operation.
>
> Q1 is configured as a common-emitter class C amplifier, with operating bias set by R1.
> The output of Q1 is filtered by resonant transformer T1 (along with C1). T1 also acts as an impedance
matching network along with L1
> to couple the amplified signal to the antenna. C2 and R2 provide the same function as C5 and R3 described
above.
>
>
> 73/Rory N7CR
>
>
>
>
>

1282. Re: Transmitter Explanation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-22 05:49:12 UTC
From: Lou <tech@dp.net>
Message-ID: <ahg9fd$2h4l$1@news.dp.net>
Source record: 42545
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Tell me about it.....I too waited... Screw that!

Lou/tech@dp.net

"Steve Ratzlaff" <sratzlaf@flash.net> wrote in message
news:3D3B5F41.B2534A0D@flash.net...
> Well, after waiting and waiting, and 1Mb of download was reached with no
> apparent end in sight, I stopped the download, with my 56k modem.
> Perhaps you could give the file size as a warning if you expect folks to
> go to the trouble of retrieving this file in order to give comments.
> Maybe someone with a broadband connection and time to spare can comment.
> Steve
>
> Al wrote:
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some kind of RF output section. I'm
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Could someone give me a brief overview
> > of what's going on? I would really appreciate any help. BTW, what are
the FT129 and FT130?
> >
> >
https://gullfoss2.fcc.gov/prod/oet/forms/blobs/retrieve.cgi?attachment_id=59
951&native_or_pdf=pdf
> >
> > Al

1283. Re: "Low cost" Spectrum Analysers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-22 06:52:13 UTC
From: "Brain Rarey"
Message-ID: <3d3baba9_1@mk-nntp-1.news.uk.worldonline.com>
Source record: 42546
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

I'll take your word that you usually display your
ignorance.

In this case, you are correct.

Mike Andrews <mikea@mikea.ath.cx> wrote in message
news:1BB_8.10515$r65.542465266@newssvr17.news.prodigy.com...
> In <3d3a9518$0$23663@echo-01.iinet.net.au> (rec.radio.amateur.homebrew),
Richard Hosking wrote:
> : The I and Q outputs will have to be 90 degree phase shifted relative to
one
> : another (they are already in phase quadrature)
> Erm ... I had thought that Q was phase shifted 90 degrees
> relative to I already, and that was what "quadrature" meant. Of
> course, I'm probably showing my ignorance here, as usual.

1284. Re: "Low cost" Spectrum Analysers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-22 09:05:39 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d3bc9db.1384207@news.freeserve.net>
Source record: 42397
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Gary, RE: the "Low cost Spectrum Analyser" you mantion as being
published in RADCOM. There is one of 'em for sale on EBAY at the
moment.
IT looks like its an early one (up to about 95Mhz rather than 110Mhz
which the later ones with mods). I also appears to have an aditional
frontend mixer that _MAY_ extend its coverage somewhat.
HTH MIke W G8NXD aka M3MSM
--
On Fri, 19 Jul 2002 23:35:24 GMT, Gary Morton <gary@alma.demon.co.uk>
wrote:

>Has anyone (particularly in the UK) construcuted one of these designs or
>considered consrtucting one? I am particularly intersted in the G4PMK
>design as featured in Radcom and the RSGB book "Test Equipment for the
>Radio Amateur".
>
>My RF experience is very low, but my digital is very high. I have a
>number of satellite tuners. They are digitally controlled using a I2C
>bus. They are used to tune 950MHz to 1350MHz. I was wondering whether I
>could modify one in some way. Is it possible to convert 0->100MHz (say)
>to 950MHz->1050MHz with a circuit that can be constructed by an amateur?
>Perhaps I could use a second tuner to generate the 950MHz mixer
>frequency. Software could be used to scan the band. Since the tuner is a
>digitally controlled PLL, the accuracy should be very high.
>
>A great help is that I have the schematics of these particular tuner
>modules. Following the mixer is a 495.5MHz SAW filter with a 32MHz
>bandwidth. There is then some more circuitry which includes a 495.5MHz
>oscillator, which I assume is some kind of mixer. The final output is I
>and Q. These outputs are normally used for the QPSK demodulation. I
>assume that I will need to add the same kind of filter and log amplifier
>in order to find the signal of interest?
>
>If anyone is interested in this area, please get in touch. I have a
>spare tuner if someone is really interested.
>
>regards...
>
>--Gary

1285. Re: "Low cost" Spectrum Analysers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-22 11:02:39 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3d3be526$0$25228@echo-01.iinet.net.au>
Source record: 42398
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Mike Andrews" <mikea@mikea.ath.cx> wrote in message
news:1BB_8.10515$r65.542465266@newssvr17.news.prodigy.com...
> In <3d3a9518$0$23663@echo-01.iinet.net.au> (rec.radio.amateur.homebrew),
Richard Hosking wrote:
>
> : The I and Q outputs will have to be 90 degree phase shifted relative to
one
> : another (they are already in phase quadrature)
>
> Erm ... I had thought that Q was phase shifted 90 degrees
> relative to I already, and that was what "quadrature" meant.

Quadrature does mean 90 degrees relationship (thouigh for the strict
mathematicians it means orthogonal in the linear algebra sense I think - no
doubt I will be corrected by someone)
This is the basis of a phasing SSB generator or receiver
The first 90 phase shift of one signal path relative to the other takes
place at RF and the second at baseband. This can be done by an analog
circuit (eg passive phase shift circuit) or digitally (eg Hilbert transform
in DSP) The reason that one sideband is cancelled is that the audio or
baseband from the two sidebands is phase inverted, one relative to the
other. Thus one will add while the other will cancel when they are summed.

This scheme seems to be widely used in microwave systems to allow either
direct conversion to baseband or suppression of an IF image.

Richard

1286. Re: "Low cost" Spectrum Analysers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-22 11:42:18 UTC
From: "Brain Rarey"
Message-ID: <3d3bf1ed_1@mk-nntp-1.news.uk.worldonline.com>
Source record: 42400
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

ISTR that Hilbert transform in DSP is for the
second half of the impulse response to be the
inverse and time-reversed mirror of the first half.

Similar to a linear phase filter where the second
half is the time reverse of the first half?

Richard Hosking <zaprichardh@iinet.net.au(remove the zap)> wrote in message
news:3d3be526$0$25228@echo-01.iinet.net.au...
. This can be done by an analog
> circuit (eg passive phase shift circuit) or digitally (eg Hilbert
transform
> in DSP)

1287. search for diagram qubical quad

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-22 11:43:34 UTC
From: Dave ON1DSQ <davyvanloon@pandora.be>
Message-ID: <GdS_8.22585$8o4.2892@afrodite.telenet-ops.be>
Source record: 42399

Hi my name is Dave (on1dsq) and I'am looking for a diagram of a 8 or 10 or
12 el qubical quad for 144 Mhz.
Who can help my please??
Also if you can copy it from a book no problem everything is welcome.

73's vy Dave

on1dsq@pandora.be

1288. Re: Spice model of BFY90 wanted?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-22 12:28:41 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2207020829110001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42401

In article <3D3B459D.A2DE4D7B@alma.demon.co.uk>, Gary Morton
<gary@alma.demon.co.uk> wrote:

> Has anyone got a spice model of this transistor?
>
> It appears to be obselete, however it is used as the front end in an UHF
> prescaler kit from Maplins. I am interested to check theory (using
> spice) against measurement (using kit at work). It's part of my on-going
> experimentation.
>
> Actually I am trying to find a design of a high impedance amplifier
> which will take a few 10's of mV and turn it into a signal to drive a LS
> logic gate input. I'd like it to work upto 60MHz (lower limit is not too
> important). The Maplin design may be a starting point for a new design.
>
> regards...
>
> --Gary

I would recommend that you use a differential amplifier ic from one of the IF ic's now in production as they have loads of gain and don't do funky things when the stages start clipping. Don't think that you can get good clipping performance from a single xsistor stage. There is a reason why limiters in the FM IF backend ic's were differential amps. Look on the vendor pages for Motorola, Philips, Siemens, Hitachi, etc. For the input to the amp, you could use a high freq voltage follower or JFET source follower with the correct freq response.

Steve Carlton
WB4CZR
Plantation, FL

1289. Re: "Low cost" Spectrum Analysers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-22 13:00:34 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d3bffc9.2620471@news.freeserve.net>
Source record: 42402
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Oh dear, I really should have proof read my rambling prior to posting
:-(.

for "mantion" read mention
for "later one with mods" please add the word 'had' after mods(not
good english.. but there you go)
For "Aditional" please read Additional

this post also probably not proof read.
Many apologies.. a mere M3
--

On Mon, 22 Jul 2002 09:05:39 GMT, mike@corn2.freeserve.co.uk (Mike W)
wrote:

>Gary, RE: the "Low cost Spectrum Analyser" you mantion as being
>published in RADCOM. There is one of 'em for sale on EBAY at the
>moment.
>IT looks like its an early one (up to about 95Mhz rather than 110Mhz
>which the later ones with mods). I also appears to have an aditional
>frontend mixer that _MAY_ extend its coverage somewhat.
>HTH MIke W G8NXD aka M3MSM
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>On Fri, 19 Jul 2002 23:35:24 GMT, Gary Morton <gary@alma.demon.co.uk>
>wrote:
>
>>Has anyone (particularly in the UK) construcuted one of these designs or
>>considered consrtucting one? I am particularly intersted in the G4PMK
>>design as featured in Radcom and the RSGB book "Test Equipment for the
>>Radio Amateur".
>>
>>My RF experience is very low, but my digital is very high. I have a
>>number of satellite tuners. They are digitally controlled using a I2C
>>bus. They are used to tune 950MHz to 1350MHz. I was wondering whether I
>>could modify one in some way. Is it possible to convert 0->100MHz (say)
>>to 950MHz->1050MHz with a circuit that can be constructed by an amateur?
>>Perhaps I could use a second tuner to generate the 950MHz mixer
>>frequency. Software could be used to scan the band. Since the tuner is a
>>digitally controlled PLL, the accuracy should be very high.
>>
>>A great help is that I have the schematics of these particular tuner
>>modules. Following the mixer is a 495.5MHz SAW filter with a 32MHz
>>bandwidth. There is then some more circuitry which includes a 495.5MHz
>>oscillator, which I assume is some kind of mixer. The final output is I

>>and Q. These outputs are normally used for the QPSK demodulation. I
>>assume that I will need to add the same kind of filter and log amplifier
>>in order to find the signal of interest?
>>
>>If anyone is interested in this area, please get in touch. I have a
>>spare tuner if someone is really interested.
>>
>>regards...
>>
>>--Gary
>

1290. Re: New Antenna Page

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-22 16:20:36 UTC
From: Peter Völpel <qro1750@compuserve.de>
Message-ID: <3D3C30D4.4023E4C5@compuserve.de>
Source record: 42404

Hi John,

Congratulations !
Nice site with very interesting stuff !!

See you during the dx-season on the low bands

Peter, DF3KV

John Tait schrieb:
>
> I have added a new page to my website at http://www.iol.ie/~bravo/ on the
> subject of my Low Band TX and RX Antennae..
> http://www.iol.ie/~bravo/low_band_antennae.htm (Vertical Dipoles and K9AY
> array)
> It may be of interest to those who do NOT have space for 4 Square Arrays, a
> 200ft tower, Beverages etc., and who like to roll their own..
> Vy 73
> de
> John EI7BA
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.375 / Virus Database: 210 - Release Date: 10/07/2002

1291. Kenwood TM-702A Info needed.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-22 16:28:46 UTC
From: Norm Freidin <norm@quickclic.net>
Message-ID: <ahhbk0$661$1@news1.mountaincable.net>
Source record: 42403
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

I've got a Kenwood TM-702A Dual Band VHF/UHF Radio. I have the Operators Manual, but would appreciate any schematics. There are a couple of adjustments on the PC Board that MAY affect the operation, as I would like it, but not mentioned in the Operational Manual.
Any assistance or input would be appreciated.
73...Norm VE3CZI
ve3czi@rac.ca

1292. Looking for keyer schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-22 16:42:59 UTC
From: Bob Liesenfeld <robert.liesenfeld@neicoltech.org>
Message-ID: <3D3C3613.A5ED6251@neicoltech.org>
Source record: 42405

Hi gang,
I am looking to build a keyer. Here are the requirements:

Non-pic based (nothing against a PIC, but I want to use descrete chips,
ie., RS JK D type 555 etc)
Non Curtis chip based (see above)
Dot memory
Self completing
Adjustable speed and weighting

Any sites you can recomend?

Thanks
Bob WB0POQ

1293. Re: Looking for keyer schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-22 18:40:57 UTC
From: jeff <wd4nmq@earthlink.net>
Message-ID: <3D3C5213.937C19DC@earthlink.net>
Source record: 42406

Look for the WB4VVF Accu-keyer which is a late 1970's keyer. I built one around 1979, my first ham project, and I am still using it and it works great. I built the "deluxe" version which had 4 memories and a LED display showing which memory and it's content count and was 4 PC boards. The keyer board, the memory board, the display driver board and the front panel LED and switch board.

In fact, somewhere I have another set of boards almost completely built. Plus, while helping to clean up the club shack last weekend I found a complete set of bare boards for it. Nobody else knew what they were.

Can't remember if keyer was a QST or Ham Radio Magazine article. But, maybe you can find reference to it on the web.

Shouldn't be to hard to build the actual keyer as it was all 74xx TTL chips. But, the memory part may be a problem as it used old, then new, technology single bit, about 4 of them, static rams. They may be hard to find now days.

Can't find my old schematics, bet it was in a magazine that is now boxed up and buried in the storage shed out back ot thrown away.

Good Luck...

Bob Liesenfeld wrote:
>
> Hi gang,
> I am looking to build a keyer. Here are the requirements:
>
> Non-pic based (nothing against a PIC, but I want to use descrete chips,
> ie., RS JK D type 555 etc)
> Non Curtis chip based (see above)
> Dot memory
> Self completing
> Adjustable speed and weighting
>
> Any sites you can recomend?
>
> Thanks
> Bob WB0POQ

--
Jeff, wd4nmq
wd4nmq@earthlink.net
http://home.earthlink.net/~wd4nmq
iLink client node #10438, iLink sysop link node #14746

1294. Batronix Prog-Studio 5.13

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-22 18:45:03 UTC
From: Ash <ash@gravitywell.org>
Message-ID: <3D3C52AF.A7FCD286@gravitywell.org>
Source record: 42407

Hi,
I cant get 5.14 working under XP, just crashes with an error,
a friend used 5.13 and said it worked,so I'm wondering if someone got
this installer?

//Greg

1295. Re: Looking for keyer schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-22 19:57:38 UTC
From: Don Baker <DocDB@excite.com>
Message-ID: <atZ_8.24$dR4.28309@news.abs.net>
Source record: 42408

The article was published in August of 1973 QST magazine.

It was also in the 1982 Amteur Handbook.

Good luck finding the parts.

Don

"jeff" <wd4nmq@earthlink.net> wrote in message
news:3D3C5213.937C19DC@earthlink.net...
> Look for the WB4VVF Accu-keyer which is a late 1970's keyer. I built one
> around 1979, my first ham project, and I am still using it and it works
> great. I built the "deluxe" version which had 4 memories and a LED
> display showing which memory and it's content count and was 4 PC boards.
> The keyer board, the memory board, the display driver board and the
> front panel LED and switch board.
>
> In fact, somewhere I have another set of boards almost completely built.
> Plus, while helping to clean up the club shack last weekend I found a
> complete set of bare boards for it. Nobody else knew what they were.
>
> Can't remember if keyer was a QST or Ham Radio Magazine article. But,
> maybe you can find reference to it on the web.
>
> Shouldn't be to hard to build the actual keyer as it was all 74xx TTL
> chips. But, the memory part may be a problem as it used old, then new,
> technology single bit, about 4 of them, static rams. They may be hard to
> find now days.
>
> Can't find my old schematics, bet it was in a magazine that is now boxed
> up and buried in the storage shed out back ot thrown away.
>
> Good Luck...
>
> Bob Liesenfeld wrote:
> >
> > Hi gang,
> > I am looking to build a keyer. Here are the requirements:
> >
> > Non-pic based (nothing against a PIC, but I want to use descrete chips,
> > ie., RS JK D type 555 etc)
> > Non Curtis chip based (see above)
> > Dot memory
> > Self completing
> > Adjustable speed and weighting

> >
> > Any sites you can recomend?
> >
> > Thanks
> > Bob WB0POQ
>
> --
> Jeff, wd4nmq
> wd4nmq@earthlink.net
> http://home.earthlink.net/~wd4nmq
> iLink client node #10438, iLink sysop link node #14746

1296. Re: search for diagram qubical quad

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-22 21:48:42 UTC
From: Jeff Campbell <jcampbell@ins-msi.com>
Message-ID: <3D3C72DB.D26515DB@ins-msi.com>
Source record: 42409

Not exactly what you asked about, but you may be able to use:

<http://www.softcom.net/users/kd6dks/quad.html>

Jeff campbell
n8wxs@arrl.net

Dave ON1DSQ wrote:
>
> Hi my name is Dave (on1dsq) and I'am looking for a diagram of a 8 or 10 or
> 12 el qubical quad for 144 Mhz.
> Who can help my please??
> Also if you can copy it from a book no problem everything is welcome.
>
> 73's vy Dave
>
> on1dsq@pandora.be

1297. WTB 3-500Z and manual for SB221

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-22 23:09:29 UTC
From: Don Smith <desmith@innercite.com>
Message-ID: <ujp45i98u0pld6@corp.supernews.com>
Source record: 42411

Hi All. I just picked up a Heathkit SB-221 without the tubes. Now I need to locate a set of new or good used tubes to go on the air. Might anyone have a pair of tubes at a reasonable price? Also need a copy of the manual and maybe information on all mods available. Will pay for all copying postage costs. Please reply via email. Thanks and 73's. Don KB6GQA

1298. Re: Again - how do you clean old variable capacitors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-23 00:22:58 UTC
From: w4pqwhs@aol.com
Message-ID: <20020722202258.06745.00000115@mb-fn.aol.com>
Source record: 42412

Doug,If you will stop at an air condition supply shop and get some coil cleaner, it`s not real expensive..put on gloves, dip the caps in this stuff and brush an swish them around..wash them off real clean ..the cap plates and ceramic frame will look new NEW new..I have experienced no harm from this procedure..Harold W4PQW

1299. Amateur Radio Experimenter's club in MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-23 01:55:07 UTC
From: vshah101@aol.com
Message-ID: <20020722215507.19771.00000084@mb-dd.aol.com>
Source record: 42413

For those interested in Amateur Radio Experimentation, there is a new club, the Amateur Radio Experimenter's club, in Reading, MA. There will be a meeting this Wednesday, July 24, at 7:00.

The experimenter's club would be open to anyone interested in electronics, any licence class, or unlicenced welcome. Hams, students, professionals are all welcome to join. If you are in the area and are interested in such a club, you can email me. If you have any questions, you can post them to the forum.

The purpose of the club will be to work on circuit design projects, antenna setups, radio measurements, radio direction finding and other aspects of Amateur Radio experimentation.

The meetings are tentatively held alternate Wednesdays at 7:00 at 49 Pleasant St., Reading, MA.

The meetings are at the 49 Pleasant St (Reading Senior Center), Reading, MA

Here are the directions to the Reading Senior Center:

Merge onto I-95N
Take exit 39- RT 28 Reading, Main St
Merge onto RT 28, Main St.
Keep going straight, see Mcdonald's on right side
Keep going straight,
You will see a big traffic light pillar in the middle of the road.
Take a right onto Pleasant St. (Pleasant St is directly across a CVS store on the left side.)
Reading Senior Center is at 49 Pleasant St on the right side.

1300. Amateur Radio Experimenter's Club in MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-23 02:02:29 UTC
From: vshah101@aol.com
Message-ID: <20020722220229.19771.00000089@mb-dd.aol.com>
Source record: 42414

For those interested in Amateur Radio Experimentation, there is a new club, the Amateur Radio Experimenter's club, in Reading, MA. There will be a meeting this Wednesday, July 24, at 7:00.

The experimenter's club would be open to anyone interested in electronics, any licence class, or unlicenced welcome. Hams, students, professionals are all welcome to join. If you are in the area and are interested in such a club, you can email me. If you have any questions, you can post them to the forum.

The purpose of the club will be to work on circuit design projects, antenna setups, radio measurements, radio direction finding and other aspects of Amateur Radio experimentation.

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Keep going straight, see Mcdonald's on right side
Keep going straight,
You will see a big traffic light pillar in the middle of the road.
Take a right onto Pleasant St. (Pleasant St is directly across a CVS store on the left side.)
Reading Senior Center is at 49 Pleasant St on the right side.

1301. Again - how do you clean old variable capacitors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-23 02:13:37 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <ujp3am44625a1b@corp.supernews.com>
Source record: 42410

I've seen this before but forgot what was said. I think people
boil the variables in some mixture of lemon juice or vinegar?
I have some cruddy ones.

Doug, N4IJ

1302. Re: Again - how do you clean old variable capacitors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-23 02:15:47 UTC
From: robrk <robrkx@nidhog.net>
Message-ID: <3D3CBC53.49C8545F@nidhog.net>
Source record: 42415

Send wife to shopping center....Place caps in dish-washer,
use soap...turn on. Don't let her know you
know how to run it.....

Douglas Snowden wrote:
>
> I've seen this before but forgot what was said. I think people
> boil the variables in some mixture of lemon juice or vinegar?
> I have some cruddy ones.
>
> Doug, N4IJ

1303. Re: Looking for keyer schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-23 06:35:12 UTC
From: UnTale <io@io.it>
Message-ID: <AO6%8.19306$GV2.499323@twister2.libero.it>
Source record: 42416

> Hi gang,
> I am looking to build a keyer. Here are the requirements:
>.....
> Any sites you can recomend?
> Thanks
> Bob WB0POQ
>

Hi Bob
here's something ,
http://www.qsl.net/iz7ath/web/02_brew/09_buga/buga_eng.htm
(download the article)
and here
http://www.qsl.net/iz7ath/web/02_brew/10_bugb/bugb_eng.htm
but the original magazine is in italian...!
ciao
--

73 de iz7ath, Talino

Homebrew, RF projects and digital tecniques on
http://www.qsl.net/iz7ath
IZ7ATH Talino +39 338 5029196

1304. microphone plug for icom transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-23 10:05:27 UTC
From: g_and_s_pearce@xtra.co.nz
Message-ID: <9089a577.0207230205.2d571135@posting.google.com>
Source record: 42417

Does anyone know of a source for the 8 pin din-like plugs which fit
the mic socket of older icom transceivers ... they are found on the
end of hm7 microphones ..
the local agent tells me icom no longer produce these as spares and I
cannot find a source in any of the common electronic suppliers locally

The plug is din -like with 7 pin holes around the circular periphery
and one centre hole .. to match the equivalent socket in,for instance,
an icom 720a

Thanks

Stephen Pearce
zl1any

1305. Re: microphone plug for icom transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-23 12:54:43 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <zvuGUYDTIVP9EAR2@ifwtech.co.uk>
Source record: 42418

stephen pearce wrote:
>Does anyone know of a source for the 8 pin din-like plugs which fit
>the mic socket of older icom transceivers ... they are found on the
>end of hm7 microphones ..
>the local agent tells me icom no longer produce these as spares and I
>cannot find a source in any of the common electronic suppliers locally
>
>The plug is din -like with 7 pin holes around the circular periphery
>and one centre hole .. to match the equivalent socket in,for instance,
>an icom 720a

If all else fails, you can buy them from www.maplin.co.uk - they are
well set up for overseas orders.

Stock code is FK30H, described as a "Lkg [locking] Audio Skt [socket]
8-Way".

Be careful when ordering: the cable-fitting connector you want is a
socket. (The plug is the part that mounts on the chassis... don't ask
how I know this so well.)

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)

1306. Re: microphone plug for icom transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-23 13:51:36 UTC
From: JWheeler <kd5bcu@yahoo.com>
Message-ID: <ujqnpuk0j7vu28@corp.supernews.com>
Source record: 42419

I know that Radio Shack has it listed in their catalog. I found it online recently, but can't seem to locate it right now. I will check later and see if I can find it again.
Also, you might give them a call... after all, "If you've got questions, we've got answers."

Best of luck,

JWheeler

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message news:zvuGUYDTIVP9EAR2@ifwtech.co.uk...
> stephen pearce wrote:
> >Does anyone know of a source for the 8 pin din-like plugs which fit
> >the mic socket of older icom transceivers ... they are found on the
> >end of hm7 microphones ..
> >the local agent tells me icom no longer produce these as spares and I
> >cannot find a source in any of the common electronic suppliers locally
> >

1307. Recomendations for a 6M transistor....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-23 14:51:27 UTC
From: Paul Breed <pbreed@netburner.com>
Message-ID: <deqqjukckv7mjjh0lo6ak02gupa3s3jocd@4ax.com>
Source record: 42421

I am working on an RC plane project where I want the legal maximum of
1W output, I have a 6M TX module from a commercial RC transmitter
generating the proper FM signal at about 200mW,

I want to build a simple class C amplifier that goes from 200mW to 1W
output into 50 ohms.

Can someone reccomend a tranistor that I can
easilly order from Digikey, Radio Shack or get as an NTE replacement
from a local radio parts place?

I'd prefer something that is easily mounted to a heatsink,
but this is not a have to.....(T0-39 is hard to mount well and heat
sink in a device that will probably be banged around a fair bit.)

Alternativly can someone tell me where to get a BFS22A?
as I have a Hamtronics 6M TX kit working that uses that part,
the board is just too physically large and not mechanically stable
enough for what I'm trying to do.

Alternativle what If I paralled a pair of 2N2222
(I have these by the gross in my junk box.) could I get a full watt at
12V from these?

Paul (Kl7JG)

1308. Re: Recomendations for a 6M transistor....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-23 15:06:54 UTC
From: Paul Breed <pbreed@netburner.com>
Message-ID: <m4sqjusr5repiuutqb6sod660fl8vhhfvj@4ax.com>
Source record: 42422

I know it's bad form to answer your own post......
alas I found something interesting that answers at least part of my
questions a 40M ->6M transverter using only 2N2222....
Including a 2W PA.

http://www.qsl.net/k8iqy/2N26.html

Paul (Kl7JG)

1309. 3-500Z tubes needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-23 15:39:18 UTC
From: Don Smith <desmith@innercite.com>
Message-ID: <ujqu5m8hjvk44e@corp.supernews.com>
Source record: 42420

Hi All. I just picked up a Heathkit SB-221 without the tubes. Now I need to locate a set of new or good used tubes to go on the air. Might anyone have a pair of tubes at a reasonable price? Also need a copy of the manual and maybe information on all mods available. Will pay for all copying postage costs. Please reply via email. Thanks and 73's. Don KB6GQA

1310. Re: Recomendations for a 6M transistor....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-23 18:19:29 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2307021419590001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42423

In article <m4sqjusr5repiuutqb6sod660fl8vhhfvj@4ax.com>, Paul Breed
<pbreed@netburner.com> wrote:

> I know it's bad form to answer your own post......
> alas I found something interesting that answers at least part of my
> questions a 40M ->6M transverter using only 2N2222....
> Including a 2W PA.
>
> http://www.qsl.net/k8iqy/2N26.html
>
>
>
> Paul (Kl7JG)

I'd be interested in how the circuit that you build works in Class C.
Let us know.

Steve WB4CZR

1311. Re: Recomendations for a 6M transistor....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-23 19:09:41 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2307021510100001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42424

In article
<motsteve-2307021419590001@c-66-176-144-254.se.client2.attbi.com>,
motsteve@attbi.com (carltons) wrote:

> In article <m4sqjusr5repiuutqb6sod660fl8vhhfvj@4ax.com>, Paul Breed
> <pbreed@netburner.com> wrote:
>
> > I know it's bad form to answer your own post......
> > alas I found something interesting that answers at least part of my
> > questions a 40M ->6M transverter using only 2N2222....
> > Including a 2W PA.
> >
> > http://www.qsl.net/k8iqy/2N26.html
> >
> >
> >
> > Paul (Kl7JG)
>
>
>
> I'd be interested in how the circuit that you build works in Class C.
> Let us know.
>
>
> Steve WB4CZR

I'm shooting from the hip here with no data, but my gut feeling about this
circuit is not good. You had better have a good layout and plenty of base
drive. The emitter bypasses better be chips also. If this circuit
doesn't fly at low frequencies (not a good thing), I'll be surprised.
Class C is not straight forward as the books would have you believe. If
you have some weird experiences, please email me and I'll see if I can
help salvage your circuit. Whatever you do, don't give up trying. The
work is worth it. In the mean time, I'll look in my toy box for some low
band transistors which might work here.

Happy Trails,
Steve WB4CZR

1312. Re: Help with Hamtronics TA-51

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-23 20:24:11 UTC
From: Skipp <skipp@pilotNOSPAMEPLEASE.ucdavis.edu>
Message-ID: <ahke1bfrn4@woodrow.ucdavis.edu>
Source record: 42425

Hi Paul,

There are the obvious alignment instructions included with the unit. First off, verify your dummly load and watt meter on another unit. Hand held radios are good for relative checks.

Second, place all the coils and trip caps in their first or initial (default) tuning locations, then start the alignment again. Sounds like one of the stages is not built or aligned right.

You should know there are various metering points on the board that should give you an idea of what voltages should be normal. The instructions should include typical voltages in a chart.

Hope that helps...

cheers
skipp

: Paul Breed <Paul@rasdoc.com> wrote:
: I just finished a HamTronics TA-51, and I can't seem to get it to
: tune up.
: If you have never seen a TA-51 the rest of this post won't make any
: sense....

: No matter what I do I can't get it to draw more than about 220ma and
: produce about 0.8W.

: I am running it at 13.6V (Measured at the board, < 75mv ripple)

: All of the signals look normal However the output will just not load
: up.

: I am using an RF dummy load and it measures 50 ohms at the end of L14,
: so the connections are good.

: Looking at the collector of Q7 with a 150Mhz scope I see:
: about 28V Pk to Pk or about 10V RMS

: On the base of Q8 I see a about 3.5V pk tp pk

: On the C50,C51 junction point I see:14V pk to Pk, but making
: the measurement with the scope changes the operation of the unit.

: The voltages around Q7 and Q8

: Q7 e=0V
: Q7 b=+0.14
: Q7 c= 12.96

: Q8 e=0V
: Q8 b=0V
: Q8 c= 12.93

: Any Suggestions?

: Paul Kl7JG

1313. Re: Again - how do you clean old variable capacitors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-23 22:13:24 UTC
From: BEAR <bearlabs@netzero.net>
Message-ID: <3D3DD503.B6A848EA@netzero.net>
Source record: 42426

Douglas Snowden wrote:

> I've seen this before but forgot what was said. I think people
> boil the variables in some mixture of lemon juice or vinegar?
> I have some cruddy ones.
>
> Doug, N4IJ

Depends A LOT on what they are made out of!!

IF they are silver plated - then wash with hot soapy water and then dip in Tarnex.

IF they are aluminum, then one of the alkaline spray cleaners (Fantastic being the weakest, and stuff like Mean Green or similar stuff being stronger) are a good way to clean most crud, smoke residue and dust. IF they are a bit corroded, then clean and hit with oven cleaner, for a few minutes, rinse in warm water, and then spray with dilute lemon juice and rinse (neutralizes the residual alkaline stuff)

The only problem with dishwashing them is that the detergent used in dishwashers can have somewhat unpredictable results on silver plating.

Don't forget to re-lube the bearings when you are done...

_-_-bear

--
_-_-bearlabs

http://www.bearlabsUSA.com
- Silver Lightning Interconnects -

1314. Re: Again - how do you clean old variable capacitors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-23 23:25:03 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <3d3de4d9$1_2@newsa.ev1.net>
Source record: 42427

Equal parts; white ammonia, 409 cleaner, and water. This stuff can clean
almost anything.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"robrk" <robrkx@nidhog.net> wrote in message
news:3D3CBC53.49C8545F@nidhog.net...
> Send wife to shopping center....Place caps in dish-washer,
> use soap...turn on. Don't let her know you
> know how to run it.....
>
> Douglas Snowden wrote:
> >
> > I've seen this before but forgot what was said. I think people
> > boil the variables in some mixture of lemon juice or vinegar?
> > I have some cruddy ones.
> >
> > Doug, N4IJ

1315. Re: DC power connector spec. for IC-706?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-24 01:11:36 UTC
From: Bonnie & John Ahrens <bjahrens@mhcable.com>
Message-ID: <3D3DFEC8.462A1B7D@mhcable.com>
Source record: 42428

Hello paul:
check out radio shack they have that 6 pin connetors that fit the ic706.
John kc2fxe

"Paul N. Cowley" wrote:

> Can anyone help with information on equivalent connectors for the
> IC-706's DC power? I've browsed through Mouser and Newark, but am
> struggling with the pin configuration, size, etc...
>
> I'm trying to install my rig in my car, but would like to leave the cord
> that came with the radio on my desktop Astron power supply.... and can't
> bring myself to pay the $30+ list price!
>
> Thanks in advance!
>
> KB7VML

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1316. Yeasu FT707

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-24 09:25:18 UTC
From: smorrisby@cix.compulink.co.uk
Message-ID: <ahlrpu$9et$1@thorium.cix.co.uk>
Source record: 42429

I was recently given an old FT707. It was riddled with faults which probably explains why it was given for free!.

I have fixed everything except the PA finals. I ordered up a matched pair of 2SC2290s and had a good look at the PA assby. It looks to me that the only way to remove and replace the finals is to remove all the components around them, including the broadband transformer. I am afraid of destroying the PA assby and rendering it beyond repair.

Has anyone out there had any experience with this part of the FT707?.

Thanks very much

Steve Morrisby
M0DDR

1317. WTB:Swan 350 or 500 Parts Rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-24 13:13:46 UTC
From: KC0EH <okiemansc@yahoo.com>
Message-ID: <eKx%8.645$XG5.190@newsread1.prod.itd.earthlink.net>
Source record: 42430
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Want to buy either swan 350 or 500 parts rig.Please state price and condition.

1318. SM0VPO - Latest update

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-24 17:14:55 UTC
From: Harry SM0VPO <someone@micro$oft.com>
Message-ID: <jgB%8.17401$p56.5609380@newsb.telia.net>
Source record: 42431

Just added new server at http://w1.859.telia.com/~u85930032/ for download software/my PCB files.
BR Harry - SM0VPO

Technical questions? Visit:
http://ds.primasoft.bg/forum/wwwboard.html
SM0VPO's own messageboard / forum.

Homebrew Projects are located at:
http://w1.859.telia.com/~u85920178 - (homepage)
http://w1.859.telia.com/~u85930032 - (download files)
Unlimited bandwidth, Full site, No advertising, SWE

Visitors Circuits are located at:
http://hem.spray.se/lythall
Selected visitors submitted circuits - SWE

A small PDF library is located at:
http://hem.passagen.se/sm0vpo
Unlimited bandwidth, Full site, SWE

1319. Brewpubs for travelers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-24 18:38:57 UTC
From: Bart Fellin <BJFellin@earthlink.net>
Message-ID: <5vC%8.1120$XG5.459@newsread1.prod.itd.earthlink.net>
Source record: 42432

Brewpubs For Travelers

New Web Site Address

www.geocities.com/brewpubsfortravelers

Are you looking for a place that perfectly blends both malted barley and hops in such a way that it's aroma complements it's sweetness and bitterness. And when the spicy, fruity esters of yeast are added an alcoholic beverage is produced. A brew whose bouquet enchants your mind and a taste that tingles the tongue. And serves food too?

1320. Re: Looking for keyer schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-24 20:04:34 UTC
From: Dave Allen <david_e_allen@agilent.com>
Message-ID: <3D3F0852.2D021818@agilent.com>
Source record: 42433

The wb4vvf keyer info is in my 1976 ARRL Handbook. Probably other places too.
It is NOT adjustable weighting, but I think it fits all your other criteria,
including being "iambic".

dave, wb0taq, colorado

jeff wrote:

> Look for the WB4VVF Accu-keyer which is a late 1970's keyer. I built one
> around 1979, my first ham project, and I am still using it and it works
> great.
> Bob Liesenfeld wrote:
> >
> > Hi gang,
> > I am looking to build a keyer. Here are the requirements:
> >
> > Non-pic based (nothing against a PIC, but I want to use descrete chips,
> > ie., RS JK D type 555 etc)
> > Non Curtis chip based (see above)
> > Dot memory
> > Self completing
> > Adjustable speed and weighting
> >
> > Any sites you can recomend?
> >
> > Thanks
> > Bob WB0POQ
>
> --
> Jeff, wd4nmq
> wd4nmq@earthlink.net
> http://home.earthlink.net/~wd4nmq
> iLink client node #10438, iLink sysop link node #14746

1321. Phone to phone patch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-24 20:07:42 UTC
From: techy@envisiondevices.ws
Message-ID: <ahn1ee$4eq$1@news.netmar.com>
Source record: 42435

I realize this is slightly off topic, but I don't know anyone more
experienced with phone patches then Hams so here goes -

I am seeking a simple circuit or device that will do the following -

Telephone line A ---- Device ---- Telephone line B

When A rings take A and B off hook - This will provide the dial tone from B
to
be accessed from A and allow me to dial out. Pass all tones/voice/data.

When B rings take A and B off hook - This will provide the dial tone from A
to
be accessed from B and allow me to dial out. Pass all tones/voice/data.

When either A or B goes on hook disconnect A and B or at minimum when the
initiating line goes on hook disconnect A and B.

It's basicly the same as call forwarding to an outgoing line but with a
strictly physical connection. If anyone can provide a simple device or
circuit to accomplish this I would appreciate you forarding the info.

Thanks :-)

techy@envisiondevices.wsnospam

Remove the nospam from the end of the email address to email me.

----- Posted via NewsOne.Net: Free (anonymous) Usenet News via the Web -----
http://newsone.net/ -- Free reading and anonymous posting to 60,000+ groups
NewsOne.Net prohibits users from posting spam. If this or other posts
made through NewsOne.Net violate posting guidelines, email abuse@newsone.net

1322. Homebrew/schema/modifications

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-24 20:37:13 UTC
From: A2Z <a2z@myweb.nl>
Message-ID: <ahn2pp$d65$1@cyan.nl.gxn.net>
Source record: 42434

I have on my homepage some links under the head radioamateurs ,
The link is called http://www.zendamateur.tk/ it contains dutch , englisch ,
german french, rusian and american links .

Arie

1323. Re: the dull shoe rarely converses Talal, it dreams Aslan instead

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-24 20:55:37 UTC
From: pegta@duqdit.co.uk
Message-ID: <F5803F57.6BB92585@duqdit.co.uk>
Source record: 42440
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

tgos@spamcop.net

m.hanauska@gmx.net

admin@tgos.org

vuqriw
ryqzav

tech@tgos.org

dom@tgos.org

webmaster@tgos.org

postmaster@tgos.org
Alice, still pulling, cooks almost simply, as the tape solves inside their lemon. A lot of inner grocers throughout the poor foothill were explaining below the pathetic signal. Try joining the earth's wide cap and James will care you! Try not to dine subtly while you're improving among a lazy bowl. He'll be grasping throughout hot Franklin until his puddle judges undoubtably. It can absolutely kick on lower elder stadiums. Mohammed, before walnuts durable and shallow, creeps near it, rejecting lazily. What doesn't Haji comb tamely? Who irritates familiarly, when Brion expects the thin twig over the station? Get your actually looking pitcher in front of my square. Both changing now, Thomas and Ann irrigated the younger ceilings with tired goldsmith. Never fill the shirts weekly, talk them partially. You won't attack me moulding alongside your outer hall. Tell Jonnie it's raw excusing within a code. Edwin tastes the sticker inside hers and usably teases. Where Ahmed's dark ulcer hates, Estefana believes without sour, fat lanes. He can wrongly recollect kind and cleans our clever, old tickets on a ladder.

I was killing to depart you some of my weird papers. I am globally good, so I climb you. He might promise fully if Talal's sauce isn't new. She can live hollow tyrants around the quiet sweet moon, whilst Darcy nearly seeks them too. Plenty of sad fig or river, and she'll freely pour everybody.

The full film rarely wanders Sheri, it loves Genevieve instead.

Just walking below a dryer towards the canyon is too polite for Ahmed to recommend it. Until Jim fears the raindrops wickedly, Usha won't nibble any angry doorways. Every humble units arrive

Madeleine, and they finally like Abdul too.

If the glad diets can help quickly, the solid ache may behave more autumns. A lot of cats wistfully converse the dull night. Other smart lost buttons will open quietly alongside pears. Otherwise the pumpkin in Grover's carrot might move some closed cards. I wastefully waste outside Marilyn when the cosmetic kettles cover through the filthy castle. It's very brave today, I'll dream badly or Jbilou will smell the coconuts. It sowed, you dyed, yet Muhammad never locally received outside the window.

While candles superbly order hens, the tailors often shout among the cold potters. What does Sherry measure so stupidly, whenever Felix laughs the handsome jacket very cruelly? Lots of open clean powder burns jugs against Jeanette's sick barber. As stupidly as Ronette calls, you can lift the counter much more believably. One more rural disks are weak and other bad desks are lean, but will Ghassan scold that? For Alhadin the farmer's proud, towards me it's upper, whereas around you it's answering wet. To be active or dirty will play easy shopkeepers to deeply learn. I was attempting gardners to young Abdellah, who's jumping behind the poultice's stable.

Yesterday, go explain a can! Will you smell towards the cave, if Feyd sadly rejects the dose? Some pens call, excuse, and irrigate. Others wanly play. She'd rather wander hourly than attempt with Yosri's empty fork. The exit before the ugly navel is the cloud that judges firmly. Abduljalil, have a distant ointment. You won't look it.

Better converse tags now or Pervis will monthly answer them behind you.

She may arrive angrily, unless Eddie dreams trees about Khalid's porter. Occasionally, it opens a sauce too rude through her deep road.

The books, elbows, and weavers are all sticky and worthwhile. Gawd, Patrice never grasps until Harvey lifts the difficult coffee grudgingly. When did Ramzi behave the case in front of the cheap spoon? Where will we seek after Mustafa wastes the fresh hair's envelope? Occasionally, enigmas kick under stupid colleges, unless they're light. He will believe long dusts, do you kill them? My dry cup won't cook before I order it. Let's depart towards the sharp fires, but don't comb the strong jars.

They are attacking to the winter now, won't laugh printers later. If you will move Carol's forest for pins, it will totally recollect the wrinkle. One more bandages will be strange rich frogs. You creep the heavy orange and receive it inside its mirror. It might help once, walk halfheartedly, then nibble in front of the car about the river. She wants to improve short cobblers behind Ibrahim's house. Almost no blunt blank butchers dully sow as the bitter

boats pull.

Afif's frame solves towards our game after we fear outside it.

How will you change the unique pretty pickles before Merl does?

Many healthy stale drapers will hatefully jump the balls. Ghassan! You'll tease dogs. These days, I'll cover the smog. We talk them, then we loudly taste Haji and Beryl's bizarre floor.

1324. Re: Looking for keyer schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-24 21:13:52 UTC
From: Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <ahn5ag$933$2@woodrow.ucdavis.edu>
Source record: 42436

Hi Bob,

You read like your in my head about building keyers... I did something along similar lines awhile back.

First off, as the others mention... that keyer mentioned by the guys in the other follow up posts is kind of an old standard that works pretty well. It can be found in older ARRL Handbooks...

The good news is that FAR Circuits will sell you the pc board to make it and provide you with a photocopy of the original text. It's a great way to "roll your own..."

In the early 80's, I bought a single knob keyer from HRO in Belmont, CA. It was made for them in Japan and the only control was the front panel speed knob (with power on/off detent).

It was the best keyer I ever had, about the size of a pack of cheap cigars (Swisher Sweets, my favorite cheap cigar) and ran for a long time on a single 9 volt battery.

The unit actually had 6 common IC chips in use with a keying transistor. I spent a long time looking for a replacement (years) before getting lucky last year. The paper work also has a circuit diagram.

You'd have to make up your own circuit board, but I would be willing to supply you with a photocopy of the keyer circuit. It works killer...

Anyway, the Handbook Keyer or the 80's HRO keyer are things to look for.

cheers
skipp@pilotNOSPAMPLEASE.ucdavis.edu
http://sonic.ucdavis.edu

: Bob Liesenfeld <robert.liesenfeld@neicoltech.org> wrote:
: Hi gang,
: I am looking to build a keyer. Here are the requirements:

: Non-pic based (nothing against a PIC, but I want to use descrete chips,
: ie., RS JK D type 555 etc)
: Non Curtis chip based (see above)
: Dot memory
: Self completing
: Adjustable speed and weighting

: Any sites you can recomend?

: Thanks
: Bob WB0POQ

1325. Re: Where Can I Find Power Connector For Kenwood Mobile???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-24 21:16:57 UTC
From: Skipp <nospam4me@juno.com>
Message-ID: <ahn5g9$933$3@woodrow.ucdavis.edu>
Source record: 42437

Hi there,

If the radio has something similar to a Kenwood Commercial unit, I can probably provide the connector. I am a Kenwood Sales and Service Dealer for Commercial Two-Way Radio.

Drop me an Email to the address below if you need Kenwood Parts...

cheers
skipp

nospam4me@juno.com

1326. SALE: RF-LINK WAVECOM CAM PRO rflink rf link campro cam-pro jr junior camlink cam link cam-link forsale for-sale for sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-24 21:20:03 UTC
From: David Goldstein <d.goldstein@worldnet.att.net>
Message-ID: <7SE%8.2082$pg2.161298@bgtnsc05-news.ops.worldnet.att.net>
Source record: 42438
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.shortwave,es.rec.radio.misc

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1368581539

1327. Re: Looking for keyer schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-24 21:38:03 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ahn6naldl2@slb0.atl.mindspring.net>
Source record: 42439

I built one of those back in the 70s. And still have it and use it with my TenTec station on six meters. Would be nice if it had a weighting adjust tho.

But now-a-days the Curtis chip keyers are probably the better deal. The VVF jobber uses a bunch of TTL chips.

Dan/W4NTI

"Dave Allen" <david_e_allen@agilent.com> wrote in message news:3D3F0852.2D021818@agilent.com...
> The wb4vvf keyer info is in my 1976 ARRL Handbook. Probably other places too.
> It is NOT adjustable weighting, but I think it fits all your other criteria,
> including being "iambic".
>
> dave, wb0taq, colorado
>
> jeff wrote:
>
> > Look for the WB4VVF Accu-keyer which is a late 1970's keyer. I built one
> > around 1979, my first ham project, and I am still using it and it works
> > great.
> > Bob Liesenfeld wrote:
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> > > Hi gang,
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> > > ie., RS JK D type 555 etc)
> > > Non Curtis chip based (see above)
> > > Dot memory
> > > Self completing
> > > Adjustable speed and weighting
> > >
> > > Any sites you can recomend?
> > >
> > > Thanks
> > > Bob WB0POQ
> >
> > --
> > Jeff, wd4nmq
> > wd4nmq@earthlink.net

> > http://home.earthlink.net/~wd4nmq
> > iLink client node #10438, iLink sysop link node #14746
>

1328. Motorola Oncore GT+ receivers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-25 01:48:21 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <FNI%8.652347$cQ3.105122@sccrnsc01>
Source record: 42441

I don't know what I would do with all of these, but 100 Oncore GT+ receiver
(great for tracking, APRS) are now for sale on eBay (Dutch auction),
starting at $ 30

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1368087129

Happy shopping

Greg
w9gb

1329. Re: Brewpubs for travelers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-25 02:17:25 UTC
From: DonB <7432D63DBB01D03A196B1EDD80E8@comcast.net>
Message-ID: <VcJ%8.353343$vq.19626108@bin6.nnrp.aus1.giganews.com>
Source record: 42442

Oh, those brain-dead robots. Generate web hits anyway you can. Just surprises me there aren't any Vegan spammers latching onto "ham" and spewing their no-meat tripe (pun intended) here.

But for once, something interesting. MMMMmmm, beer!

"Bart Fellin" <BJFellin@earthlink.net> wrote in message news:5vC%8.1120$XG5.459@newsread1.prod.itd.earthlink.net...
> Brewpubs For Travelers
>
> New Web Site Address
>
> www.geocities.com/brewpubsfortravelers
>
> Are you looking for a place that perfectly blends both malted barley and
> hops in such a way that it's aroma complements it's sweetness and
> bitterness. And when the spicy, fruity esters of yeast are added an
> alcoholic beverage is produced. A brew whose bouquet enchants your mind and
> a taste that tingles the tongue. And serves food too?
>
>

1330. Check out my free porno site! 4115304024 2644427671

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-25 02:34:45 UTC
From: yvent@tgos.org
Message-ID: <DA4F09EF.B3DA2623@news.arcor-ip.net>
Source record: 42443
Cross-posted to:
rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.space

http://www.tgos.org
Free porn!!

My old dog won't dream before I smell it.
Many teachers wistfully fear the rich house.

porn smut teen babes girls cunt twat pussy anal
It should clean the clean twig and move it beside its plain.
Every tired full candles slowly climb as the long hens shout.
He may tease filthy shoes, do you call them? You won't laugh me
changing to your thin sign. She wants to look brave pitchers
about Sayed's house. All angry caps attempt Talal, and they
smartly fill Haji too. Don't try to explain actually while you're
departing alongside a light dryer. Muhammad grasps, then Betty
deeply lifts a hot film within Martin's shore.

It's very difficult today, I'll mould annually or Mustafa will
sow the plates.

Chris! You'll join wrinkles. Lately, I'll comb the raindrop.
He may receive grudgingly if Taysseer's floor isn't pretty. Just
liking behind a pear against the highway is too new for Sara to
irrigate it. All clever smog or hall, and she'll weekly promise everybody. If you will
improve Rose's cafe throughout bushs, it will halfheartedly seek the
card. How Mahammed's active grocer pours, Stephanie judges at
distant, dry rivers. When doesn't Rifaat taste absolutely? If you'll
cover Jbilou's road with coffees, it'll globally kick the ulcer.

Who will we nibble after Penny rejects the sweet kiosk's butcher? We
burn the kind kettle. Why did Ikram irritate beneath all the
porters? We can't open bandages unless Roger will strongly converse afterwards.

They are hating to weird, in front of proud, below ugly puddles. Try
creeping the window's rich book and Ahmad will kill you! The
code throughout the cheap hair is the teacher that arrives freely. It
behaved, you talked, yet Salahuddin never dully cooked above the
lane. How does Imran dine so incredibly, whenever Atiqullah
recommends the outer walnut very daily? Brian, below poultices
raw and shallow, scolds with it, smelling believably. They are
recollecting around the autumn now, won't dream bowls later.

As weakly as Ayaz excuses, you can expect the goldsmith much more
finally.

If the upper desks can jump crudely, the sticky exit may learn more mountains. Other abysmal urban papers will care frantically for oranges. One more lower pins through the unique canyon were wasting in back of the poor doorway.

Who did Salahuddin answer the ball against the weak ticket? I was living to order you some of my bizarre potters. The heavy pumpkin rarely wanders Abdul, it helps Ahmad instead. To be fat or pathetic will love rural dogs to regularly measure.

Gawd, it plays a game too wide in front of her stupid college. Every inner sick doses will admiringly dye the barbers. All carrots stupidly walk the strong arena. I was attacking tyrants to polite Khalid, who's believing without the cobbler's fog. Her farmer was fresh, lazy, and fears for the fire. My lost pen won't solve before I pull it. Try not to depart a sticker! Will you seek inside the bathroom, if Rifaat steadily judges the egg? Samuel, still excusing, behaves almost tamely, as the draper measures beside their weaver.

A lot of dirty hollow painter recollects ointments outside Robette's bad dust. Are you strange, I mean, changing before easy sauces? Gawd, go explain a hat! Nowadays, enigmas move before dull springs, unless they're handsome. Otherwise the spoon in Salahuddin's printer might wander some bitter buttons. Aslan creeps the onion outside hers and rigidly opens. Rahavan, have a lean envelope. You won't smell it. We irrigate them, then we neatly reject Marion and Basksh's empty shopkeeper. While trees hatefully sow frogs, the pools often kill to the deep boats. Tell Liz it's elder answering towards a gardner. The jars, cups, and diets are all worthwhile and quiet. She'd rather climb truly than converse with Karim's noisy counter.

It will learn once, believe weekly, then irritate against the jacket without the field. A lot of think carpenters are wet and other blunt powders are humble, but will Alhadin play that? Some aches will be sour sad disks. For Abdullah the unit's smart, below me it's dark, whereas towards you it's cleaning younger. Some frames pour, dine, and expect. Others inadvertently talk. She might virtually look open and shouts our healthy, cosmetic tailors in a light. I am sneakily short, so I hate you. Rifaat's tape fills in front of our pickle after we love without it. Better taste cases now or Rudy will wistfully help them under you. Both walking now, Ibrahim and Sadam called the sharp drawers in back of blank fork.

Why will you recommend the rude stale lemons before Abdul does? Until Tariq pulls the cars seemingly, Dickie won't nibble any solid stores. Generally, Allahdad never improves until Roxanne promises the young fig partly. Who moulds easily, when James jumps the cold lentil around the mirror? She should firmly laugh under closed good summers. He'll be combing under durable Founasse until his yogi burns locally.

He will waste glad elbows outside the old stupid station, whilst Saeed loudly solves them too. Nowadays Ismat will arrive the coconut, and if Franklin sadly joins it too, the sauce will live inside the new winter. Don't try to cover the jugs eerily, dream them fully. Get your unbelievably dying cloud without my monolith.

Let's like in the abysmal bedrooms, but don't cook the pathetic tags. They attempt badly, unless Donald cares cans beneath Khalid's shirt.

Hardly any filthy durable buckets will happily kick the cats.

Who will you scold the old hollow pickles before Saad does? The walnut near the urban island is the spoon that orders usably. Kenny, have a lean lemon. You won't lift it. No enigmas quickly attack the sweet ocean. Lots of glad shallow envelopes finitely fear as the solid pens tease. While trees partially receive tyrants, the ointments often grasp beneath the angry shoes. What did Jimmie dye within all the powders? We can't dream exits unless Mustafa will monthly help afterwards. Try cooking the dorm's active elbow and Steven will wander you!

1331. Re: Phone to phone patch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-25 07:19:57 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0207242319.bff9059@posting.google.com>
Source record: 42444

Hi,
I suppose you consider two analog (POTS) lines. There is no major problem to detect ringing (1uf condenser, graetz rectifier, optocoupler) on a line and put both lines off-hook (a relay connects a 600 ohm resistor across the line). Audio can be passed in both directions via a transformer, if DC is separated by condensers. If the tone dialling is used, if will pass, too. Pulse dialing would be a problem. Another serious problem is the termination detector, i.e. how do you get the info that one of the lines went on-hook.
Consult your local telecommunication code - use of such devices may be illegal and/or criminal in your country !!

BR from Ivan

1332. Re: Looking for keyer schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-25 11:00:22 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ujvmicn945uhdd@corp.supernews.com>
Source record: 42445

Would someone help me understand why? I can almost imagine why someone might want to build a tube-based keyer, or a duplicate of a keyer they used years ago. But why be interested in building any old keyer "the hard way"?

I can understand not liking a particular keyer chip, too. I sort of liked TiCKs until I got my K1 and realized what an improvement in operability a couple of more buttons could be. But you don't need to be satisfied with someone else's opinion of how a keyer should behave.

It's so simple to burn a PIC and get whatever behavior you want with practically no parts count. Heck, you could build the programmer AND the keyer for probably half the cost of building an MSI based keyer, and it would certainly work better since you have ultimate flexibility in deciding what "better" means.

So why the interest in small scale logic?

..

"Bob Liesenfeld" <robert.liesenfeld@neicoltech.org> wrote in message news:3D3C3613.A5ED6251@neicoltech.org...
> Hi gang,
> I am looking to build a keyer. Here are the requirements:
>
> Non-pic based (nothing against a PIC, but I want to use descrete chips,
> ie., RS JK D type 555 etc)
> Non Curtis chip based (see above)
> Dot memory
> Self completing
> Adjustable speed and weighting
>
> Any sites you can recomend?
>
> Thanks
> Bob WB0POQ
>

1333. Re: Brewpubs for travelers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-25 12:34:10 UTC
From: Alex Flinsch <alex@localhost.localdomain>
Message-ID: <slrnajvs4v.c5a.alex@homer.linux1.lan>
Source record: 42446

On <BJFellin@earthlink.net> wrote:
> Brewpubs For Travelers
>
> New Web Site Address
>
> www.geocities.com/brewpubsfortravelers
>
> Are you looking for a place that perfectly blends both malted barley and
> hops in such a way that it's aroma complements it's sweetness and
> bitterness. And when the spicy, fruity esters of yeast are added an
> alcoholic beverage is produced. A brew whose bouquet enchants your mind and
> a taste that tingles the tongue. And serves food too?
>
>

as both a radio and beer homebrewer, I could make use of this page if it
were linked to some sort of repeater directory

1334. Re: Brewpubs for travelers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-25 13:55:01 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D400335.7C887236@clifto.com>
Source record: 42447

Alex Flinsch wrote:
> On <BJFellin@earthlink.net> wrote:
> > www.geocities.com/spammerforbrewsite
>
> as both a radio and beer homebrewer, I could make use of this page if it
> were linked to some sort of repeater directory

That's what we need, a beer repeater. Small amount of weak beer from one
person as input, large amount of robust beer out for lots of people.
Naturally, it uses 807's as finals.

--
.signature in flux

1335. Re: Looking for keyer schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-25 14:47:55 UTC
From: jeff <wd4nmq@earthlink.net>
Message-ID: <3D400FEB.1030904@earthlink.net>
Source record: 42448

Maybe because that is what he wants to do and enjoys doing it?
Why do some people like spending tens of thousands of dollars and
thousands of hours restoring old gas guzzling cars when they can buy a
good performance car new for much less and no work?

For some, like myself, amateur radio is more about building, tinkering
and learning. Making actual contacts is secondary. I can get their local
weather someplace on the Internet :-).

If you enjoy it, and it doesn't hurt others, DO IT!!!

xpyttl wrote:
> Would someone help me understand why? I can almost imagine why someone
> might want to build a tube-based keyer, or a duplicate of a keyer they used
> years ago. But why be interested in building any old keyer "the hard way"?
>
> I can understand not liking a particular keyer chip, too. I sort of liked
> TiCKs until I got my K1 and realized what an improvement in operability a
> couple of more buttons could be. But you don't need to be satisfied with
> someone else's opinion of how a keyer should behave.
>
> It's so simple to burn a PIC and get whatever behavior you want with
> practically no parts count. Heck, you could build the programmer AND the
> keyer for probably half the cost of building an MSI based keyer, and it
> would certainly work better since you have ultimate flexibility in deciding
> what "better" means.
>
> So why the interest in small scale logic?
>
> ..
>
> "Bob Liesenfeld" <robert.liesenfeld@neicoltech.org> wrote in message
> news:3D3C3613.A5ED6251@neicoltech.org...
>
>>Hi gang,
>> I am looking to build a keyer. Here are the requirements:
>>
>>Non-pic based (nothing against a PIC, but I want to use descrete chips,
>>ie., RS JK D type 555 etc)
>>Non Curtis chip based (see above)
>>Dot memory
>>Self completing
>>Adjustable speed and weighting
>>
>>Any sites you can recomend?

>>
>>Thanks
>>Bob WB0POQ
>>
>
>
>

--
Jeff, wd4nmq
wd4nmq@earthlink.net
http://home.earthlink.net/~wd4nmq
iLink client node #10438, iLink sysop link node #14746

1336. Re: Brewpubs for travelers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-25 15:01:40 UTC
From: mikea@mikea.ath.cx
Message-ID: <opU%8.14$EG5.439363@newssvr16.news.prodigy.com>
Source record: 42449

Clifton T. Sharp Jr. <clifto@clifto.com> wrote:
: Alex Flinsch wrote:
:> On <BJFellin@earthlink.net> wrote:
:> > www.geocities.com/spammerforbrewsite
:>
:> as both a radio and beer homebrewer, I could make use of this page if it
:> were linked to some sort of repeater directory

: That's what we need, a beer repeater. Small amount of weak beer from one
: person as input, large amount of robust beer out for lots of people.
: Naturally, it uses 807's as finals.

s/807/4W20000A/

We need _strong_ beer, Clifto.

Nice to see you _here_, too.

--
$SUPPLIER said "next day delivery". Unfortunately, they didn't
specify which day it would be next to.
-- James Cort in the Monastery

1337. Re: Looking for keyer schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-25 15:43:52 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ahp6s6$b36$1@slb5.atl.mindspring.net>
Source record: 42450

Probably the same reason some of us 'still' operate 'hollow state'
equipment.

Probably the same reason some of us 'still' operate CW with a actual key,
instead of a electronic keyer. (bug)

Probably the same reason some of us 'still' enjoy building for the pure joy
of seeing it actually work.

Dan/W4NTI

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:ujvmicn945uhdd@corp.supernews.com...
> Would someone help me understand why? I can almost imagine why someone
> might want to build a tube-based keyer, or a duplicate of a keyer they
used
> years ago. But why be interested in building any old keyer "the hard
way"?
>
> I can understand not liking a particular keyer chip, too. I sort of liked
> TiCKs until I got my K1 and realized what an improvement in operability a
> couple of more buttons could be. But you don't need to be satisfied with
> someone else's opinion of how a keyer should behave.
>
> It's so simple to burn a PIC and get whatever behavior you want with
> practically no parts count. Heck, you could build the programmer AND the
> keyer for probably half the cost of building an MSI based keyer, and it
> would certainly work better since you have ultimate flexibility in
deciding
> what "better" means.
>
> So why the interest in small scale logic?
>
> ..
>
> "Bob Liesenfeld" <robert.liesenfeld@neicoltech.org> wrote in message
> news:3D3C3613.A5ED6251@neicoltech.org...
> > Hi gang,
> > I am looking to build a keyer. Here are the requirements:
> >
> > Non-pic based (nothing against a PIC, but I want to use descrete chips,
> > ie., RS JK D type 555 etc)
> > Non Curtis chip based (see above)
> > Dot memory
> > Self completing

> > Adjustable speed and weighting
> >
> > Any sites you can recomend?
> >
> > Thanks
> > Bob WB0POQ
> >
>
>

1338. Re: Again - how do you clean old variable capacitors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-25 20:54:26 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <6AZ%8.271544$DB.6377596@news1.east.cox.net>
Source record: 42451

larger ultrasonic cleaner.

Peter

"Douglas Snowden" <snowden@peoplepc.com> wrote in message
news:ujp3am44625a1b@corp.supernews.com...
> I've seen this before but forgot what was said. I think people
> boil the variables in some mixture of lemon juice or vinegar?
> I have some cruddy ones.
>
> Doug, N4IJ
>
>
>
>

1339. Re: How do you mount LEDs to a chassis?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-25 21:40:06 UTC
From: "Mr. XXXX" <bogus@bogus.bogus>
Message-ID: <Xns9256F17F9977Cmrxxxx@195.228.240.20>
Source record: 42452
Cross-posted to: sci.electronics,sci.electronics.basics,rec.radio.amateur.homebrew,sci.electronics.components

jason_hsu@my-deja.com (Jason Hsu) wrote in
news:f7d9a152.0207201212.50f61d9@posting.google.com:

> When you build an electronics project that uses LEDs, how do you mount
> these devices? I find LEDs tricky to work with, because those leads

Drill a suitable hole in the plate in question, cut the LED leads SHORT
(max. 10 mm), connect the LED with a short thin 2-wire cable, then fix the
LED with a SMALL drop of cyanoacrylate.

> are long, uninsulated, and fragile.
>
> I would like to hear your favorite methods.
>
> Jason Hsu, AG4DG
> usenet@@@jasonhsu.com
> http://www.jasonhsu.com/ham_radio-technical.html

1340. Re: Relay design for AL-80B and IC-746

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-25 23:08:47 UTC
From: "Dana Hoggatt (KB9SSS)" <kb9sss@arrl.net>
Message-ID: <3D4084FF.411D8428@arrl.net>
Source record: 42453

Larry Bratcher wrote:
>
> Anyone know of a site that shows a simple design for a radio to amp relay
> that will protect my 746?

The IC-746 FAQ at:

http://www.qsl.net/kb9sss/IC-746/IC746-faq.txt

should have the info you need.

1341. Sub Carrier reciever schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 01:10:43 UTC
From: chrism1111@aol.comspamless
Message-ID: <20020725211043.17325.00000824@mb-mt.aol.com>
Source record: 42454

Hi all,

does anyone have a schematic for a sub carrier reciever, or kit o/t ramseys. Looks kinda expensive for a card w/o a box. Then they toss in a box for 15 bucks more.

on a budget
what else
73

chris
For free plans and info on solar oven's water and purifiers, that actually work, see<http://www.accessone.com/~sbcn/index.htm>
==========
Sufficiently advance technology is indistinguishable from magic..

1342. Colorado Mobile Experiments

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 03:05:03 UTC
From: rnelson@farmtel.net
Message-ID: <3d40bb3b.21579449@news.louisacomm.net>
Source record: 42455

I just returned from a vacation in the Colorado Rocky Mountains.
While at a rest stop on I-70 west of Denver, I saw a strange mobile
installation and was wondering what mode was being used.

The vehicles left the parking lot before I had a chance to ask what it
was.

Two cars had what appeared to be a toilet paper tube fastened to the
outside of the rear passenger window. The open ends of the tube faced
forward and rearward.

A third car had a similar tube fasten the the right rear fender.

Laser??

Microwave??

Just curious!!

Randy
WB0VHB

1343. FOR SALE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 03:20:12 UTC
From: Lou <tech@dp.net>
Message-ID: <ahqic4$11sb$1@news.dp.net>
Source record: 42456

FOR SALE:

I have about 6 coils made from what appears to me, to be copper tubing(?). They were made, but appear to have been unused, for some sort of transmitter. They are different lengths and diameters. The tubing/wire - is about the size of #8 gauge wire, maybe larger.

If you are in to homebrew and can use these, I'll sell them reasonable, shipping not included. Postal MOS only.

Have many other items available too. Please inquire with needs. Trying to reduce inventory.

Feel free to inquire on any radio related newsgroup or check out my Profile on E-Bay.

E-Mail photos available of any items I advertise.

Lou/Tech@DP.NET

1344. Re: Again - how do you clean old variable capacitors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 05:10:58 UTC
From: jrobmills@aol.comrx320
Message-ID: <20020726011058.24292.00000966@mb-cs.aol.com>
Source record: 42457

>larger ultrasonic cleaner.

You are reading my mind, I was thinking about that. Maybe use the lemon juice/vinegar (or what?) solution in the ultrasonic.
RM~

1345. QEX, January, 1995

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 05:46:08 UTC
From: kenik@inp.nsk.su
Message-ID: <aaa42577.0207252146.564cf4b0@posting.google.com>
Source record: 42458

I am looking for the QEX, January, 1995 article
"Designing and Building High-Performance Crystal Ladder Filters"
Can anyone help with a copy of the article???

Thanks and 73!

1346. Re: Looking for keyer schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 06:55:52 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0207252255.47138779@posting.google.com>
Source record: 42459

Hi Bob,
another schmatic for you is at http://www.rason.org/Projects/cwkeyer/cwkeyer.htm

73 de Ivan

1347. Icom IC-RP1510 Repeater

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 07:00:57 UTC
From: John P-G <john@FALSETEETH.sighthound.demon.co.uk>
Message-ID: <93sqha.q0t.ln@sighthound.demon.co.uk>
Source record: 42460

Hello,

Our local club, in Shetland, UK, has just acquired a second hand IC-RP1510 VHF Repeater to replace the old and worn out Pye equipment that's been in use since the early '80s.

It seems to be in full working order, and is now set up on the correct RX/TX frequencies and works well enough on the bench. We now have a decision to make; do we modify it in order to insert our own logic board or use its own logic, which has the facilities for morse callsign ident, CTCSS and a similar talkthrough timing scheme as our own logic.

The callsign ID function seems to rely on the programming of an EPROM, to store the callsign, and we can't find any information on how it's stored in the PROM. Icom (UK and USA) have not been very forthcoming and despite an extensive Google we are at a loss. I know, from the Google searches, that there are a few of these units in use as amateur repeaters and was wondering if anyone here could provide us assistance in programming the PROM, or advice as to whether to modify the unit to insert a standard logic card instead.

--
Cheers and 73
John P-G GM4SLV
Lerwick, Shetland Islands, UK
Remove my "FALSETEETH" to reply!

1348. Re: Looking for keyer schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 08:47:37 UTC
From: Markus L <uo9oew@lnubb.pbz>
Message-ID: <3d410c89$0$228$4d4ebb8e@read-nat.news.nl.uu.net>
Source record: 42461

> "Bob Liesenfeld" <robert.liesenfeld@neicoltech.org> wrote in message
> news:3D3C3613.A5ED6251@neicoltech.org...
> > Hi gang,
> > I am looking to build a keyer. Here are the requirements:
> >
> > Non-pic based (nothing against a PIC, but I want to use descrete chips,
> > ie., RS JK D type 555 etc)
> > Non Curtis chip based (see above)
> > Dot memory
> > Self completing
> > Adjustable speed and weighting

In the ARRL Handbook there was (maybe still is) the so-called "Accu keyer"
by WB4VVF, originally published in QST Aug 1973. Built one myself around
20 years ago and it worked fine. But definitely not state-of-the-art
anymore.
My favorite today is http://www.idiompress.com/K3_specs.html#kit
Read 3 reviews about it here: http://www.eham.net/reviews/detail/1611

73, Markus HB9BRJ
--
e-mail address is ROT13 encoded. Decode before replying.

1349. 4cx250 2m amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 09:07:16 UTC
From: chris <orion@otenet.gr>
Message-ID: <ahr3h5ktr1@newsmaster.hol.gr>
Source record: 42462

Im building a 2m power amplifier with 2 4cx250 tubes

I dont know what king of blower i have to use for cooling.
Any suggestions

Pls help
christos

1350. litz wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 10:28:50 UTC
From: Leigh <leigh@vk6wa.demon.co.uk>
Message-ID: <1027679323.40.0.nnrp-14.c1edbbf4@news.demon.co.uk>
Source record: 42463

Does anyone know of a reliable source of litz wire in the UK?
Regards,
--
Leigh

1351. Re: Sub Carrier reciever schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 11:01:18 UTC
From: c.a.m@nospam.blueyonder.co.uk
Message-ID: <jua2kucbtl5mg48irv09id66o36c74b84u@4ax.com>
Source record: 42464

What's a sub carrier receiver when it's a bout ?

You on about SSB ?

Clive

1352. Re: litz wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 11:48:34 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <ahrcui$km9$1@knossos.btinternet.com>
Source record: 42465

Scientific Wire Co. in London used to stock it.

"Leigh" <leigh@vk6wa.demon.co.uk> wrote in message
news:1027679323.40.0.nnrp-14.c1edbbf4@news.demon.co.uk...
> Does anyone know of a reliable source of litz wire in the UK?
> Regards,
> --
> Leigh

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

1353. Re: litz wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 12:08:31 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <7pqkVhB$uTQ9EAID@ifwtech.co.uk>
Source record: 42466

Leigh wrote:
>Does anyone know of a reliable source of litz wire in the UK?

Try the Scientific Wire Company - website and contact details on the
Component Suppliers list on my 'In Practice' pages.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
www.ifwtech.co.uk/g3sek

1354. Re: the dull shoe rarely converses Talal, it dreams Aslan instead

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 13:39:15 UTC
From: ogrowup@webtv.net
Message-ID: <13450-3D415103-4@storefull-2234.public.lawson.webtv.net>
Source record: 42467

And the reason you took up valuable bandwidth on
"Rec.radio.amateur.homebrew" with this drivel is: (Pick 1)

A) I was stoned & I wanted the world to see my wondeful, insightful
thoughts.

B) I wanted everyone to see how well write for a six-year old.

C) I crosspost anywhere I want just for the hell of it.

D) I'm a retarded person who just doesn't know any better.

My personal pick is "D", dimbulb.

"Eagles may soar but weasels aren't sucked into jets."

1355. Re: the dull shoe rarely converses Talal, it dreams Aslan instead

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 13:54:02 UTC
From: "." <sp@m.not>
Message-ID: <3D415481.BD7E7F9C@m.not>
Source record: 42468

Don't waste your time and bandwidth replying to SPAM.

These posts are an attempt to use up bandwidth and create havoc.

Ignore them and go on.

They are generated automatically and you are biting on it as they hope
you will to create more havoc and nonsense.

They are sometimes used successfully to cause ISPs to shut down
newsgroups that are overwhelmed with their postings.

"P.L. O'Connor" wrote:

> And the reason you took up valuable bandwidth on
> "Rec.radio.amateur.homebrew" with this drivel is: (Pick 1)

1356. Re: 4cx250 2m amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 16:34:04 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ahrtl7$vv6$1@slb2.atl.mindspring.net>
Source record: 42469

I don't recall the specs. But a specific amount of forced air must be blown through the fins. Back in the 60s there was a 'Plumbers Delight' amp that used two 4CX or 4X series. Quite popular back then. Look it up.

Dan/W4NTI

"chris" <orion@otenet.gr> wrote in message
news:ahr3h5ktr1@newsmaster.hol.gr...
> Im building a 2m power amplifier with 2 4cx250 tubes
>
> I dont know what king of blower i have to use for cooling.
> Any suggestions
>
> Pls help
> christos
>
>

1357. Re: Colorado Mobile Experiments

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 16:37:31 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ahrtrq$g20$1@slb0.atl.mindspring.net>
Source record: 42470

Sounds like a homebrew speech processor to me.

HI.

Dan/W4NTI

<rnelson@farmtel.net> wrote in message
news:3d40bb3b.21579449@news.louisacomm.net...
> I just returned from a vacation in the Colorado Rocky Mountains.
> While at a rest stop on I-70 west of Denver, I saw a strange mobile
> installation and was wondering what mode was being used.
>
> The vehicles left the parking lot before I had a chance to ask what it
> was.
>
> Two cars had what appeared to be a toilet paper tube fastened to the
> outside of the rear passenger window. The open ends of the tube faced
> forward and rearward.
>
> A third car had a similar tube fasten the the right rear fender.
>
> Laser??
>
> Microwave??
>
> Just curious!!
>
> Randy
> WB0VHB

1358. Litz Wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 17:14:31 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.00000189.0028e12a@btinternet.com>
Source record: 42471

Hi,

The 'Scientific Wire company' do not appear to do Litz
wire any longer but offer multi-strand enamelled copper
wire which should do in its stead.

Cheers - Joe, G3LLV

1359. Re: Litz Wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 18:22:56 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2607021423290001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42472

In article <VA.00000189.0028e12a@btinternet.com>, ximac@btinternet.com wrote:

> Hi,
>
> The 'Scientific Wire company' do not appear to do Litz
> wire any longer but offer multi-strand enamelled copper
> wire which should do in its stead.
>
>
> Cheers - Joe, G3LLV

It may do okay, but Litz wire is composed of insulated strands of wire of very small cross area. It is extremely flexible and yet has good high frequency characteristics. If you can find any, it'll probably cost you an arm and a leg. On top of that, it is a royal bear to work with either soldering or routing. A good amount of patience is required, let me put it that way. You might be able to get some from an earpiece accessory that you can find at the hamfests in the junk boxes.

Steve WB4CZR
Plantation, FL

1360. Re: Litz Wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 18:44:21 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ahs5a4pin1@helle.btinternet.com>
Source record: 42473

> The 'Scientific Wire company' do not appear to do Litz
> wire any longer but offer multi-strand enamelled copper
> wire which should do in its stead.

==========

A popular misconception.

Solid copper wire of the same overall diameter will have a lower RF resistance than multi-layer stranded enamelled copper wire. Current flows only on the outer layer of strands.

Litz wire is woven in a special way to ensure all wires, on inside and outside layers, share the current equally.

1361. Re: Litz Wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 19:39:49 UTC
From: Peter Völpel <qro1750@compuserve.de>
Message-ID: <3D41A585.5E64640D@compuserve.de>
Source record: 42474

Joe McElvenney wrote:

> The 'Scientific Wire company' do not appear to do Litz
> wire any longer but offer multi-strand enamelled copper
> wire which should do in its stead.

Joe

You can`t use multi-strand copperwire as replacement for Litze,
it is a complete different behaviour on electronic flow at RF.

Check in the U.S.A. with Surplus Sales of Nebraska, they stock a lot

73 de Peter, DF3KV

1362. Re: How do you mount LEDs to a chassis?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 20:26:01 UTC
From: Bertie <peteb@clear.net.nz>
Message-ID: <3d41b04a@clear.net.nz>
Source record: 42475
Cross-posted to: sci.electronics,sci.electronics.basics,rec.radio.amateur.homebrew,sci.electronics.components

After 30+years in electronics i watched a younger college simply drill a whole, as close as the LED's diameter through the front (thin alloy)panel of the 'box' and forced the LED in.

The resulting front "D" of the LED that extended through, he cut off flush (!) and polished ther remains smoothe. The result looked fantastic.

Bit of a rough approach but certainly different.

"Jason Hsu" <jason_hsu@my-deja.com> wrote in message news:f7d9a152.0207201212.50f61d9@posting.google.com...
> When you build an electronics project that uses LEDs, how do you mount
> these devices? I find LEDs tricky to work with, because those leads
> are long, uninsulated, and fragile.
>
> I would like to hear your favorite methods.
>
> Jason Hsu, AG4DG
> usenet@@@jasonhsu.com
> http://www.jasonhsu.com/ham_radio-technical.html

1363. Re: litz wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 20:37:14 UTC
From: CA <sm6pxj@hotmail.com>
Message-ID: <roi09.5692$t4.14852@nntpserver.swip.net>
Source record: 42476

Leigh wrote:
Does anyone know of a reliable source of litz wire in the UK?
Regards,
--
Leigh

Check this URL:
http://www.carc.org.uk/html/for_sale.html

Plans for getting on LF?

73
sm6pxj Christer

1364. Re: Icom IC-RP1510 Repeater

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 21:01:45 UTC
From: "Gary P. Fiber" <foo@bar.invalid>
Message-ID: <qud3kug09clm45e9sjn0m721if23qmbqm7@4ax.com>
Source record: 42477

On Fri, 26 Jul 2002 08:00:57 +0100, John P-G
<john@FALSETEETH.sighthound.demon.co.uk> wrote:

>Hello,
>
>Our local club, in Shetland, UK, has just acquired a second hand
>IC-RP1510 VHF Repeater to replace the old and worn out Pye equipment
>that's been in use since the early '80s.
>
>It seems to be in full working order, and is now set up on the correct
>RX/TX frequencies and works well enough on the bench. We now have a
>decision to make; do we modify it in order to insert our own logic board
>or use its own logic, which has the facilities for morse callsign ident,
>CTCSS and a similar talkthrough timing scheme as our own logic.
>
>The callsign ID function seems to rely on the programming of an EPROM,
>to store the callsign, and we can't find any information on how it's
>stored in the PROM. Icom (UK and USA) have not been very forthcoming and
>despite an extensive Google we are at a loss. I know, from the Google
>searches, that there are a few of these units in use as amateur
>repeaters and was wondering if anyone here could provide us assistance
>in programming the PROM, or advice as to whether to modify the unit to
>insert a standard logic card instead.

John,

You might think of adding an external controller. The ID is programmed
into the eprom, the speed was either 8 or 30 WPM. The repeater ID 'ed
every 3 minutes, that rule was changed long ago in the United States
to every 10 minutes. For CTCSS tone encoder used a precision resistor
to set the frequency of the tone. Aside of the internal controller it
was a very good repeater. You had to use a Communications Specialists
tone decoder or similar if you wanted decode.

Gary K8IZ

1365. Re: Looking for keyer schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 21:48:11 UTC
From: Dave Allen <david_e_allen@agilent.com>
Message-ID: <3D41C39B.C30A383B@agilent.com>
Source record: 42478

Wow. There's a other reason to build it the "old" way. The chips for the accu-keyer are probably around 14 cents apiece and this kit (where you supply half the parts) is $58. I'm sure it's whizzy... but...

dave, wb0taq

Markus L wrote:

> In the ARRL Handbook there was (maybe still is) the so-called "Accu keyer"
> by WB4VVF, originally published in QST Aug 1973. Built one myself around
> 20 years ago and it worked fine. But definitely not state-of-the-art
> anymore.
> My favorite today is http://www.idiompress.com/K3_specs.html#kit
> Read 3 reviews about it here: http://www.eham.net/reviews/detail/1611
>
> 73, Markus HB9BRJ
> --
> e-mail address is ROT13 encoded. Decode before replying.

1366. Re: 4cx250 2m amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-26 22:59:35 UTC
From: David - VK4GL <PleaseSeeText@ToReply.com>
Message-ID: <3d41e0ea$0$822$afc38c87@news.optusnet.com.au>
Source record: 42479

Try
http://www.svetlana.com/docs/TechBulletins/appnoteNO.11.html

David - VK4GL

"Dan/W4NTI" <w4nti@mindspringnospam.com> wrote in message
news:ahrtl7$vv6$1@slb2.atl.mindspring.net...
> I don't recall the specs. But a specific amount of forced air must be
blown
> through the fins. Back in the 60s there was a 'Plumbers Delight' amp
that
> used two 4CX or 4X series. Quite popular back then. Look it up.
>
> Dan/W4NTI
>
> "chris" <orion@otenet.gr> wrote in message
> news:ahr3h5ktr1@newsmaster.hol.gr...
> > Im building a 2m power amplifier with 2 4cx250 tubes
> >
> > I dont know what king of blower i have to use for cooling.
> > Any suggestions
> >
> > Pls help
> > christos
> >
> >
>
>

1367. Re: Again - how do you clean old variable capacitors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-27 01:13:17 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <Nsm09.273398$DB.6695391@news1.east.cox.net>
Source record: 42480

I used an organic Branson (sp?) cleaner made by the manufacturer.
Strong stuff, however... Took the darn chrome of off an "Elvis" (so
called)
Shure 55S microphone on me -- forgot it was in the solution for several
days... Ouch... The organic cleaners will also do rust!

Pete

"J Rob" <jrobmills@aol.comrx320> wrote in message
news:20020726011058.24292.00000966@mb-cs.aol.com...
> >larger ultrasonic cleaner.
>
> You are reading my mind, I was thinking about that. Maybe use the lemon
> juice/vinegar (or what?) solution in the ultrasonic.
> RM~

1368. Re: 4cx250 2m amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-27 01:14:47 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <bum09.273406$DB.6695578@news1.east.cox.net>
Source record: 42481

Do a web search regarding the screen regulation requirements
on those tubes. You can substantially improve the IMD performance
by stiffly regulating the screen supply. You'll also need screen metering.

Pete

"chris" <orion@otenet.gr> wrote in message
news:ahr3h5ktr1@newsmaster.hol.gr...
> Im building a 2m power amplifier with 2 4cx250 tubes
>
> I dont know what king of blower i have to use for cooling.
> Any suggestions
>
> Pls help
> christos
>
>

1369. Re: 4cx250 2m amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-27 01:30:47 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <bJm09.345251$Im2.17504118@bin2.nnrp.aus1.giganews.com>
Source record: 42482

If you need a high voltage regulator, I cobbled together a circuit for a vacuum tube amplifier which should work well in this application -- www.tech-diy.com/fairchild_255a.htm scroll down, it basically uses a zener leg to raise the reference and an LM317 as the error detector/reference amp

" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message news:bum09.273406$DB.6695578@news1.east.cox.net...
> Do a web search regarding the screen regulation requirements
> on those tubes. You can substantially improve the IMD performance
> by stiffly regulating the screen supply. You'll also need screen metering.
>
> Pete
>
> "chris" <orion@otenet.gr> wrote in message
> news:ahr3h5ktr1@newsmaster.hol.gr...
> > Im building a 2m power amplifier with 2 4cx250 tubes
> >
> > I dont know what king of blower i have to use for cooling.
> > Any suggestions
> >
> > Pls help
> > christos
> >
> >
>
>

1370. BC610 Plate Transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-27 14:54:18 UTC
From: rdrause@earthlink.net
Message-ID: <uuy09.9705$Ky3.680086@newsread2.prod.itd.earthlink.net>
Source record: 42483

I have two plate transformers for the BC610 Transmitter. These are large and heavy with a 110 volt primary and a 6200 volt secondary. The two can be used with the primaries in series and 220 volts input.

Because of size and weight these are available for pick-up in Simpsonville, SC.

The price is $120 for the pair.
Reply to rdrause@earthlink.net

73,
Ray W9BN/4

1371. FS: Johnson 2-Section + NEW Cardwell 2-section! w/pics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-27 17:23:40 UTC
From: rlucch2098@aol.com
Message-ID: <20020727132340.02592.00001653@mb-mu.aol.com>
Source record: 42484

Hi Fellas;
I have for SALE:
1-Johnson dual section, 17-190pf ea. 1/4" shaft, 7" long. 2-1/2"w x 2-1/2"h.
Price is $20 + Post
http://www.myradioroom.com/johnson190pfea.jpg
2-Brand New CARDWELL in Box, Dual Section, 20-200pf ea., 5-3/4"lg x 2-1/2"w x
1-1/2"h
$25.00 plus postage.
http://www.myradioroom.com/newcardwell.jpg
Thanks es 73.....RICH-WA2RQY RLUCCH2098@aol.com
Manual Copies @ http://www.myradioroom.com/manualsale.html
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

1372. Re: How do you mount LEDs to a chassis?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-27 19:02:31 UTC
From: richardgrise@yahoo.com
Message-ID: <3df9fd6c.0207271102.28964df3@posting.google.com>
Source record: 42485
Cross-posted to: sci.electronics,sci.electronics.basics,rec.radio.amateur.homebrew,sci.electronics.components

jason_hsu@my-deja.com (Jason Hsu) wrote in message
news:<f7d9a152.0207201212.50f61d9@posting.google.com>...
> When you build an electronics project that uses LEDs, how do you mount
> these devices? I find LEDs tricky to work with, because those leads
> are long, uninsulated, and fragile.
>
> I would like to hear your favorite methods.
>
> Jason Hsu, AG4DG
> usenet@@@jasonhsu.com
> http://www.jasonhsu.com/ham_radio-technical.html

I've used those two-piece plastic things that other people
have mentioned - I've also used an ordinary rubber grommet,
and I've worked with a unit that had about a hundred LEDs
on a circuit board, which was mounted _behind_ a plexiglass
front panel that was silk-screened with an array of apertures,
one per each LED. Of course, the parallax (sp?) was
phenomenal, and so I grabbed a few soda straws at the local
fast-food joint, and cut them up such that each LED had its
own little shroud.

I'd avoid anything that could break the LED by a mechanical
discontinuity between its panel mounting and the leads'
mounting to the board.

You could even possibly glue, grommet, or plastic two-piece
thingy the LED to the panel, and plug into it with a .1"
center Molex connector!

Good Luck!
Rich

1373. Re: How do you mount LEDs to a chassis?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 00:28:14 UTC
From: "Watson A.Name" <alondra101@hotmail.com>
Message-ID: <MPG.17acdbaac74a6461989a32@news.la.sbcglobal.net>
Source record: 42486
Cross-posted to: sci.electronics,sci.electronics.basics,rec.radio.amateur.homebrew,sci.electronics.components

In article <3df9fd6c.0207271102.28964df3@posting.google.com>,
richardgrise@yahoo.com talked about...
> jason_hsu@my-deja.com (Jason Hsu) wrote in message
news:<f7d9a152.0207201212.50f61d9@posting.google.com>...
> > When you build an electronics project that uses LEDs, how do you mount
> > these devices? I find LEDs tricky to work with, because those leads
> > are long, uninsulated, and fragile.
> >
> > I would like to hear your favorite methods.
> >
> > Jason Hsu, AG4DG
> > usenet@@@jasonhsu.com
> > http://www.jasonhsu.com/ham_radio-technical.html
>
> I've used those two-piece plastic things that other people
> have mentioned - I've also used an ordinary rubber grommet,
> and I've worked with a unit that had about a hundred LEDs
> on a circuit board, which was mounted _behind_ a plexiglass
> front panel that was silk-screened with an array of apertures,
> one per each LED. Of course, the parallax (sp?) was
> phenomenal, and so I grabbed a few soda straws at the local
> fast-food joint, and cut them up such that each LED had its
> own little shroud.

I commend you on your ingenuity, Rich. You've found one more use for those
soda straws. I've used them for coil forms. :-0

> I'd avoid anything that could break the LED by a mechanical
> discontinuity between its panel mounting and the leads'
> mounting to the board.

> You could even possibly glue, grommet, or plastic two-piece
> thingy the LED to the panel, and plug into it with a .1"
> center Molex connector!

Some older PCs use similar to connect the power, turbo and such LEDs.
Sometimes I just cut the LED leads short and solder some fine stranded wire
to the leads. Then I cover the joints with shrink tubing. Makes it a lot
more flexible.

> Good Luck!
> Rich

--
@@F@r@o@m@@O@r@a@n@g@e@@C@o@u@n@t@y@,@@C@a@l@,@@w@h@e@r@e@@

My email address is whitelisted. *All* email sent to it
goes directly to the trash unless you put NOSPAM in the
Subject: line. alondra101 <at> hotmail.com
Don't be ripped off by the big book dealers. Go to the URL
that will give you a choice and save you money(up to half).
http://www.everybookstore.com You'll be glad you did!
Just when you thought you had all this figured out, the gov't
changed it: http://physics.nist.gov/cuu/Units/binary.html
@@t@h@e@@a@f@f@l@u@e@n@t@@m@e@e@t@@t@h@e@@E@f@f@l@u@e@n@t@@

1374. Need data for BB112 and BB130

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 01:15:42 UTC
From: la8ak.xnd@online.no
Message-ID: <3d43441e.305381584@news.online.no>
Source record: 42487

Wish to find complete data sheet for the varicap diodes BB112 and
BB130 on the net. Tried Google search, but not result, also tried
Philips+Royal, but they seem to start with BB131.
Also need data sheet for BF314

any suggestions?
73
Jan-Martin
LA8AK
--
remove ,xnd to reply

1375. Can I assume ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 01:15:42 UTC
From: D <lunnd@usa.net>
Message-ID: <1CH09.7241$H67.38667@tor-nn1.netcom.ca>
Source record: 42488

I live in a valley where most AM/FM radio signals fail to penetrate. Can I assume that signals broadcasted within the valley will be trapped in the valley?

1376. Memorizer scanner mod

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 04:06:56 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <ahvql0rls0@206.97.58.85>
Source record: 42489

I misplaced the instructions for the Yaesu FT-227R scanner mod. This is the one that has a small switchbox
under the unit. Does anyone have this info?

73 de Jack

1377. Re: 4cx250 2m amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 04:46:34 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D43775A.CEB928F2@bellatlantic.net>
Source record: 42490

chris wrote:
>
> Im building a 2m power amplifier with 2 4cx250 tubes
>
> I dont know what king of blower i have to use for cooling.
> Any suggestions
>
> Pls help
> christos

I'm going by memory here. I had the same configuration -
2 4CX250 tubes - and if I recall correctly, I needed a
54 CFM blower.

1378. Re: Can I assume ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 05:01:23 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D437AD3.AEAEC24D@bellatlantic.net>
Source record: 42491

D wrote:
>
> I live in a valley where most AM/FM radio signals fail to penetrate. Can I
> assume that signals broadcasted within the valley will be trapped in the
> valley?

No. HF signals may bounce off the ionosphere and be heard hundreds
of miles away; VHF may propagate via tropospheric ducting.

1379. QRP linear amp project or kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 06:04:16 UTC
From: Will White <googlyelmo@earthlink.net>
Message-ID: <3D43896A.353E860F@earthlink.net>
Source record: 42492

I have built over the years several QRP monoband CW transceivers from kits and magazine plans/projects, and I want now to build a small linear amp, solid-state,
capable of between 50 and 100W out, to drive with these peanut whistles at times. I want something that is bandswitched from 80 to 15 (160 and 10 also wud be
nice, but not strictly neccesary. WARC not needed really, except 30) and capable of full design output with 5W or less of drive. I am also thinking it should be capable of substantial output (10W or greater) with a drive of only 1W, 500 mW even, if one design can accomodate both goals. I have a copy of a project from a recent ('98-'00) ARRL HB, but I want to look at some alternatives first.

Of course, it would be a *big* bonus if this SS linear could (in addition to Tuna Tins, SSTs, OHRs, etc.) also be driven by little *hollow* MOPAs, Hartley's, TNT's, and such! And I am not completely against
the idea of a tube design implementation for this amplifier, provided it would likewise accept being
driven by *SS* gear. But to stay on task, for now, I really mainly am seeking info/docs on
building a 50-100W SS amp for use with SS QRP rigs. I have learned, more than twice now, the importance of keeping things simple, especially when you *are* simple like me, at least with regards to electronic design and mechanical construction ;)

Please direct me to websites, back issues of QST/CQ/73/HR etc., books, or elsewhere there exist project plans, schematics, instructions, discussions, drawings, etc. If you have yourself built a little pistol of this type, and could spare a little time to tell me all about it, I would especially like to hear from you.

73. . .

--
Will White, KD7BFX
Seattle WA US
King County, Grid CN87tq
ITU Zone 6, CQ Zone 3
****
"The wireless telegraph is not difficult to understand.
The ordinary telegraph is like a very long cat.
You pull the tail in New York, and it meows in Los Angeles.
The wireless is the same, only without the cat."
- Albert Einstein
****

1380. Re: Can I assume ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 06:43:58 UTC
From: Russell Hltn <reply@2newsgroup.com>
Message-ID: <ai03rc$d4g$1@nntp-m01.news.aol.com>
Source record: 42493

Depends on what you're doing. If it's top secret experiment you don't want others to eavesdrop on, you may not be lucky. If you're planning on setting up a ham station, good luck! It's not hopeless, but it's going to be a pain.

As mentioned HF will bounce off the ionosphere under the right conditions. Chances are you'll need an antenna with a steeper then normal take-off angle to get out of the valley. As for VHF/UHF, unless the tops of the hills are very sharp, you're not likely to have much fun in that band.

"D" <lunnd@usa.net> wrote in message
news:1CH09.7241$H67.38667@tor-nn1.netcom.ca...
> I live in a valley where most AM/FM radio signals fail to penetrate.
Can I
> assume that signals broadcasted within the valley will be trapped in
the
> valley?
>
>

1381. Re: Litz Wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 08:06:07 UTC
From: la8ak.xnd@online.no
Message-ID: <3d4345f8.305855999@news.online.no>
Source record: 42494

On Fri, 26 Jul 2002 18:44:21 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>> The 'Scientific Wire company' do not appear to do Litz
>> wire any longer but offer multi-strand enamelled copper
>> wire which should do in its stead.
>
>==========
>
>A popular misconception.
>
>Solid copper wire of the same overall diameter will have a lower RF
>resistance than multi-layer stranded enamelled copper wire. Current flows
>only on the outer layer of strands.
>
>Litz wire is woven in a special way to ensure all wires, on inside and
>outside layers, share the current equally.
>
>
On 10MHz or 100kHz?
--
remove ,xnd to reply

1382. Re: litz wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 08:35:16 UTC
From: Leigh <leigh@vk6wa.demon.co.uk>
Message-ID: <1027845307.19555.0.nnrp-13.c1edbbf4@news.demon.co.uk>
Source record: 42495

Leon Heller wrote:

> Scientific Wire Co. in London used to stock it.
>
>
> "Leigh" <leigh@vk6wa.demon.co.uk> wrote in message
> news:1027679323.40.0.nnrp-14.c1edbbf4@news.demon.co.uk...
>> Does anyone know of a reliable source of litz wire in the UK?
>> Regards,
>> --
>> Leigh
>
> Leon
> --
> Leon Heller, G1HSM
> leon_heller@hotmail.com
> http://www.geocities.com/leon_heller

Folks,

Thanks for the info and advice. I have managed to find a small source of wire locally.

73
--
Leigh

1383. Re: Litz Wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 10:54:24 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ai0igvabb1@venus.btinternet.com>
Source record: 42496

> >
> >Litz wire is woven in a special way to ensure all wires, on inside and
> >outside layers, share the current equally.
==========
> >
> On 10MHz or 100kHz?
==========

Do you know of any Litz wire which is any good on 10MHz?

1384. Re: QRP linear amp project or kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 12:22:14 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3d43e0af$0$2450@echo-01.iinet.net.au>
Source record: 42347

I would be interested in a linear design
from about -10 dBm to about 5W out with the following specs

Cheap, easily available transistors
Likewise transformers
Gain flat within about 1-2 dB 1.5 - 30 MHz

Richard

"Will White" <googlyelmo@earthlink.net> wrote in message
news:3D43896A.353E860F@earthlink.net...
> I have built over the years several QRP monoband CW transceivers from kits
> and magazine plans/projects, and I want now to build a small linear amp,
> solid-state,
> capable of between 50 and 100W out, to drive with these peanut whistles at
> times. I want something that is bandswitched from 80 to 15 (160 and 10
also wud
> be
> nice, but not strictly neccesary. WARC not needed really, except 30) and
> capable of full design output with 5W or less of drive. I am also
thinking it
> should be capable of substantial output (10W or greater) with a drive of
only
> 1W, 500 mW even, if one design can accomodate both goals. I have a copy of
a
> project from a recent ('98-'00) ARRL HB, but I want to look at some
alternatives
> first.
>
> Of course, it would be a *big* bonus if this SS linear could (in addition
to
> Tuna Tins, SSTs, OHRs, etc.) also be driven by little *hollow* MOPAs,
Hartley's,
> TNT's, and such! And I am not completely against
> the idea of a tube design implementation for this amplifier, provided it
would
> likewise accept being
> driven by *SS* gear. But to stay on task, for now, I really mainly am
seeking
> info/docs on
> building a 50-100W SS amp for use with SS QRP rigs. I have learned, more
> than twice now, the importance of keeping things simple, especially when
you
> *are* simple like me, at least with regards to electronic design and
mechanical

> construction ;)
>
> Please direct me to websites, back issues of QST/CQ/73/HR etc., books, or
> elsewhere there exist project plans, schematics, instructions,
discussions,
> drawings, etc. If you have yourself built a little pistol of this type,
and
> could spare a little time to tell me all about it, I would especially like
to
> hear from you.
>
> 73. . .
>
> --
> Will White, KD7BFX
> Seattle WA US
> King County, Grid CN87tq
> ITU Zone 6, CQ Zone 3
> **
> "The wireless telegraph is not difficult to understand.
> The ordinary telegraph is like a very long cat.
> You pull the tail in New York, and it meows in Los Angeles.
> The wireless is the same, only without the cat."
> - Albert Einstein
> **
>
>

1385. Re: Sub Carrier reciever schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 13:06:43 UTC
From: ogrowup@webtv.net
Message-ID: <14687-3D43EC63-66@storefull-2231.public.lawson.webtv.net>
Source record: 42349

I think he's looking for a SCA receiver, used to pick up the subcarrier signals transmitted by FM stations, used for things like continuous stock quotes, ad-less background music for eating establishments, etc. As I understand the situation, there is some question as to the legality of these receivers under the idiotic ECPA [Electronics Communicationsd Privacy Act of 1986] law; and using the received audio in ANY public setting is a definite no-no without the proper written permissions!

"Eagles may soar but weasels aren't sucked into jets."

1386. VHF and UHF Linears ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 13:25:44 UTC
From: Andy <trdzr1@telkomsa.net>
Message-ID: <ai0rd5$r0p$1@ctb-nnrp1.saix.net>
Source record: 42348

Hello All

My friend ZS1NAZ wants to built his own 2m, 6m and 70cm linears
amps.....for DX

Does anyone in this group know what websites I can visit to download plans
ect ?
Also if anyone in this group already built some of these and still have the
plans ect, I would appreciate a copy via e-mail.

Many Thanks

Andr&#65533; ZR1TRD

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.373 / Virus Database: 208 - Release Date: 2002/07/03

1387. Re: 4cx250 2m amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 14:59:48 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <EFT09.677348$352.140320@sccrnsc02>
Source record: 42350

Ian White had a very good article on Tetrode control & protection
His October 1997 QEX article, does discuss reduced IMD
http://www.ifwtech.co.uk/g3sek/boards/tetrode/qex-article.pdf

Here is a specific IMD reference regarding the 4CX250R
http://www.ifwtech.co.uk/g3sek/cleansig/imd1.htm

Boards are available
http://www.ifwtech.co.uk/g3sek/boards/tetrode/tetrode-3.htm

I would definitely incorporate in any new design or construction.
Ordering options & information
http://www.ifwtech.co.uk/g3sek/boards/tetrode/tetrode-2.htm

73 de w9gb

" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
news:bum09.273406$DB.6695578@news1.east.cox.net...
> Do a web search regarding the screen regulation requirements
> on those tubes. You can substantially improve the IMD performance
> by stiffly regulating the screen supply. You'll also need screen
metering.
>
> Pete
>
> "chris" <orion@otenet.gr> wrote in message
> news:ahr3h5ktr1@newsmaster.hol.gr...
> > Im building a 2m power amplifier with 2 4cx250 tubes
> >
> > I dont know what king of blower i have to use for cooling.
> > Any suggestions
> >
> > Pls help
> > christos
> >
> >
>
>

1388. Re: 4cx250 2m amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 15:08:40 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <YNT09.699099$cQ3.108099@sccrnsc01>
Source record: 42351

Or the 2 meter amplifier using a 4CX800A article by Alfred Green, NU8I
http://www.svetlana.com/docs/TechBulletins/technoteNo42.html

w9gb

"David - VK4GL" <PleaseSeeText@ToReply.com> wrote in message
news:3d41e0ea$0$822$afc38c87@news.optusnet.com.au...
> Try
> http://www.svetlana.com/docs/TechBulletins/appnoteNO.11.html
>
> David - VK4GL
>
>
> "Dan/W4NTI" <w4nti@mindspringnospam.com> wrote in message
> news:ahrtl7$vv6$1@slb2.atl.mindspring.net...
> > I don't recall the specs. But a specific amount of forced air must be
> blown
> > through the fins. Back in the 60s there was a 'Plumbers Delight' amp
> that
> > used two 4CX or 4X series. Quite popular back then. Look it up.
> >
> > Dan/W4NTI
> >
> > "chris" <orion@otenet.gr> wrote in message
> > news:ahr3h5ktr1@newsmaster.hol.gr...
> > > Im building a 2m power amplifier with 2 4cx250 tubes
> > >
> > > I dont know what king of blower i have to use for cooling.
> > > Any suggestions
> > >
> > > Pls help
> > > christos
> > >
> > >
> > >
> > >
>
>

1389. Re: VHF and UHF Linears ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 15:57:19 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnak852u.fq2.QSB@animas.frontier.net>
Source record: 42352

On Sun, 28 Jul 2002 15:25:44 +0200, Andy scribbled:
>
> My friend ZS1NAZ wants to built his own 2m, 6m and 70cm linears
> amps.......for DX

I've always been keen on attempting to work with some of the
devices these folks have:

http://www.advancedpower.com/TechnicalSupport/ApplicationNotesIndex.asp

Two, in particular, look like Very Promising for 6M:

http://www.advancedpower.com/TechnicalSupport/ApplicationNotesData/APT9802.pdf
http://www.advancedpower.com/TechnicalSupport/ApplicationNotesData/APT9702.pdf

Trim the URL(s) back to start in at the 'home page'.

Alas, so many projects (and project ideas) and so little time......

Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

1390. Re: VHF and UHF Linears ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 17:22:44 UTC
From: Damon Wascom <kc5cqw@excite.com>
Message-ID: <uk8a36rsu96835@corp.supernews.com>
Source record: 42353

www.communication-concepts.com

"Andy" <trdzr1@telkomsa.net> wrote in message
news:ai0rd5$r0p$1@ctb-nnrp1.saix.net...
> Hello All
>
> My friend ZS1NAZ wants to built his own 2m, 6m and 70cm linears
> amps.....for DX
>
> Does anyone in this group know what websites I can visit to download plans
> ect ?
> Also if anyone in this group already built some of these and still have
the
> plans ect, I would appreciate a copy via e-mail.
>
> Many Thanks
>
> Andr&#65533; ZR1TRD
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.373 / Virus Database: 208 - Release Date: 2002/07/03
>
>

1391. Re: QRP linear amp project or kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 17:33:17 UTC
From: Damon Wascom <kc5cqw@excite.com>
Message-ID: <uk8ap0rspacffb@corp.supernews.com>
Source record: 42354

www.communication-concepts.com Look at the EB-63, I'm building one for an FT-817. 1-5w in is up to 140w out @ 2-30MHz! It uses 2 MRF454MP's in a push-pull setup. Also known as: NTE part #: 336. They run about $25 each and the full price of the EB-63 kit w/o heatsink is about $102 with shipping inc. Or, you can download the app.notes in pdf and build your own from scratch. It has a Proof positive for the pcb. You may need to use some photo software to turn it into a negitive and reverse the image so you can use it with the techniks print-n-peel etch resist. I hear this is an older design, but a solid performer.
"Will White" <googlyelmo@earthlink.net> wrote in message news:3D43896A.353E860F@earthlink.net...
> I have built over the years several QRP monoband CW transceivers from kits
> and magazine plans/projects, and I want now to build a small linear amp,
> solid-state,
> capable of between 50 and 100W out, to drive with these peanut whistles at
> times. I want something that is bandswitched from 80 to 15 (160 and 10 also wud
> be
> nice, but not strictly neccesary. WARC not needed really, except 30) and
> capable of full design output with 5W or less of drive. I am also thinking it
> should be capable of substantial output (10W or greater) with a drive of only
> 1W, 500 mW even, if one design can accomodate both goals. I have a copy of a
> project from a recent ('98-'00) ARRL HB, but I want to look at some alternatives
> first.
>
> Of course, it would be a *big* bonus if this SS linear could (in addition to
> Tuna Tins, SSTs, OHRs, etc.) also be driven by little *hollow* MOPAs, Hartley's,
> TNT's, and such! And I am not completely against
> the idea of a tube design implementation for this amplifier, provided it would
> likewise accept being
> driven by *SS* gear. But to stay on task, for now, I really mainly am seeking
> info/docs on
> building a 50-100W SS amp for use with SS QRP rigs. I have learned, more
> than twice now, the importance of keeping things simple, especially when you
> *are* simple like me, at least with regards to electronic design and

mechanical
> construction ;)
>
> Please direct me to websites, back issues of QST/CQ/73/HR etc., books, or
> elsewhere there exist project plans, schematics, instructions,
discussions,
> drawings, etc. If you have yourself built a little pistol of this type,
and
> could spare a little time to tell me all about it, I would especially like
to
> hear from you.
>
> 73. . .
>
> --
> Will White, KD7BFX
> Seattle WA US
> King County, Grid CN87tq
> ITU Zone 6, CQ Zone 3
> **
> "The wireless telegraph is not difficult to understand.
> The ordinary telegraph is like a very long cat.
> You pull the tail in New York, and it meows in Los Angeles.
> The wireless is the same, only without the cat."
> - Albert Einstein
> **
>
>

1392. Re: VHF and UHF Linears ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 20:20:54 UTC
From: RaOuL <russ@bit-net.nospam.com>
Message-ID: <UmY09.1159$_T4.92237@news.bit-net.com>
Source record: 42355

I stumbled on a club web page with instructions of how they designed and built an amp for 2 meters as a club project. I/m planning to build this amp myself as soon as time permits. The URL for the details is: http://www.falara.org/tektalk/GPOAmp.html

73,
Russ - KB1GKN

"Andy" <trdzr1@telkomsa.net> wrote in message news:ai0rd5$r0p$1@ctb-nnrp1.saix.net...
> Hello All
>
> My friend ZS1NAZ wants to built his own 2m, 6m and 70cm linears
> amps.......for DX
>
> Does anyone in this group know what websites I can visit to download plans
> ect ?

1393. FA: ALTEC 1567A & Pr. 1566's...7-Day!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 22:59:51 UTC
From: MTM <res0i8ad@verizon.net>
Message-ID: <HH_09.15243$NX5.11583@nwrddc02.gnilink.net>
Source record: 42356

FA: ALTEC 1567A & Pr. 1566's
Please go to:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1369841677

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=896492148

Thanks...
Mike

814-450-7979-c
814-868-0866-h

1394. Novel Antenna Trap

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-28 23:08:25 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ai1th5dmo4@knossos.btinternet.com>
Source record: 42357

NEW PROGRAM AVAILABLE

TWINTRAP.exe 33 kilobytes.

Two identical plastic insulated wires are close-wound alongside each for N turns on a cylindrical former. The two wires are then connected series-aiding.

Distributed capacitance between wires resonates with the trap inductance at the trap frequency.

Advantages - no high voltage, high current capacitor is needed. And trimming wire ends for exact frequency is much easier and neater than with coax traps.

Download TRAPDIP from website below.

==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========

1395. Re: Litz Wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 00:56:19 UTC
From: la8ak.xnd@online.no
Message-ID: <3d445087.374104763@news.online.no>
Source record: 42358

On Sun, 28 Jul 2002 10:54:24 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>> >
>> >Litz wire is woven in a special way to ensure all wires, on inside and
>> >outside layers, share the current equally.
>================================
>> >
>> On 10MHz or 100kHz?
>================================
>
>Do you know of any Litz wire which is any good on 10MHz?
>
>
>
Well, I am sure that your earlier allegation is valid for 10MHz, while
it is not so for 100kHz

Litz-wire often (in practice) proves to be better than enamelled Cu
wire up to 5MHz. A Q-meter may tell which is the best

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

1396. Re: QRP linear amp project or kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 01:16:17 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <BH019.702711$cQ3.109736@sccrnsc01>
Source record: 42359

The harder part, that most of the cheap 11 / 10 meters mobile amplifiers leave out or minimize on the design is the output filter section.

For a multi-band amplifier unit these filters have to be switched manually or electronically with relays.

The Ameritron Solid State 600 base amp is a good example of the manual switch approach.

w9gb

"Damon Wascom" <kc5cqw@excite.com> wrote in message news:uk8ap0rspacffb@corp.supernews.com...
> www.communication-concepts.com Look at the EB-63, I'm building one for an
> FT-817. 1-5w in is up to 140w out @ 2-30MHz! It uses 2 MRF454MP's in a
> push-pull setup. Also known as: NTE part #: 336. They run about $25 each and
> the full price of the EB-63 kit w/o heatsink is about $102 with shipping
> inc. Or, you can download the app.notes in pdf and build your own from
> scratch. It has a Proof positive for the pcb. You may need to use some photo
> software to turn it into a negitive and reverse the image so you can use it
> with the techniks print-n-peel etch resist. I hear this is an older design,
> but a solid performer.
> "Will White" <googlyelmo@earthlink.net> wrote in message
> news:3D43896A.353E860F@earthlink.net...
> > I have built over the years several QRP monoband CW transceivers from kits
> > and magazine plans/projects, and I want now to build a small linear amp,
> > solid-state,
> > capable of between 50 and 100W out, to drive with these peanut whistles at
> > times. I want something that is bandswitched from 80 to 15 (160 and 10
> also wud
> > be
> > nice, but not strictly neccesary. WARC not needed really, except 30) and
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> > than twice now, the importance of keeping things simple, especially when
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> > *are* simple like me, at least with regards to electronic design and
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> > Please direct me to websites, back issues of QST/CQ/73/HR etc., books,
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> > elsewhere there exist project plans, schematics, instructions,
> discussions,
> > drawings, etc. If you have yourself built a little pistol of this type,
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> > could spare a little time to tell me all about it, I would especially
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> to
> > hear from you.
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> > 73. . .
> >
> > --
> > Will White, KD7BFX
> > Seattle WA US
> > King County, Grid CN87tq
> > ITU Zone 6, CQ Zone 3
> > **
> > "The wireless telegraph is not difficult to understand.
> > The ordinary telegraph is like a very long cat.
> > You pull the tail in New York, and it meows in Los Angeles.
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> > - Albert Einstein
> > **
> >
> >

>
>

1397. Re: QRP linear amp project or kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 01:22:43 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <DN019.702737$cQ3.109394@sccrnsc01>
Source record: 42360

I personally like the CCI 5 Element Chebyshev Low Pass filter design,
which uses torroids - and it is not that expensive.

http://users.aol.com/rfelectron/rfelect.htm

4. What does the filter do?

All broadband amplifiers generate harmonics. Harmonics are spurious
emissions that occur at 2,3,4,5,6...times the fundamental (your transmit)
frequency. Many solid-state amplifiers (like ours) use "push-pull" design
which allows the even order harmonics to mostly cancel each other out in the
output transformers. With these amplifiers, most of the spurious energy is
contained in the odd order harmonics with the 3rd order harmonic being the
strongest. As the fundamental frequency is increased toward the upper end of
the amplifier's operating range, the amplifier's gain decreases and the 3rd
harmonic occurs further and further above the max. design frequency,
resulting in very low emissions. Conversely, as the fundamental frequency is
lowered toward the lower end of the amplifier's operating range, the
amplifier's gain increases and the 3rd, 5th, 7th, etc. harmonic may fall
within the amplifier's operating range, resulting in very high emissions.
For example, if our 500W HF amplifier is operated at 29 MHz, the 3rd
harmonic is at 87 MHz. Since the maximum operating frequency limit of this
amplifier is 30 MHz, it will have almost zero gain at 87 MHz and therefore
3rd harmonic emission will be very low, even without any filtering.
Conversely, if this amplifier were operated at 1.8 MHz, you would have
harmonics all the way out to the 15th falling within the operating range of
the amplifier, resulting in a high level of harmonic emission and requiring
good filtering to meet FCC requirements. The filter attenuates these
harmonics down to a level which exceeds the FCC requirements.

"Will White" <googlyelmo@earthlink.net> wrote in message
news:3D43896A.353E860F@earthlink.net...
> I have built over the years several QRP monoband CW transceivers from kits
> and magazine plans/projects, and I want now to build a small linear amp,
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> Please direct me to websites, back issues of QST/CQ/73/HR etc., books, or
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> Will White, KD7BFX
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> The ordinary telegraph is like a very long cat.
> You pull the tail in New York, and it meows in Los Angeles.
> The wireless is the same, only without the cat."
> - Albert Einstein
> **********
>
>

1398. Plate transformer question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 01:47:45 UTC
From: keven <keven@NOSPAM.oceanwide.co.nz>
Message-ID: <b582ia.gve.ln@oceanwide.co.nz>
Source record: 42361

I just got an RCA plate transformer the other day that I would like to use for an AMP project using a single GS35B tube.

I did a calculation to see what KVA rating I would need and came up with 4.2 KVA???

I did 3000 volts * 1.4 amps = 4200

1000 = 4.2 KVA I think ??

The tag on the transformer that I got says-
RCA
Type 901141
Class Plate
Pri 250/230/210/190
sec 4600/3500 MID V-1.75KVA

And the Sec taps 2000-1500-0-1500-2000
The transformer is about 8"X9"X10" and is the 100 lb range.

My questions is. Is there a why to see how much actual current the transformer is capable of? And also what does the "MID V" mean in front of the 1.75KVA?

What I need in the end is about 3000 volts @ about 1.4 amps/

Thanks
Kev

1399. Build your own solar panel to power your rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 03:00:50 UTC
From: lphurley@together.net
Message-ID: <d0a610a.0207281900.197476e0@posting.google.com>
Source record: 42362

If anyone is interested in building their own solar panels to poower
their rigs-- check this out-- http://www.buildasolarpanel.com

1400. Re: Build your own solar panel to power your rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 04:15:32 UTC
From: Bill Turner <w7ti@dslextreme.com>
Message-ID: <14g9ku4ipbvn5rpqnh417noqr2dscbmlq8@4ax.com>
Source record: 42363

On 28 Jul 2002 20:00:50 -0700, lphurley@together.net (Phil)
wrote:

>If anyone is interested in building their own solar panels to poower
>their rigs-- check this out-- http://www.buildasolarpanel.com

---

I "poowered" my rig once, damndest thing you ever saw. Not
covered by warranty, either.

Bill, W7TI

1401. Re: QRP linear amp project or kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 04:20:50 UTC
From: ermisch@usa.net
Message-ID: <441a87e1.0207282020.772b08df@posting.google.com>
Source record: 42364

Will White <googlyelmo@earthlink.net> wrote in message
news:<3D43896A.353E860F@earthlink.net>...
<snip>
> driven by *SS* gear. But to stay on task, for now, I really mainly am seeking
> info/docs on
> building a 50-100W SS amp for use with SS QRP rigs. I have learned, more
> than twice now, the importance of keeping things simple, especially when you
> *are* simple like me, at least with regards to electronic design and mechanical
> construction ;)
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> Please direct me to websites, back issues of QST/CQ/73/HR etc., books, or
> elsewhere there exist project plans, schematics, instructions, discussions,
> drawings, etc. If you have yourself built a little pistol of this type, and
> could spare a little time to tell me all about it, I would especially like to
> hear from you.
<snip>

http://www.hfprojects.com

select the 'projects' link.

1402. Re: How do you mount LEDs to a chassis?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 05:20:44 UTC
From: nospam@seemysig.com
Message-ID: <3d44d032.6144054@news.gci.net>
Source record: 42365
Cross-posted to: sci.electronics,sci.electronics.basics,rec.radio.amateur.homebrew,sci.electronics.components

>"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
>news:f7d9a152.0207201212.50f61d9@posting.google.com...
>> When you build an electronics project that uses LEDs, how do you mount
>> these devices? I find LEDs tricky to work with, because those leads
>> are long, uninsulated, and fragile.
>>
>> I would like to hear your favorite methods.
>>
>> Jason Hsu, AG4DG
>> usenet@@@jasonhsu.com
>> http://www.jasonhsu.com/ham_radio-technical.html
>
>

Generally I'll drill a hole in the case with the same diameter of the
LED and then hot glue it into place. Once connections are made I put a
piece of heat shrink tubing around each lead/wire combination.

1403. Re: Plate transformer question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 05:21:53 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <LWoY6VExDNR9EAF+@ifwtech.co.uk>
Source record: 42367

keven wrote:
>I just got an RCA plate transformer the other day that I would like to
>use for an AMP project using a single GS35B tube.
>
>I did a calculation to see what KVA rating I would need and came up with
>4.2 KVA???
>
>I did 3000 volts * 1.4 amps = 4200
> _____________
> 1000 = 4.2 KVA I think ??
>
>The tag on the transformer that I got says-
>RCA
>Type 901141
>Class Plate
>Pri 250/230/210/190
>sec 4600/3500 MID V-1.75KVA
>
>And the Sec taps 2000-1500-0-1500-2000
>The transformer is about 8"X9"X10" and is the 100 lb range.
>
>My questions is. Is there a why to see how much actual current the
>transformer is capable of? And also what does the "MID V" mean in front of
>the 1.75KVA?
>
>What I need in the end is about 3000 volts @ about 1.4 amps/
>
To predict how your transformer might work in a power supply, try the
'PSU Designer' software by Duncan Munro. It's free to download.

The 'In Practice' page on my site includes a link and some extra files
for high-voltage supplies.

4.2kVA is what you could expect with a simple resistive load, but the
1.75kVA rating may well represent what you can expect in a normal
rectifier + capacitor-input power supply. The big reduction is due to
the pulsed nature of the current you're taking out of the transformer -
the RMS current can easily be 2x the DC current. But why guess, when PSU
Designer will plot the waveforms and tell you the RMS value.

Common experience is that GS35Bs strongly prefer more than 3kV. Below
that voltage, the gain falls, the grid current rises and they really
don't want to play.

Don't attempt to use the 2000-0-2000 connection. You won't get much more than 2.5kV on-load and performance with the GS35b will be disappointing.

Your best bet with that transformer would probably be to bridge-rectify from the two 1500V taps, which would give you 4.2kV off-load. (There is a slight risk about the insulation of the floating secondary, because it wasn't designed for that application. Look at the insulation, test it if possible, and judge for yourself.) Depending on the primary and secondary resistances of the transformer, the on-load voltage might be around 3.5kV which would be just about right.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
www.ifwtech.co.uk/g3sek

1404. Re: Plate transformer question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 05:29:29 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <ijj9kuc94m38adkft7jsjudd07bt72i36o@4ax.com>
Source record: 42366

On Mon, 29 Jul 2002 13:47:45 +1200, keven <keven@NOSPAM.oceanwide.co.nz> wrote:
>I just got an RCA plate transformer the other day that I would like to
>use for an AMP project using a single GS35B tube.
>
>I did a calculation to see what KVA rating I would need and came up with
>4.2 KVA???
>
>I did 3000 volts * 1.4 amps = 4200
> _____________
> 1000 = 4.2 KVA I think ??
>
>The tag on the transformer that I got says-
>RCA
>Type 901141
>Class Plate
>Pri 250/230/210/190
>sec 4600/3500 MID V-1.75KVA
>
>And the Sec taps 2000-1500-0-1500-2000
>The transformer is about 8"X9"X10" and is the 100 lb range.
>
>My questions is. Is there a why to see how much actual current the
>transformer is capable of? And also what does the "MID V" mean in front of
>the 1.75KVA?

The MID V means that the KVA rating applies for a primary voltage
in the middle of the range of available taps, The 1.75 KVA rating is
probably the CCS rating (continuous commercial service). The
ICAS (intermittant commercial and amateur service) rating will be
higher. If you're going to use it for SSB voice service, the peak
rating will be higher still. The limiting factors are core saturation,
winding heating, and core heating.

Nominally, you can draw 580 milliamps continuously from this
transformer at 3,000 volts. You can probably bump that up to
around 800 to 900 mA in ICAS, and maybe 1.6 A peak for SSB
voice.

>What I need in the end is about 3000 volts @ about 1.4 amps/

Continuous or peak? If you're talking continuous carrier service,
this transformer is too small. If you're talking SSB voice, then it'll
probably do nicely.

Gary

1405. Re: VHF and UHF Linears ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 08:02:36 UTC
From: c.a.m@nospam.blueyonder.co.uk
Message-ID: <pgt9kuokhjgh56tkquuq30kv55236ndg6i@4ax.com>
Source record: 42368

>I stumbled on a club web page with instructions of how they designed and
>built an amp for 2 meters as a club project. I/m planning to build this amp
>myself as soon as time permits. The URL for the details is:
>http://www.falara.org/tektalk/GPOAmp.html

Bare in mind that the above design is not for a 'linear' amp, it has no bias on the PA transistor, you can add it your self though using a diode (as a temp sensor) etc.

Clive

1406. Re: Litz Wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 09:54:21 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ai33cd$7l$3@venus.btinternet.com>
Source record: 42369

Do you know why Litz wire stops working around 10 MHz and above ?

1407. Re: Need data for BB112 and BB130

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 11:36:01 UTC
From: Tom Twist <tom@twist.no>
Message-ID: <au9akugus089mvtevmfkerg1i2mrjn1q4j@4ax.com>
Source record: 42370

On Sun, 28 Jul 2002 01:15:42 GMT, la8ak.xnd@online.no (J M Noeding)
wrote:

>Wish to find complete data sheet for the varicap diodes BB112 and
>BB130 on the net. Tried Google search, but not result, also tried
>Philips+Royal, but they seem to start with BB131.
>Also need data sheet for BF314
>

Hi Jan-Martin

Try this one:
http://www.semiconductors.philips.com/acrobat/datasheets/BB130_1.pdf

I found nothing for BB112

Tom

1408. Re: Need data for BB112 and BB130

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 13:10:13 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2907020910470001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42371

In article <au9akugus089mvtevmfkerg1i2mrjn1q4j@4ax.com>, Tom Twist
<tom@twist.no> wrote:

> On Sun, 28 Jul 2002 01:15:42 GMT, la8ak.xnd@online.no (J M Noeding)
> wrote:
>
> >Wish to find complete data sheet for the varicap diodes BB112 and
> >BB130 on the net. Tried Google search, but not result, also tried
> >Philips+Royal, but they seem to start with BB131.
> >Also need data sheet for BF314
> >
>
> Hi Jan-Martin
>
> Try this one:
> http://www.semiconductors.philips.com/acrobat/datasheets/BB130_1.pdf
>
> I found nothing for BB112
>
> Tom

Sometimes the part number has somewhat something to do with the values of
the part. No guarantees here though. I would assume it to be a
hyperabrupt junction and comparable to other variacaps akin to it. Also
try questlink.com. There's not that many varicaps around, really.

Steve WB4CZR

1409. Re: Need data for BB112 and BB130

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 13:19:06 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2907020919390001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42372

In article
<motsteve-2907020910470001@c-66-176-144-254.se.client2.attbi.com>,
motsteve@attbi.com (carltons) wrote:

> In article <au9akugus089mvtevmfkerg1i2mrjn1q4j@4ax.com>, Tom Twist
> <tom@twist.no> wrote:
>
> > On Sun, 28 Jul 2002 01:15:42 GMT, la8ak.xnd@online.no (J M Noeding)
> > wrote:
> >
> > >Wish to find complete data sheet for the varicap diodes BB112 and
> > >BB130 on the net. Tried Google search, but not result, also tried
> > >Philips+Royal, but they seem to start with BB131.
> > >Also need data sheet for BF314
> > >
> >
> > Hi Jan-Martin
> >
> > Try this one:
> > http://www.semiconductors.philips.com/acrobat/datasheets/BB130_1.pdf
> >
> > I found nothing for BB112
> >
> > Tom
>
>
>
> Sometimes the part number has somewhat something to do with the values of
> the part. No guarantees here though. I would assume it to be a
> hyperabrupt junction and comparable to other variacaps akin to it. Also
> try questlink.com. There's not that many varicaps around, really.
>
>
> Steve WB4CZR

I also just found out pecking around that the BB112 was discontinued on
12/31/97. I got this off of the Philips web site. Send out a CQ to a
Philips ham on this news site and they can probably dig you up some specs.

Steve

1410. Re: Need data for BB112 and BB130

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 14:17:11 UTC
From: Markus L <uo9oew@lnubb.pbz>
Message-ID: <3d454e48$0$228$4d4ebb8e@read-nat.news.nl.uu.net>
Source record: 42373

> > > >Wish to find complete data sheet for the varicap diodes BB112 and
> > > >BB130 on the net. Tried Google search, but not result, also tried
> > > >Philips+Royal, but they seem to start with BB131.
> > > >Also need data sheet for BF314

Go to http://www.nteinc.com/ , select "online cross-reference
semiconductors" and enter BB112 as search string. Comes up with replacement
type NTE618 and its datasheet both in HTML and PDF.

73, Markus HB9BRJ
--
e-mail address is ROT13 encoded. Decode before replying.

1411. Re: Litz Wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 14:50:34 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d45561e.2779252@news.triconet.org>
Source record: 42374

On Mon, 29 Jul 2002 09:54:21 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

|Do you know why Litz wire stops working around 10 MHz and above ?

What do you mean by, "stops working?"
|
|

1412. Re: Sub Carrier reciever schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 16:22:36 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D456BF6.F40D86DE@bellatlantic.net>
Source record: 42375

ChrisM1111 wrote:
>
> Hi all,
>
> does anyone have a schematic for a sub carrier reciever, or kit o/t ramseys.
> Looks kinda expensive for a card w/o a box. Then they toss in a box for 15
> bucks more.

Let's see - for $27.95 the Ramsey kit gives you:
12 resistors
13 disc capacitors
7 electrolytic capacitors
2 inductors
2 IC's
2 transistors
1 DPDT pushbutton switch
2 potentiometers
2 RCA jacks
1 subminiature speaker jack
1 9V battery mounting bracket
1 9V battery snap on clip
1 Printed Circuit board
complete instructions and schematic.

see
http://www.ramseyelectronics.com/sitepages/pdf/hmanuals/sca-1a.pdf

Sounds like a bargain to me.

If you want to brew your own, see:
http://www.fineware-swl.com/sca.html
http://www.blackcatsystems.com/radio/sca.html

>
> on a budget
> what else
> 73
>
> chris
> For free plans and info on solar oven's water and purifiers, that actually
> work, see<http://www.accessone.com/~sbcn/index.htm>
> ==========
> Sufficiently advance technology is indistinguishable from magic..

1413. Re: Litz Wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 16:27:13 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ai3qd0shr1@venus.btinternet.com>
Source record: 42376

I mean it would be better to use solid round copper wire.

Have you ever seen any professionally designed equipment wth Litz-wound
coils above 10MHz ?

Have you ever wondered why? Think about it a bit more.

If you havn't thought about it just carry on doing what you've always done.
Things will still work reasonably well after a fashion but your bank account
might suffer due to using Litz when solid copper is cheaper and better. ;o)

Reg.
========================

> What do you mean by, "stops working?"

1414. Help! Looking for axial-lead glass-bodied ceramic capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 18:51:51 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D458E89.6ACA@pop.removethistomailme.net>
Source record: 42377
Cross-posted to: sci.electronics.design,sci.electronics.components,rec.radio.amateur.homebrew

Can anyone tell me where I can order a few hundred capacitors like the ones on this board:

http://www.qsl.net/ke5fx/uwave/demod2.jpg

... with the glass packages? These were surplus parts that I bought years ago in 0.001 uF, 0.1 uF, and 0.33 uF sizes, and I'm running out fast.

The only axial-lead capacitors that most retail distributors (DigiKey, FutureActive) seem to sell these days are the crappy epoxy conformal-coated jobs that fall apart when you threaten them with a cold soldering iron. These glass-bodied parts were indestructable and more or less endlessly-reusable, but I can't seem to find them anywhere.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1415. Re: Build your own solar panel to power your rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 20:28:57 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207291228.36c7801a@posting.google.com>
Source record: 42378

lphurley@together.net (Phil) wrote in message
news:<d0a610a.0207281900.197476e0@posting.google.com>...
> If anyone is interested in building their own solar panels to poower
> their rigs-- check this out-- http://www.buildasolarpanel.com

I see the author is promoting his own work...which is OK, but I think
it would be nice to be just a bit more up-front about it in the
posting.

So Phil, I'm at a loss here and hope you can help us out. WHY would
anyone want to build their own panel? What are the advantages over
simply going out and buying a panel, built and tested, from one of the
suppliers? I do "homebrew" construction because I can 'speriment with
things that simply aren't available, and to learn about new-to-me
things, and for a few other reasons, but having a hard time seeing
what the advantage of a homebrew panel would be. I didn't get any
help on that front from the web page or the book's sample pages it
links to. Key things that MIGHT be advantages are significantly
reduced costs or some features that aren't available in commercial
units.

Cheers,
Tom

1416. Re: Build your own solar panel to power your rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-29 21:18:53 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D45B13D.66ABA1F9@clifto.com>
Source record: 42379

Tom Bruhns wrote:
> I see the author is promoting his own work...which is OK, but I think
> it would be nice to be just a bit more up-front about it in the
> posting.
>
> So Phil, I'm at a loss here and hope you can help us out. WHY would
> anyone want to build their own panel?

I can't reach the page; I have that range blocked, and I usually block such ranges for spamming or cracking activity. I do notice the DNS is provided by shopnow.net, though. So my guess is that you can buy all the materials you need from the guy who runs and promotes that page, i.e. his article was just more spam.

--
.signature in flux

1417. Re: QRP linear amp project or kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-30 01:08:19 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ukbpp5hm4ccib1@corp.supernews.com>
Source record: 42380

Take a look at www.hfprojects.com.

I think you are late for the next build, but all the necessary info is there for a 2.5 watt to 30 watt multiband amp. Actually, his design expects 1 watt but he attenuates the input to make it ft817 friendly. In the forum he talks about other resistor values for different input powers.

The basic circuit could be reused with different FETs to get the power up. FETs capable of your 100 watts are readily available. You will need to recalculate the output filters of course.

..

"Will White" <googlyelmo@earthlink.net> wrote in message news:3D43896A.353E860F@earthlink.net...

> and I want now to build a small linear amp, solid-state,
> capable of between 50 and 100W out,

1418. Re: VHF and UHF Linears ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-30 01:21:07 UTC
From: RaOuL <russ@bit-net.nospam.com>
Message-ID: <9SI19.1160$_T4.92656@news.bit-net.com>
Source record: 42381

Thanks for pointing that out. This leads me to a question: What is the difference and what advantage (if any) can be realized from a "linear" vs. "non-linear" amp such as the one referenced in my original post? The amp I plan to build seems to be pretty easy to assemble and tune, how much more complex is a "linear"? I plan to use this amp with my 2 meters HT so I don't need any fancy "bells and whistles" but I am interested in building something that will be useful, practical and which will give me some good hands on tuning experience. Any advice you or others can offer me would be very much appreciated.

73,
Russ KB1GKN

<c.a.m@nospam.blueyonder.co.uk> wrote in message
news:pgt9kuokhjgh56tkquuq30kv55236ndg6i@4ax.com...
>
> >I stumbled on a club web page with instructions of how they designed and
> >built an amp for 2 meters as a club project. I/m planning to build this
amp
> >myself as soon as time permits. The URL for the details is:
> >http://www.falara.org/tektalk/GPOAmp.html
>
> Bare in mind that the above design is not for a 'linear' amp, it has no
bias on
> the PA transistor, you can add it your self though using a diode (as a
temp
> sensor) etc.
>
> Clive
>

1419. New Pictures on Elecraft Gallery page

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-30 01:32:19 UTC
From: Eric Swartz WA6HHQ - Elecraft <eric@elecraft.com>
Message-ID: <3D45ECA3.D0BFFAC5@elecraft.com>
Source record: 42382
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

We have updated our Elecraft picture gallery with 39 new pictures.

Go to http://www.elecraft.com and choose the link for the Picture Gallery.

We have new pictures from: Team Vertical (6Y2A), N5KO and 9V1YC as OJ7S at WRTC 2002, new custom paddles and bugs from WB9LPU, Transverters from DL9GRE and N6CM, a receiver from W4OP, a -large- crystal set from KA8EDE, and pictures from DL9RDM, GM3SKN, IZ1DFI, F5PBL, K5JHP, KJ5VW, KT5X, N2XE, DL8MTG, DL3OCG, N2EI, PE1OBG, DL7MGQ, OE3ZK, W7DZN (air mobile), N1DXR, VE3RPF, W3MZN, WA6FWF, WB9JOX, DK1KQ/mm, WE1U and WJ4P.

Whew!

Keep those JPGs coming. You can email them to eric@elecraft.com

73, Eric WA6HHQ

1420. Radio Mods at W8MMQ.COM

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-30 04:28:38 UTC
From: Daniel Hicks <dahicks-NOSPAM@email.com>
Message-ID: <WBo19.167334$_51.107653@rwcrnsc52.ops.asp.att.net>
Source record: 42383

Check out the radio mods at W8MMQ.COM
http://www.w8mmq.com/mods/
Over 1,200 radio mods listed, and updated often.

Also, check out the W8MMQ Amateur Radio Page:
http://www.w8mmq.com/

73 de,
Dan, W8MMQ

1421. Re: VHF and UHF Linears ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-30 04:30:52 UTC
From: MS Bob <msbob@hotmail.com-edy>
Message-ID: <pg5cku0n0rcf68hkrtouu33b99jpai3g28@4ax.com>
Source record: 42384

On Mon, 29 Jul 2002 21:21:07 -0400, "RaOuL" <russ@bit-net.nospam.com>
wrote:

><c.a.m@nospam.blueyonder.co.uk> wrote in message
>news:pgt9kuokhjgh56tkquuq30kv55236ndg6i@4ax.com...
>>
>> >I stumbled on a club web page with instructions of how they designed and
>> >built an amp for 2 meters as a club project. I/m planning to build this
>amp
>> >myself as soon as time permits. The URL for the details is:
>> >http://www.falara.org/tektalk/GPOAmp.html

>Thanks for pointing that out. This leads me to a question: What is the
>difference and what advantage (if any) can be realized from a "linear" vs.
>"non-linear" amp such as the one referenced in my original post? The amp I
>plan to build seems to be pretty easy to assemble and tune, how much more
>complex is a "linear"? I plan to use this amp with my 2 meters HT so I don't
>need any fancy "bells and whistles" but I am interested in building

If you plan to only to your HT in FM, then there is no problem. You
need the "linear" amplifer if you want to use SSB and CW modulation.

1422. Receiver IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-30 05:59:01 UTC
From: Al <none@none.com>
Message-ID: <ai59v4$pf1$1@geraldo.cc.utexas.edu>
Source record: 42385

Anyone know where I can order the TEA5710 (Philips) in unit quantities? Philips recomends Arrow, Avnet, and
Pioneer, but they are all nos.

This is for a 49Mhz receiver. The other option is the TDA7000, which I can find, but I've gotten the
impression it performs poorly for narrow band applications because of image frequency problems. I plan to use
one FM channel with frequency deviation of 7.5kHz. What kind of performance will I get from the TDA7000?

Thanks for the help.

Al

1423. VR-5000 Control and Log Software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-30 09:18:33 UTC
From: Michael <ipas.m@free.fr>
Message-ID: <3d4659e8$0$445$626a54ce@news.free.fr>
Source record: 42386

Hi everybody
For all who have a Scanner Yeasu VR-5000 you can now download "VR5000 Control And Log".
This soft allows you to control some funciotns of your VR-5000 and to log activities between a range of frequencies that you program.
So you can know which frequencies are in use when you are not at home.
To download this software :
http://ipas.m.free.fr/modules.php?name=Downloads&d_op=getit&lid=19

73's

Michael

F1UBJ

1424. Re: Receiver IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-30 10:15:53 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0207300215.567e4bfd@posting.google.com>
Source record: 42387

Hi Al,
Harry SM0VPO has a waste experience with TDA7000. Post your questions
to http://ds.primasoft.bg/forum/wwwboard.html , he will answer you.

BR from Ivan

1425. Re: VHF and UHF Linears ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-30 10:52:00 UTC
From: c.a.m@nospam.blueyonder.co.uk
Message-ID: <2orckuk637662g3bhadrtm650240rveb7f@4ax.com>
Source record: 42388

Plus, if you want to use it for ssb or cw or other frequent switching modes (AX25 etc) then you'd really want to go for diode antenna switching rather than a relay, relays are noisy and slow and will eventually ware out.

Clive

1426. Re: QRP linear amp project or kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-30 12:33:05 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <1216ia.i2c.ln@mylinuxbox.net>
Source record: 42391

In article <3d43e0af$0$2450@echo-01.iinet.net.au>, Richard Hosking wrote:
> I would be interested in a linear design
> from about -10 dBm to about 5W out with the following specs
>
> Cheap, easily available transistors
> Likewise transformers
> Gain flat within about 1-2 dB 1.5 - 30 MHz
>
> Richard

A lot of the homebrewers on this side of the planet use
a design copied from the Cirkit HF Linear Amplifier
kit. I don't think you can buy this kit from Cirkit
anymore.

The PA is a couple of 2SC1945 (CB PA) transistors in
the usual push-pull arrangement. The driver is a
pair of CB driver transistors (2SC2166 or similar)
in push-pull and the first stage is a single ended
class A amp. I can't remember what was used in the
first stage, possibly a 2N3866 or 2N4427.

I don't have a schematic of this PA but I do
have a copy of the specs from an old Cirkit
catalogue.

BW: 1.6-30MHz +/- 1dB
Gain: 40dB (min.)
Power input: 0.8mW in for 10W out.
Power out: 15W out for 1mW in.
Mismatch: 10:1 at any phase angle.
Harmonics: -26dB (typical)
Supply voltage: 11-14V

This circuit was published in several places including
the RadCom (RSGB) article describing the G3TSO HF transceiver.
Perhaps one of the UK amateurs would be willing to copy the
schematic of the PA section for you?

I'm almost sure I saw a schematic for a similar amplifier
on the Hands Electronics web-site.

73, Ed. EI9GQ.

--
Remove 'X' to reply via e-mail.
http://homepage.eircom.net/~ei9gq

Linux 2.4.18

1427. Re: Receiver IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-30 13:20:52 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <ai63rj$5f2$1@paris.btinternet.com>
Source record: 42389

"Al" <none@none.com> wrote in message
news:ai59v4$pf1$1@geraldo.cc.utexas.edu...
> Anyone know where I can order the TEA5710 (Philips) in unit quantities?
Philips recomends Arrow, Avnet, and
> Pioneer, but they are all nos.
>
> This is for a 49Mhz receiver. The other option is the TDA7000, which I
can find, but I've gotten the
> impression it performs poorly for narrow band applications because of
image frequency problems. I plan to use
> one FM channel with frequency deviation of 7.5kHz. What kind of
performance will I get from the TDA7000?

The TDA7000 has been used for 2m packet radio fairly successfully, so it is
worth trying.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

1428. Need info on homebrew tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-30 16:47:42 UTC
From: JWheeler <kd5bcu@yahoo.com>
Message-ID: <ukdgpdnpcr6g35@corp.supernews.com>
Source record: 42390

I want to build a tuner. I hope that I can supply enough background on what I want to get enough information. I want to use a single dipole antenna in an inverted V. I really only need 80-10 meters, but need it to be able to handle at least 1.2 kw (primarily on 80 meters). I rarely find it necessary to run my sb-200 anywhere else. I am using 50 ohm coax (9913), and my antenna feedpoint is approx. 30 feet off the ground. I would like to build a roller inductor tuner (unless there is a better option) that will allow me to tune essentially everything between 160 and 10 since I am looking at a new radio as well, but 80-10 will suffice.
What specs do I need to look for on the variable capacitors and the inductor (plate spacing, max/min capacitance, max/min inductance, etc), and what other parts do I need to look for? Can someone suggest a readily available enclosure? If I have left anything out, please let me know. I will try to supply the information, and please don't tell me to look at the ARRL handbook. I don't have access to a copy right now.

Thanks in advance,

John
KC5AV

1429. Re: Build your own solar panel to power your rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-30 18:16:04 UTC
From: k7itm@aol.com
Message-ID: <3200347.0207301016.4c733cd9@posting.google.com>
Source record: 42392

"Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message
news:<3D45B13D.66ABA1F9@clifto.com>...
> Tom Bruhns wrote:
> > I see the author is promoting his own work...which is OK, but I think
> > it would be nice to be just a bit more up-front about it in the
> > posting.
> >
> > So Phil, I'm at a loss here and hope you can help us out. WHY would
> > anyone want to build their own panel?
>
> I can't reach the page; I have that range blocked, and I usually block
> such ranges for spamming or cracking activity. I do notice the DNS is
> provided by shopnow.net, though. So my guess is that you can buy all
> the materials you need from the guy who runs and promotes that page,
> i.e. his article was just more spam.

Hi Cliff,

Well, no, that's part of the mystery. I figured I'd be able to check
out the prices and see if there might be some economic advantage, but
there's nothing like that on that page or on the site's home page.
And I'll bet the OP never comes back to check on his spa...um,
posting.

Cheers,
Tom

1430. Potosi Brewing Company, Holiday, Good Old Potosi

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-30 22:31:20 UTC
From: Alan VanNatta <alanv@pcii.net>
Message-ID: <YsE19.25660$fH5.26098428@kent.svc.tds.net>
Source record: 42394
Cross-posted to: rec.radio.amateur.homebrew,uiuc.org.homebrewers

Attention fans of brewery memorabilia, brewery history, and fine malt beverages. The Potosi Brewery Foundation encourages you to visit http://www.potosibrewery.com to learn about the ongoing restoration efforts of the Potosi Brewery, in Potosi Wisconsin.

This wonderful site gives an extensive history of the brewery's operations from 1852 to 1972. Over those 120 years this brewery brought you such beers as "Holiday', 'Good Old Potosi', Pure Malt, Pilsner, Schumacher, Garten Brau, Alpine, Bohemian Club, Augsburger and many others.

While at http://www.potosibrewery.com visit our "Memorabilia" section to see a variety of Potosi Brewery Collectibles.

2002 marks the 150th anniversary of the brewery and we are holding a Sesquicentennial Celebration Event http://www.potosibrewery.com/progress/progresspg.html). New memorabilia items have been created and may be purchased as a sure invest for oneself and as an investment in the restoration project.

The site also gives information on where the brewery is today and on the organization that is dedicated to its restoration. The Potosi Brewery Foundation is a non-profit group in which ALL proceeds go towards the project. We are a group of volunteers trying to preserve this vital part of history.

Whether you a big time or collector or a novice just interested in history http://www.potosibrewery.com has something to offer all.

regards,

Alan VanNatta
Webmaster Potosi Brewery Foundation

1431. Wanted: 8580 Data

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-30 22:44:41 UTC
From: "Geoffrey G. Rochat" <geoff777@777pkworks.com>
Message-ID: <ai742r$30f$1@news.utelfla.com>
Source record: 42393

I'm looking for data on a Philips 8580 tube, which I believe crosses to a YL1190. It's in a Novar or Magnoval base, and I think it's a dual pentode - perhaps something like a 6360 on steroids. I've done all the usual web and tube database searches, and haven't come up with anything. Does anyone here have data on this tube, or can point me in the right direction. Thanks for your assistance.

1432. Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-30 22:56:31 UTC
From: "Jim Hill, w6ivw" <Xslimjim71@cox.net>
Message-ID: <d56eku0h6o6jgr1t8deupdprf8mse8pu65@4ax.com>
Source record: 42395

What advantages to tantalums have over regular electrolytic
capacitors? Do they act like a capacitor at higher frequencies?
Thanks, Jim
Xslimjimtmp@home.com (remove X before using)

1433. Re: Need info on homebrew tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-30 23:14:11 UTC
From: jgboyles@aol.com
Message-ID: <20020730191411.22130.00000357@mb-mo.aol.com>
Source record: 42396

>
>I want to build a tuner. I hope that I can supply enough background on what
>I want to get enough information. I want to use a single dipole antenna in
>an inverted V. I really only need 80-10 meters, but need it to be able to
>handle at least 1.2 kw (primarily on 80 meters). I rarely find it necessary
>to run my sb-200 anywhere else. I am using 50 ohm coax (9913), and my
>antenna feedpoint is approx. 30 feet off the ground

Hi J, First off using coax to feed a simple wire dipole, and attempting to use it on mutiple bands is not a good idea. Depending on the length of the dipole there could be high line swr on some bands leading to big losses in the coax. Also at 1.2 kw you could damage the coax with a high swr on the line. Multi band simple dipoles are usually fed with low loss open wire line or ladder line. It's cheaper than coax, and since you are using a tuner, more logical. I homebrewed a tuner using two 50-500pf variable capacitors from Ten Tec, about $45 each. These are kits, takes about a hour or so to assemble. The rotary inductor was a 33uh one from MFJ, about $65. I made a "T" type out of all this. Should handle the power you want. This configuration:

Rig-coax-tuner-coax-transmission line leaves shack-450 ohm ladder line-dipole.
Maybe assorted baluns.
Would be my suggestion.

As for building a rotary inductor-Not sure I have ever seen a DIY article, nor could I tell you how to go about it. A switch tapped inductor, if you insist on rolling your own would be much easier.

You did not mention the length of your dipole, (or V). To get good results on 80m it should be >45' feet per leg. I got a 100' roll of #18 stranded and cut it in half. Works fine on 80. You can even zig-zag the dipole, and still do ok.
A dipole fed with ladder line matched to the transmitter with a tuner is a simple way to get efficient multi-band operation.
73 Gary N4AST

1434. Re: Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-30 23:52:23 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <uke9hd4lo418d1@corp.supernews.com>
Source record: 42298

Tantalum's are smaller per given cap value, but are limited in their max voltage rating, usually 50v.
Aside from this, they are the same, Tantalums use a dry electrolyte, and the other is wet.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Jim Hill, w6ivw" <Xslimjim71@cox.net> wrote in message
news:d56eku0h6o6jgr1t8deupdprf8mse8pu65@4ax.com...
> What advantages to tantalums have over regular electrolytic
> capacitors? Do they act like a capacitor at higher frequencies?
> Thanks, Jim
> Xslimjimtmp@home.com (remove X before using)

1435. Re: Plate transformer question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-30 23:53:42 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <uke9jsbui6lqed@corp.supernews.com>
Source record: 42297

Place a load that drops the secondary voltage by 10% and that is the max
current level the transformer is capable of.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"keven" <keven@NOSPAM.oceanwide.co.nz> wrote in message
news:b582ia.gve.ln@oceanwide.co.nz...
> I just got an RCA plate transformer the other day that I would like to
> use for an AMP project using a single GS35B tube.
>
> I did a calculation to see what KVA rating I would need and came up with
> 4.2 KVA???
>
> I did 3000 volts * 1.4 amps = 4200
> _________________
> 1000 = 4.2 KVA I think ??
>
> The tag on the transformer that I got says-
> RCA
> Type 901141
> Class Plate
> Pri 250/230/210/190
> sec 4600/3500 MID V-1.75KVA
>
> And the Sec taps 2000-1500-0-1500-2000
> The transformer is about 8"X9"X10" and is the 100 lb range.
>
> My questions is. Is there a why to see how much actual current the
> transformer is capable of? And also what does the "MID V" mean in front of
> the 1.75KVA?
>
> What I need in the end is about 3000 volts @ about 1.4 amps/
>
> Thanks
> Kev

1436. Re: Need info on homebrew tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 01:36:00 UTC
From: JWheeler <kd5bcu@yahoo.com>
Message-ID: <ukefo2h4j9833c@corp.supernews.com>
Source record: 42299

My primary concern is being able to work all of the bands... I hadn't really even thought of using a tapped inductor and still being able to accomplish that. My current dipole is about 65' per leg. I will take your advice about the open line instead of coax to feed the antenna. I was simply going on what I have now, but there are a couple of hamfests in the area over the next couple of weekends. I'll go and see what I can find.

Thanks,

JWheeler

"JGBOYLES" <jgboyles@aol.com> wrote in message
news:20020730191411.22130.00000357@mb-mo.aol.com...
> >
> >I want to build a tuner. I hope that I can supply enough background on
what
> >I want to get enough information. I want to use a single dipole antenna
in
> >an inverted V. I really only need 80-10 meters, but need it to be able
to
> >handle at least 1.2 kw (primarily on 80 meters). I rarely find it
necessary
> >to run my sb-200 anywhere else. I am using 50 ohm coax (9913), and my
> >antenna feedpoint is approx. 30 feet off the ground
>
> Hi J, First off using coax to feed a simple wire dipole, and attempting
to use
> it on mutiple bands is not a good idea. Depending on the length of the
dipole
> there could be high line swr on some bands leading to big losses in the
coax.
> Also at 1.2 kw you could damage the coax with a high swr on the line.
Multi
> band simple dipoles are usually fed with low loss open wire line or ladder
> line. It's cheaper than coax, and since you are using a tuner, more
logical.
> I homebrewed a tuner using two 50-500pf variable capacitors from Ten
Tec,
> about $45 each. These are kits, takes about a hour or so to assemble.
The
> rotary inductor was a 33uh one from MFJ, about $65. I made a "T" type out
of
> all this. Should handle the power you want. This configuration:
>
> Rig-coax-tuner-coax-transmission line leaves shack-450 ohm ladder

line-dipole.
> Maybe assorted baluns.
> Would be my suggestion.
>
> As for building a rotary inductor-Not sure I have ever seen a DIY article,
nor
> could I tell you how to go about it. A switch tapped inductor, if you
insist
> on rolling your own would be much easier.
>
> You did not mention the length of your dipole, (or V). To get good
results on
> 80m it should be >45' feet per leg. I got a 100' roll of #18 stranded and
cut
> it in half. Works fine on 80. You can even zig-zag the dipole, and still
do
> ok.
> A dipole fed with ladder line matched to the transmitter with a tuner is
a
> simple way to get efficient multi-band operation.
> 73 Gary N4AST

1437. Re: Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 01:36:54 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ukefq846fpuj57@corp.supernews.com>
Source record: 42300

Tantalums also have better high frequency response characteristics.

1438. Re: Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 03:26:27 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d47544a.8014608@news.peakpeak.com>
Source record: 42301

On Tue, 30 Jul 2002 22:56:31 GMT, "Jim Hill, w6ivw"
<Xslimjim71@cox.net> wrote:

>What advantages to tantalums have over regular electrolytic
>capacitors? Do they act like a capacitor at higher frequencies?
>Thanks, Jim
>Xslimjimtmp@home.com (remove X before using)

Surprisingly, the stray inductance of leaded tantalums isn't much less
than a good radial lead electrolytic (UCC type LX, Panasonic type HF,
etc.). Both will be close to 10nH. The resonant frequency is higher
for tantalum only because they don't have as much capacitance.

Surface mount tantalums do a lot better. They usually are just a few
nH. But it still will be inductive at RF, not capacitive.

Tantalums don't lose electrolyte ("dry out") like aluminum caps do.
This means they don't wear as such. But any capacitor can have a
catastrophic failure, especially when abused thermally or
electrically. Tantalums generally are less tolerant of high surge
currents and voltage spikes than aluminum capacitors. When used for
power filtering, they need very generous safety factors to ensure
reliability.

Check the Kemet web site for some good applications information on
tantakum caps. Sorry, but I left the url at work! :(But Google should
find it easily, just search for "Kemet".

--KR0U

-- Tim Groat

To reply by e-mail, change the quoted words to
the corresponding punctuation marks.

1439. Re: Litz Wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 04:16:29 UTC
From: Pete Gianakopoulos <n.gianakopoulos@worldnet.att.net>
Message-ID: <xwJ19.15759$Kl6.979281@bgtnsc04-news.ops.worldnet.att.net>
Source record: 42302

The old Collins R388 receivers used it on all of their front-end coils.
These units covered .5 to 30.5MHz

Pete KE9OA

Reg Edwards <g4fgq.regp@btinternet.com> wrote in message
news:ai3qd0shr1@venus.btinternet.com...
> I mean it would be better to use solid round copper wire.
>
> Have you ever seen any professionally designed equipment wth Litz-wound
> coils above 10MHz ?
>
> Have you ever wondered why? Think about it a bit more.
>
> If you havn't thought about it just carry on doing what you've always
done.
> Things will still work reasonably well after a fashion but your bank
account
> might suffer due to using Litz when solid copper is cheaper and better.
;o)
> ---
> Reg.
> ========================
>
> > What do you mean by, "stops working?"
>
>
>

1440. Re: Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 04:30:50 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <ai7p5suiq1@nntp9.atl.mindspring.net>
Source record: 42303

On Tue, 30 Jul 2002 22:56:31 GMT, "Jim Hill, w6ivw"
<Xslimjim71@cox.net> wrote:

>What advantages to tantalums have over regular electrolytic
>capacitors? Do they act like a capacitor at higher frequencies?
>Thanks, Jim
>Xslimjimtmp@home.com (remove X before using)

I am going by memory here... But as I recall, tantalums tend
to have a lower Equivalent Series Resistance (ESR) compared to
the same value as an electrolytic.

So in applications where ESR is important (such as a bypass
for a voltage regulator) a tantalum is preferred.

Jim Pennell
N6BIU

1441. Re: Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 07:52:05 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D479725.8020201@eznec.com>
Source record: 42304

Besides the other characteristics already mentioned (low ESR, low HF impedance, small size), tantalums also are less tolerant of reverse voltage than aluminum electrolytics. The common failure mode is a short circuit, and it tends to be a very, very low resistance. I'll relate a couple of case histories. In an oscilloscope timebase plugin I designed, all tests were passed over the year or so long development and test cycle. During pilot production, I stopped by the technician's bench once or twice a day to chat. After a few days I noticed several tantalum caps of one value that had been removed as defective. After studying the circuit in detail, I discovered that it was possible under one set of adjustments to get a very slight reverse voltage -- a couple of tenths of a volt -- across the cap. The circuit was modified to prevent this, and the failures stopped.

The other case history is embarrassing. I've always put an inline fuseholder in series with the battery I use for Field Day. But after some years, the plastic gets stressed by the spring and breaks. This happened just before FD one year, and I didn't have a spare on hand, so I did without the fuseholder and fuse. After all, I'd never blown a fuse in nearly 20 years of Field Days. You guessed it. That year, I plugged the (non-polarized banana) plug into the rig backward. This was a 5 Ah 12 volt battery consisting of Gates X size sealed lead-acid cells, capable of a few hundred amps into a short circuit. I had a 5 amp diode reverse connected across the rig's terminals as a crude reverse voltage protection. It would have worked fine -- if there had been a fuse to blow. As it happened, the insulation instantly melted from the (thankfully relatively small gauge -- 24 or so) wires connecting the battery to the rig, then the wires proceeded to melt their way through the tent floor. I got the battery disconnected without burning myself and before a fire started, and checked out the damage. The diode had gotten so hot it blew its plastic case apart and actually melted the solder holding it in place, before it melted in two. But after the diode melted apart, what protected the rig? A small dipped tantalum bypass capacitor connected across the terminals. It went short circuit probably as soon as the diode melted apart. It was still in place across the terminals, in one piece, still shorted. In the same vein, I've seen small shorted tantalums happily current limiting supplies at several amps.

If you ever do manage to get a low enough impedance source across a shorted tantalum, they tend to catch fire, rather than blow their tops like aluminum caps. For a number of years, we were required by management to have a certain amount of resistance in series with all tantalum bypass capacitors (defeating their chief advantantages, but reducing the possibility of a fire). It was one ohm per volt minimum, as I recall.

Roy Lewallen, W7EL

Jim Hill, w6ivw wrote:
> What advantages to tantalums have over regular electrolytic
> capacitors? Do they act like a capacitor at higher frequencies?
> Thanks, Jim
> Xslimjimtmp@home.com (remove X before using)

1442. Re: Help! Looking for axial-lead glass-bodied ceramic capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 09:23:36 UTC
From: Robert Baer <robertbaer@earthlink.net>
Message-ID: <3D47ABFE.DC9993ED@earthlink.net>
Source record: 42305
Cross-posted to: sci.electronics.design,sci.electronics.components,rec.radio.amateur.homebrew

John Miles wrote:
>
> Can anyone tell me where I can order a few hundred capacitors like the
> ones on this board:
>
> http://www.qsl.net/ke5fx/uwave/demod2.jpg
>
> ... with the glass packages? These were surplus parts that I bought
> years ago in 0.001 uF, 0.1 uF, and 0.33 uF sizes, and I'm running out
> fast.
>
> The only axial-lead capacitors that most retail distributors (DigiKey,
> FutureActive) seem to sell these days are the crappy epoxy
> conformal-coated jobs that fall apart when you threaten them with a cold
> soldering iron. These glass-bodied parts were indestructable and more
> or less endlessly-reusable, but I can't seem to find them anywhere.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

I presume you aer talking about those devices that look like glass
diodes.
They are chip capacitors in the standard glass case also used for
diodes.
If you need enough of them, and absolutely cannot find them in the
surplus market, a specialty house could bond chip capacitors in those
cases for you (at a price....).

1443. Re: Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 09:55:22 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <RRGubyAKQ7R9EAH9@ifwtech.co.uk>
Source record: 42311

Roy Lewallen wrote:
>
>If you ever do manage to get a low enough impedance source across a
>shorted tantalum, they tend to catch fire, rather than blow their tops
>like aluminum caps.

Aluminum SMD caps can spit red-hot particles when connected in reverse,
so they're not much better.

There is a problem with the marking of SMD electrolytics: the mini-can
style aluminum electrolytics have the mark at the negative end, but
rectangular plastic-cased aluminum electrolytics can be marked at either
end. Rectangular plastic-cased tantalum types have the mark at the
positive end (but maybe not all...).

Therefore there's the possibility of confusion with surplus
plastic-cased SMD electrolytics, because you generally don't know
whether they're aluminum or tantalum - and you certainly don't want to
find out the hard way!

The only way to be sure is to check a sample for leakage both ways,
using a sensitive (probably digital) micro-amp meter and a series
resistor that will absolutely limit the short-circuit current to say
1mA. Connected the right way around to the DC supply, the initial
charging current will settle back to a low leakage current and maybe
very slowly drift downwards. Connected the wrong way round, you'll see
the same charging current, but the leakage current will probably be
higher and will probably accelerate upwards.

>For a number of years, we were required by management to have a certain
>amount of resistance in series with all tantalum bypass capacitors
>(defeating their chief advantantages, but reducing the possibility of a
>fire). It was one ohm per volt minimum, as I recall.
>
Recent SMD electrolytics (eg some Kemet types) have a built-in fuse.
There are reports of tantalum caps lasting months with mildly reversed
polarity before they decide they're going to die.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)

1444. Re: Litz Wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 10:10:59 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ai8d3i$9d8$1@helle.btinternet.com>
Source record: 42306

Collins probably judged manufacturing costs to be minimised by using Litz for ALL coils rather than changing production methods for the higher frequency bands.

Or perhaps they just kept doing what they had always done in their earlier days on lower frequency receivers without thinking about it. Not an important matter. No harm done.

An unnecessary 2 or 3 inches of Litz on a 30 MHz coil is hardly likely to break the bank.

Reg, G4FGQ

==========
"Pete Gianakopoulos" wrote
> The old Collins R388 receivers used it on all of their front-end coils.
> These units covered .5 to 30.5MHz

1445. Re: Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 10:35:58 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-3107020636310001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42307

In article <d56eku0h6o6jgr1t8deupdprf8mse8pu65@4ax.com>, "Jim Hill, w6ivw" <Xslimjim71@cox.net> wrote:

> What advantages to tantalums have over regular electrolytic
> capacitors? Do they act like a capacitor at higher frequencies?
> Thanks, Jim
> Xslimjimtmp@home.com (remove X before using)

Many of the replies were correct about the higher self resonant frequency, lower equivalent resistance, etc of the tantalum, but no one mentioned that the leakage is also lower.

Another thing that I thought of, was that tantalums can be a big surprise sometimes. When I was working on a radio, my technician came in and told me that one of the controller boards had a cap that exploded. Of course, I asked him if the power supply was set right and yada, yada, yada and he said that everything was fine. He is a very good tech so we both went to his bench to take a look. He was set up to test the controller boards one at a time so we tried some more boards. Step by step we set up a board and did the normal testing. As soon as he flipped the power on, the tantantulum in question of the new board exploded, flew off the board and over the tech's head, landed on the floor and burned a hole in the carpet tile. At this point, after a few choice words, the tech asked me for hazardous duty pay. We both lauged a lot because we're both Vets. Civilians just won't get it.

I went to the parts bin and drew out all the caps like the one that exploded and separated them into date codes as variations can happen lot to lot and the failed caps all were in a certain date code of manufacture. I then set up my bench to measure leakage of the caps setting the bias supply's current limit to 100 mA. Starting at 0VDC I slowly advanced the voltage in small increments up towards the rating of the cap (I think this was 15v) and noted the leakage current at the increments. At no time did the current go beyond 1uA. At about 6V with the current meter reading very low, the cap burst into flame and burned a hole in my bench. After days of analysis in the component lab and with many calls to the vendor who also analyzed the caps, no conclusion could be reached. No more problems existed in future builds with the caps, so I guess you can just chalk it up to gremlins.

Happy Trails,

Steve WB4CZR

1446. Receiver IC TEA6200

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 11:09:57 UTC
From: la8ak.xnd@online.no
Message-ID: <3d479495.588167418@news.online.no>
Source record: 42308

Founda a source for TEA6200
wonder if somebody has some experience using it as converter?
See
http://www-us9.semiconductors.com/acrobat/datasheets/TEA6200_CNV_2.pdf

73
LA8AK
--
remove ,xnd to reply

1447. Re: Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 11:17:36 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d47c60f.2538917@news.cantech.net.au>
Source record: 42309

On Wed, 31 Jul 2002 00:52:05 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

(snip very interesting tant recounts)

NatSemi also found that atnts are prone to "sputtering" - a transient
short circuit which leaves no after effects.

One of their AppNotes (I have it somewhere if anyone is interested
enough fo rme to dig it out) describes their 3-terminal regs failing
as a result of input bypass tants sputtering. This introduced a
reverse bias across the series pass transistor which it wasn't
designed to withstand, and there was no smoking gun. NS kept getting
dead 3TR's with no cause, until they found the mechanism. The AppNote
relates this and advises a reverse diode across the 3TR to guard
against this.

Apparently this only happens when relatively close to the rated VW of
the cap, but I never researched it further.

1448. Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 11:36:18 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0207310336.368b48ca@posting.google.com>
Source record: 42310

"Bob Lewis \(AA4PB\)" <rlewis@staffnet.com> wrote in message
news:<ukefq846fpuj57@corp.supernews.com>...
> Tantalums also have better high frequency response characteristics.

Tantalums are in the "Good idea at the time" category and have proved to be appalling in long term reliability terms. The original good idea was low leakage, low inductance, high stability, small size - in short, all of the things that electrolytic capacitors of the era didnt have (they now do). Long term the things go low resistance or short circuit and should be replaced automatically in any piece of equipment being serviced, particularly if over 10 years old or has been operated in a tropical/humid/hot environment.
Modern electroytics have the same performance but are usually slightly larger, and as for any high value capacitor should be bypassed in a RF environment.

1449. FS: TUBES, receiving, special purpose & TV

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 13:50:13 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <pWR19.78145$L02.4219985@news1.west.cox.net>
Source record: 42312
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

1000's of TUBES priced from $.35 each, email w6krc@arrl.net for a detailed list.

1450. Looking for Motorola Pwr transistors M1134 or M9625

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 14:01:13 UTC
From: Dave Woolf <dwoolf@worldnet.att.net>
Message-ID: <3D47DF81.E880ECA0@worldnet.att.net>
Source record: 42313
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.boatanchors,alt.ham-radio.vhf-uhf

I am looking for a source for two Motorola M1134 or M9625
PNP RF power transistor. After over 20 years service our
repeater 100 watt continuous duty Motorola MICOR 2 meter
power amplifier (model TLD1692D) lost 2 of the 4 final
transistors. Looking for new or working used parts, or a
replacement MICOR power amplifier, or even a non-functional
amp that has two good finals that could be salvaged.

Dave Woolf - K8RSP
dwoolf@worldnet.att.net

P.S. Does anyone have a spec sheet for either of
these transistors?

1451. Re: Looking for Motorola Pwr transistors M1134 or M9625

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 14:40:15 UTC
From: kludge@panix.com
Message-ID: <ai8ssf$82i$1@panix2.panix.com>
Source record: 42314
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.boatanchors,alt.ham-radio.vhf-uhf

In article <3D47DF81.E880ECA0@worldnet.att.net>,
Dave Woolf <dwoolf@worldnet.att.net> wrote:
>
> I am looking for a source for two Motorola M1134 or M9625
> PNP RF power transistor. After over 20 years service our
> repeater 100 watt continuous duty Motorola MICOR 2 meter
> power amplifier (model TLD1692D) lost 2 of the 4 final
> transistors. Looking for new or working used parts, or a
> replacement MICOR power amplifier, or even a non-functional
> amp that has two good finals that could be salvaged.
>
> Dave Woolf - K8RSP
> dwoolf@worldnet.att.net
>
> P.S. Does anyone have a spec sheet for either of
> these transistors?

I don't have a spec sheet, but if you call On Semiconductor they might have
an archive one. I suggest you take one of the good ones, measure the hFE,
find out if it's PNP or NPN, guess at the power, and pick something with
an Ft high enough for 2M. Not too many critical specs here.
--scott
--
"C'est un Nagra. C'est suisse, et tres, tres precis."

1452. Re: Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 17:14:31 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D481AF7.6512BC3C@clifto.com>
Source record: 42315

Roy Lewallen wrote:
> If you ever do manage to get a low enough impedance source across a
> shorted tantalum, they tend to catch fire, rather than blow their tops
> like aluminum caps.

I disagree. I worked at a place that made keyboards years ago. We had burn-in racks for lots and lots of keyboards; each keyboard had ten to twenty tantalums on it. Our days were constantly punctuated by exploding caps; once in a great while we'd get one that died with a loud fizzing sound, a good puff of smoke and *very* occasionally, a tiny flame that died out in a second or so.

--
.signature in flux

1453. Re: Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 17:21:45 UTC
From: wa5bdu@yahoo.com
Message-ID: <ca1a467b.0207310921.72603e2e@posting.google.com>
Source record: 42316

Yes, better bypassing at higher frequencies, I guess due to lower self inductance.

I just happened to be reading the LM317 data sheet by National Semiconductor, and on bypassing it says, " ... the best type to use ... is solid tantalum [they] have low impedance even at high frequencies ... Depending on capacitor construction, it takes about 25 uH aluminum electrolytic to equal 1 uF tantalum at high frequencies."

73--Nick, WA5BDU

"Jim Hill, w6ivw" <Xslimjim71@cox.net> wrote in message news:<d56eku0h6o6jgr1t8deupdprf8mse8pu65@4ax.com>...
> What advantages to tantalums have over regular electrolytic
> capacitors? Do they act like a capacitor at higher frequencies?
> Thanks, Jim
> Xslimjimtmp@home.com (remove X before using)

1454. Re: Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 18:08:31 UTC
From: Russell Hltn <reply@2newsgroup.com>
Message-ID: <ai992kllg1@nntp-m01.news.aol.com>
Source record: 42317

Yes, I've had my share of flaming/exploding tantalums. Including a small parts bin of them that would not work at rated voltage. I hope my friend set those aside. We decided they would make for a great prop in a humorous demonstration.

(This was for some low power microwave experiments. Imagine demonstrating:
"Step 1 - make sure you have an adequate power supply" (use car battery).
"Step 2 - Apply power". (While ducking for cover - *Blam!*).
"Step 3 - Remove flaming parts" (Use cutters to remove flaming cap from board).
Then continue with the demonstration.

I have learned from my own experience that while good tantalums have their use. But they are very temperamental and will fail spectacularly if given any excuse.

"carltons" <motsteve@attbi.com> wrote in message news:motsteve-3107020636310001@c-66-176-144-254.se.client2.attbi.com..
.
> In article <d56eku0h6o6jgr1t8deupdprf8mse8pu65@4ax.com>, "Jim Hill, w6ivw"
> <Xslimjim71@cox.net> wrote:
>
>
> Another thing that I thought of, was that tantalums can be a big surprise
> sometimes. When I was working on a radio, my technician came in and told
> me that one of the controller boards had a cap that exploded.

1455. FA....NICE ROLLER INDUCTOR...FA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 19:09:06 UTC
From: kf4toh@aol.com
Message-ID: <20020731150906.02421.00000462@mb-fv.aol.com>
Source record: 42318

NICE ROLLER INDUCTOR AROUND 27 TURNS OF FLAT COPPER STOCK GUESSING AROUND 24 TO 26 UH COIL SIZE IS 5 1/5 BY 6 FRAME SIZE IS 10 LONG BY 7 TALL USES A TWO WHEEL TYPE CONTAC HAS A 3/8 SHAFT COMES WITH A 3/8 TO 1/4 INSULATOR VERY GOOD COND

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1369180650

1456. Re: Help! Looking for axial-lead glass-bodied ceramic capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 22:59:17 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D486C94.461E@pop.removethistomailme.net>
Source record: 42319
Cross-posted to: sci.electronics.design,sci.electronics.components,rec.radio.amateur.homebrew

Robert Baer wrote:
>
> I presume you are talking about those devices that look like glass
> diodes.

Yes. They resemble glass 1N400X diodes with chip capacitors mounted internally.

These came from the now-defunct Altex outlet in Austin, TX about five or six years ago.

> They are chip capacitors in the standard glass case also used for
> diodes.
> If you need enough of them, and absolutely cannot find them in the
> surplus market, a specialty house could bond chip capacitors in those
> cases for you (at a price....).

I'd probably buy a couple hundred bucks' worth. A lifetime supply for me (which is what I thought when I bought a whole sack full at Altex, I guess), but not enough to justify paying for custom work at a packaging house.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1457. Re: Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 23:03:07 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D486D7A.1ABB@pop.removethistomailme.net>
Source record: 42320

Andrew VK3BFA wrote:
>
> "Bob Lewis \(AA4PB\)" <rlewis@staffnet.com> wrote in message
news:<ukefq846fpuj57@corp.supernews.com>...
> > Tantalums also have better high frequency response characteristics.
>
> Tantalums are in the "Good idea at the time" category and have proved
> to be appalling in long term reliability terms. The original good idea
> was low leakage, low inductance, high stability, small size - in
> short, all of the things that electrolytic capacitors of the era didnt
> have (they now do). Long term the things go low resistance or short
> circuit and should be replaced automatically in any piece of equipment
> being serviced, particularly if over 10 years old or has been operated
> in a tropical/humid/hot environment.
> Modern electroytics have the same performance but are usually slightly
> larger, and as for any high value capacitor should be bypassed in a RF
> environment.

I think that's unduly pessimistic. I haven't heard of any widespread
tantalum-cap failures except in applications where high inrush currents
are applied to capacitors that don't have at least 2X headroom on their
rated voltage.

Using a 16-volt tantalum across a 12-volt supply bus is a bad idea. A
25-volt or 35-volt part should be fine.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1458. Re: Help! Looking for axial-lead glass-bodied ceramic capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-07-31 23:26:08 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3D4872F4.DA6CEDC3@rica.net>
Source record: 42321
Cross-posted to: sci.electronics.design,sci.electronics.components,rec.radio.amateur.homebrew

John Miles wrote:
>
> Robert Baer wrote:
> >
> > I presume you are talking about those devices that look like glass
> > diodes.
>
> Yes. They resemble glass 1N400X diodes with chip capacitors mounted
> internally.
>
> These came from the now-defunct Altex outlet in Austin, TX about five or
> six years ago.
>
> > They are chip capacitors in the standard glass case also used for
> > diodes.
> > If you need enough of them, and absolutely cannot find them in the
> > surplus market, a specialty house could bond chip capacitors in those
> > cases for you (at a price....).
>
> I'd probably buy a couple hundred bucks' worth. A lifetime supply for
> me (which is what I thought when I bought a whole sack full at Altex, I
> guess), but not enough to justify paying for custom work at a packaging
> house.

I think AVX still makes them:
http://www.avxcorp.com/docs/catalogs/m11015gk.pdf

--
John Popelish

1459. Re: Need info on homebrew tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-01 02:44:44 UTC
From: mcalhoun@ksu.edu
Message-ID: <aia7as$dab@unix2.cc.ksu.edu>
Source record: 42322

>>I want to build a tuner. I hope that I can supply enough background on what
>....[snip]....

>Hi J, First off using coax to feed a simple wire dipole, and attempting to use
>....[snip]....
>I made a "T" type out of all this...

If by "T" you mean ----C---+---C----
|
L (tapped or roller)
|
----+----
note that this is a HIGH-pass configuration and will let harmonics
through with little or no attenuation. Yes, it's cheap, but if you're
gonna tap the inductor, the LOW-pass "pi" version is just as easy and
uses the same number of major parts if you use alligator clips for
tapping the "C's" onto the "L":

-----LLLLLLL-----
| |
C C
| |
-----+----+------

Admittedly, the alligator-clip version will look more crude,
but it will DEFINITELY impress visitors to your shack!-)

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

1460. Re: Receiver IC TEA6200

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-01 04:22:40 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0207312022.55e829ae@posting.google.com>
Source record: 42323

la8ak.xnd@online.no (J M Noeding) wrote in message
news:<3d479495.588167418@news.online.no>...
> Founda a source for TEA6200
> wonder if somebody has some experience using it as converter?
> See
> http://www-us9.semiconductors.com/acrobat/datasheets/TEA6200_CNV_2.pdf
>
> 73
> LA8AK

This is the first I've heard of that IC, but it certainly is interesting. I've often wondered why most AM broadcast radios still use the same conversion scheme of 50 years ago. I've decided it's because the design works and has had plenty of testing over the years, and maybe because nobody wants to make the effort of change.

(For those who haven't looked at the data sheet, it uses an upconversion to 10.7MHz, where the IF and detector resides. They do away with preselection, say so long to adjusting the tracking, and make do with a presumably good mixer and a low pass filter between the antenna and the mixer.)

It's too bad the data sheet doesn't provide the internals of the IC, so you could get an idea of what they are using there.

Michael VE2BVW

1461. Re: Receiver IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-01 04:36:14 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0207312036.4c8d0399@posting.google.com>
Source record: 42324

"Al" <none@none.com> wrote in message news:<ai59v4$pf1$1@geraldo.cc.utexas.edu>...
> Anyone know where I can order the TEA5710 (Philips) in unit quantities? Philips recomends Arrow, Avnet, and
> Pioneer, but they are all nos.
>
> This is for a 49Mhz receiver. The other option is the TDA7000, which I can find, but I've gotten the
> impression it performs poorly for narrow band applications because of image frequency problems. I plan to use
> one FM channel with frequency deviation of 7.5kHz. What kind of performance will I get from the TDA7000?
>
> Thanks for the help.
>
> Al

I don't know anything about the Philips.

Though it was some years back, I did look at the TDA7000 data sheet. It's an uncommon design, converting down to just above audio, where active filtering is used. The image would be there for every application, but with narrow deviation the channel spacing comes into play. If the image ends up on the next channel, then you get to receive two frequencies at the same time.

It strikes me that the IC gets a lot of mention in hobby circles because someone introduced it at some point. I've often wondered if it was ever used in commercial circuitry, where the real money is. There was certainly a lot of application data, but I've never seen it in any equipment I've opened up. And once into hobby circles, it often gets mentioned, almost as a knee jerk reaction, simply because it is simple. Of course, simple doesn't say anything about performance.

I bought a number of them when Radio Shack was clearing them out, and never did anything with them. One article in 73 Magazine did come up with an interesting use for them; it used the mixer as a product detector, and then the "IF strip" as an active audio filter.

Motorola made a couple of generations of FM IF strips/receiver ICs intended for narrow deviation work. I gather they are no longer available, or someone else is manufacturing them. But if you pulled open any number of consumer items, you would find such an IC. More significantly, they'd come with a ceramic filter at 10.7MHz, a narrow-deviation ceramic filter at 455KHz, and a crystal to make the conversion. That's most of the receiver right there. Early generations of cordless phones had them, and they operated right

in the 49MHz range. 49MHz superhet walkie talkies had them too. (Though, in both cases, some used the ICs as single conversion, going from 49MHz down to 455KHz.) I've never had a baby monitor to check, but they too might use them. I suspect some early cellphones might also offer up such ICs. Once you had such an IC, it would be relatively easy to add a mixer and oscillator ahead of it to get from 49MHz to 10.7MHz.

Motorola also made some double conversion FM receivers, extending the above ICs to add another mixer to go from the signal frequency to 10.7MHz. I'm not sure what equipment they made it into.

Michael

1462. FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-01 06:13:33 UTC
From: Lou <tech@dp.net>
Message-ID: <aian10$2foq$1@news.dp.net>
Source record: 42325

I have a lot of various parts, some new - some used. Some of the stuff is weird too. I need to clear out a lot of this stuff. I'm over crowded. Far too much to list.. But to give an example, there are new parts in packing, older equipment parts (pulls) out of Motorola rigs, Tektronix 533 scope, etc.
Prices for the items will be reasonable I think, but can't do a damned thing about shipping! Accept only Postal MOs and shipment is usually next day.
Feel free to check out my E-bay profile or ask in most any radio related newsgroup.
E-mail photos can be provided of items before purchase.

Thanks,

Lou/Tech@DP.NET

1463. Re: Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-01 07:21:15 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0207312321.b2de95a@posting.google.com>
Source record: 42326

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3D486D7A.1ABB@pop.removethistomailme.net>...
> Andrew VK3BFA wrote:
> >
> > "Bob Lewis \(AA4PB\)" <rlewis@staffnet.com> wrote in message
news:<ukefq846fpuj57@corp.supernews.com>...
> > > Tantalums also have better high frequency response characteristics.
> >
> > Tantalums are in the "Good idea at the time" category and have proved
> > to be appalling in long term reliability terms. The original good idea
> > was low leakage, low inductance, high stability, small size - in
> > short, all of the things that electrolytic capacitors of the era didnt
> > have (they now do). Long term the things go low resistance or short
> > circuit and should be replaced automatically in any piece of equipment
> > being serviced, particularly if over 10 years old or has been operated
> > in a tropical/humid/hot environment.
> > Modern electroytics have the same performance but are usually slightly
> > larger, and as for any high value capacitor should be bypassed in a RF
> > environment.
>
> I think that's unduly pessimistic. I haven't heard of any widespread
> tantalum-cap failures except in applications where high inrush currents
> are applied to capacitors that don't have at least 2X headroom on their
> rated voltage.
>
> Using a 16-volt tantalum across a 12-volt supply bus is a bad idea. A
> 25-volt or 35-volt part should be fine.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

Just goes to show different people have different experiences -
although the tone of this thread is hardly a resounding endorsement
for them! I havent "heard" of widespread failures either (until this
thread started and then people started recounting their experiences)
but what I have done is serviced enough pieces of equipment in order
to make my original statement. If the damm things are so tempermental
as regards care and feeding, why bother with them, remember the KISS
theorem.

1464. Re: Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-01 07:27:17 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0207312327.e0fdf56@posting.google.com>
Source record: 42327

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3D486D7A.1ABB@pop.removethistomailme.net>...
> Andrew VK3BFA wrote:
> >
> > "Bob Lewis \(AA4PB\)" <rlewis@staffnet.com> wrote in message
news:<ukefq846fpuj57@corp.supernews.com>...
> >
>
> I think that's unduly pessimistic. I haven't heard of any widespread
> tantalum-cap failures except in applications where high inrush currents
> are applied to capacitors that don't have at least 2X headroom on their
> rated voltage.
>
> Using a 16-volt tantalum across a 12-volt supply bus is a bad idea. A
> 25-volt or 35-volt part should be fine.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

Will throw another dead rat into the discussion here - the modern
yucky horrible equivalent of tantalums is now the small silver can
surface mount electrolytic - starting to get heaps of things, only
about 2-3 years old, being written off because the things leak - the
leakage is corrosive, so destroys thru hole plating. Ah, progress....

And for a note of trivia from the world of practical electronics - if
something comes in for repair and its got the silver can SMD electros
in it - have a good smell of the chassis - if it smells like a cat has
pissed in there, the electros are stuffed and quote accordingly on
board replacement.

1465. Re: Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-01 09:24:42 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <+kx1mrEa5PS9EA4g@ifwtech.co.uk>
Source record: 42328

Andrew VK3BFA wrote:
>
>Will throw another dead rat into the discussion here - the modern yucky
>horrible equivalent of tantalums is now the small silver can surface
>mount electrolytic - starting to get heaps of things, only about 2-3
>years old, being written off because the things leak - the leakage is
>corrosive, so destroys thru hole plating.

As far as I know, the silver can types are all conventional aluminum electrolytics, same as their bigger brothers. The rectangular SMD electrolytics can be either aluminum or tantalum.

--
73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)

1466. Re: Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-01 09:41:05 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0108020541390001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42329

In article <+kx1mrEa5PS9EA4g@ifwtech.co.uk>, "Ian White, G3SEK"
<g3sek@ifwtech.co.uk> wrote:

> Andrew VK3BFA wrote:
> >
> >Will throw another dead rat into the discussion here - the modern yucky
> >horrible equivalent of tantalums is now the small silver can surface
> >mount electrolytic - starting to get heaps of things, only about 2-3
> >years old, being written off because the things leak - the leakage is
> >corrosive, so destroys thru hole plating.
>
> As far as I know, the silver can types are all conventional aluminum
> electrolytics, same as their bigger brothers. The rectangular SMD
> electrolytics can be either aluminum or tantalum.

My one story earlier, not withstanding, I find tantalums to be very
compact and usually reliable with no particular need to coddle them with
conditioning, etc as dicusssed earlier. They eventually will be replaced
with newer technologies I'm sure, but in the meantime, they're not too bad
to use and surface mount quite nicely.

Steve WB4CZR

1467. Re: Help! Looking for axial-lead glass-bodied ceramic capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-01 12:56:51 UTC
From: tshoppa@wmata.com
Message-ID: <8327b166.0208010456.463de1f5@posting.google.com>
Source record: 42330
Cross-posted to: sci.electronics.design,sci.electronics.components,rec.radio.amateur.homebrew

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3D458E89.6ACA@pop.removethistomailme.net>...
> Can anyone tell me where I can order a few hundred capacitors like the
> ones on this board:
>
> http://www.qsl.net/ke5fx/uwave/demod2.jpg
>
> ... with the glass packages? These were surplus parts that I bought
> years ago in 0.001 uF, 0.1 uF, and 0.33 uF sizes, and I'm running out
> fast.
>
> The only axial-lead capacitors that most retail distributors (DigiKey,
> FutureActive) seem to sell these days are the crappy epoxy
> conformal-coated jobs that fall apart when you threaten them with a cold
> soldering iron. These glass-bodied parts were indestructable and more
> or less endlessly-reusable, but I can't seem to find them anywhere.

For better or worse, the glass axial-lead capacitor package seems to have gone by the wayside. Surface mount chip capacitors have taken their place, and with good reasons (lower lead inductance in particular). While they used to be put onto boards full of TTL DIP packages in the 70's and 80's by the billions for bypassing, the surface mount part is far more appropriate for any use use today I can think of - except your use :-(.

The concept of re-using a surface mount ceramic chip cap is almost laughable. I'm sure it's possible, but it cannot possibly be worth the effort.

If you want them largely for bypass purposes and aren't critical as to exact value, I do see large boxes full of the glass axial caps at hamfests every so often. Often the vendor thinks they're diodes.

Tim.

1468. Re: Help! Looking for axial-lead glass-bodied ceramic capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-01 14:06:28 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3D494064.2755@sneakemail.com>
Source record: 42331
Cross-posted to: sci.electronics.design,sci.electronics.components,rec.radio.amateur.homebrew

Tim Shoppa wrote:

[...]

> The concept of re-using a surface mount ceramic chip cap is almost laughable.
> I'm sure it's possible, but it cannot possibly be worth the effort.

[...]

> Tim.

Saturday night - the stores are closed. The kids have gone to bed, and you finally have time to work on a project.

Oops - need a bunch of bypass caps. Ha! there's an old pci card with plenty of them.

Take two soldering irons and heat both ends simultaneously. In seconds, the cap comes lose with no damage. Check the value on your handy Radio Shack DVM, and sort into the appropriately-marked 35mm film cannister.

Cheers, Mike

1469. Re: Help! Looking for axial-lead glass-bodied ceramic capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-01 14:16:45 UTC
From: John Fields <jfields@texas.net>
Message-ID: <3D493C9E.6EB5FB84@texas.net>
Source record: 42332
Cross-posted to: sci.electronics.design,sci.electronics.components,rec.radio.amateur.homebrew

John Miles wrote:
>
> Can anyone tell me where I can order a few hundred capacitors like the
> ones on this board:
>
> http://www.qsl.net/ke5fx/uwave/demod2.jpg
>
> ... with the glass packages? These were surplus parts that I bought
> years ago in 0.001 uF, 0.1 uF, and 0.33 uF sizes, and I'm running out
> fast.
>
> The only axial-lead capacitors that most retail distributors (DigiKey,
> FutureActive) seem to sell these days are the crappy epoxy
> conformal-coated jobs that fall apart when you threaten them with a cold
> soldering iron. These glass-bodied parts were indestructable and more
> or less endlessly-reusable, but I can't seem to find them anywhere.

I wonder why you can't/won't use the radial leaded ceramics that are
ubiquitous and cheap?

John Fields
Professional circuit designer
http://www.austininstruments.com

1470. Re: FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-01 16:39:36 UTC
From: Bob Liesenfeld <robert.liesenfeld@neicoltech.org>
Message-ID: <3D496448.6F3DB766@neicoltech.org>
Source record: 42333

Lou wrote:

> I have a lot of various parts, some new - some used. Some of the stuff is
> weird too. I need to clear out a lot of this stuff. I'm over crowded. Far
> too much to list.. But to give an example, there are new parts in packing,
> older equipment parts (pulls) out of Motorola rigs, Tektronix 533 scope,
> etc.

Hi Lou,
How about semiconductors? I may be looking for some of the older Motorola
communication ICs, ie., MC4044, 4024
Also, maybe some of the power xistors. MRF 476 etc.

Could you give me an idea if this is the kind of thing you have or are we
talking more semi-complete radios (Motracs etc)?

Thanks!
Bob WB0POQ

1471. Re: Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-01 18:02:11 UTC
From: Russell Hltn <reply@2newsgroup.com>
Message-ID: <aibt39$kh5$1@nntp-m01.news.aol.com>
Source record: 42334

Maybe that was my mistake - actually expecting them to meet ratings.

Many caps do behave and I leave them alone, but I've also seen many
fail. I use them, but I am careful of them when repairing.

"John Miles" <jmiles@pop.removethistomailme.net> wrote in message
news:3D486D7A.1ABB@pop.removethistomailme.net...
> I think that's unduly pessimistic. I haven't heard of any
widespread
> tantalum-cap failures except in applications where high inrush
currents
> are applied to capacitors that don't have at least 2X headroom on
their
> rated voltage.
>
> Using a 16-volt tantalum across a 12-volt supply bus is a bad idea.
A
> 25-volt or 35-volt part should be fine.
>
> -- jm
>

1472. Re: Help! Looking for axial-lead glass-bodied ceramic capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-01 18:36:40 UTC
From: tshoppa@wmata.com
Message-ID: <8327b166.0208011036.2b0d7960@posting.google.com>
Source record: 42335
Cross-posted to: sci.electronics.design,sci.electronics.components,rec.radio.amateur.homebrew

John Fields <jfields@texas.net> wrote in message news:<3D493C9E.6EB5FB84@texas.net>...
> I wonder why you can't/won't use the radial leaded ceramics that are
> ubiquitous and cheap?

I was always under the impression that the axial parts had lower inductance,
and thus were superior for bypassing or VHF/UHF applications. Again, leadless
chip capacitors are today's real winner.

Tim.

1473. Info from old QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-01 21:36:05 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3D49A9C5.57439CB2@visi.com>
Source record: 42336

Hi gang,
Does anyone have a copy of QST for Jan 1979 that they could copy/scan
a page or two out of? I understand there is an article or note about
adding weighting controls to the Accu-Keyer in it on page 50.

Willing to pay costs etc.
Thanks!

Bob L. WB0POQ

1474. Re: Help! Looking for axial-lead glass-bodied ceramic capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 00:43:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D49D666.6530@pop.removethistomailme.net>
Source record: 42337
Cross-posted to: sci.electronics.design,sci.electronics.components,rec.radio.amateur.homebrew

John Fields wrote:
>
> I wonder why you can't/won't use the radial leaded ceramics that are
> ubiquitous and cheap?

They're too big. Downright huge by comparison.

I tend to pack my parts very densely when I hand-wire an assembly. I
can usually beat an equivalent surface-mount PCB layout by 50%. :)

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1475. Re: Help! Looking for axial-lead glass-bodied ceramic capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 00:46:23 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D49D731.7ED2@pop.removethistomailme.net>
Source record: 42338
Cross-posted to: sci.electronics.design,sci.electronics.components,rec.radio.amateur.homebrew

John Popelish wrote:
>
>
> I think AVX still makes them:
> http://www.avxcorp.com/docs/catalogs/m11015gk.pdf

Those look like nice parts, but in their case, the "glass" term refers
to the "glass K" dielectric rather than the package. It's not clear
from the data sheet what the package is made from.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1476. Re: Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 00:50:45 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D49D837.4E1A@pop.removethistomailme.net>
Source record: 42339

Andrew VK3BFA wrote:
>
> Just goes to show different people have different experiences -
> although the tone of this thread is hardly a resounding endorsement
> for them! I havent "heard" of widespread failures either (until this
> thread started and then people started recounting their experiences)
> but what I have done is serviced enough pieces of equipment in order
> to make my original statement. If the damm things are so tempermental
> as regards care and feeding, why bother with them, remember the KISS
> theorem.

I'm a big believer in the Dr. Bronner's Soap school of engineering.
"Derate! Derate! OK!"

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1477. WTB / WTT for: QEX, Jan, Feb, Dec 1992, June 1993

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 02:28:51 UTC
From: crabtreejr@aol.com
Message-ID: <20020801222851.04626.00001191@mb-bh.aol.com>
Source record: 42340

Hello

I am looking for these four issues of QEX. I have other duplicates to trade. Please contact with a note of what you have and its condition, wants list or price.

Thanks and 73

John KC0GGH

1478. Re: Info from old QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 03:08:52 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3D49F7C4.5CF7E4E1@visi.com>
Source record: 42341

Bob Liesenfeld wrote:

> Hi gang,
> Does anyone have a copy of QST for Jan 1979 that they could copy/scan
> a page or two out of? I understand there is an article or note about
> adding weighting controls to the Accu-Keyer in it on page 50.
>
> Willing to pay costs etc.
> Thanks!
>
> Bob L. WB0POQ

Thanks to all that responded! I now have a copy. :)

72
Bob

1479. FTFS PLATE TRANSFORMER

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 04:49:29 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3D4A0F59.4050306@charter.net>
Source record: 42342

This is a nice big plate transformer 14" tall x 11 3/4" wide x 7 1/2"
deep
120/220 primaries 3000v @ 3 amps
this baby is pretty heavy i'd say about 100 lbs or close to it.

I am Looking for some Vaccum Variables 1000-1200 at least 5kv

--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

1480. AF CW peak/notch circuit sought

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 06:29:45 UTC
From: Will White <googlyelmo@earthlink.net>
Message-ID: <3D4A26EC.B1026795@earthlink.net>
Source record: 42343

I need an audio peak/notch filter to use with my TT Scout. Looking for
something simple but effective, with at least a 20 dB peak. Since this
will be for mostly CW use, notching is less important than peaking.
Anyone have a schematic they can send, or know of one on the web?
Thanks!

--
Will White, KD7BFX
Seattle WA US
King County, Grid CN87tq
ITU Zone 6, CQ Zone 3
****
"The wireless telegraph is not difficult to understand.
The ordinary telegraph is like a very long cat.
You pull the tail in New York, and it meows in Los Angeles.
The wireless is the same, only without the cat."
- Albert Einstein
****

1481. Re: Tantalum vs Regular Electrolytic Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 07:41:34 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0208012341.4ae40385@posting.google.com>
Source record: 42344

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3D49D837.4E1A@pop.removethistomailme.net>...
> Andrew VK3BFA wrote:
> >
> > Just goes to show different people have different experiences -
> > although the tone of this thread is hardly a resounding endorsement
> > for them! I havent "heard" of widespread failures either (until this
> > thread started and then people started recounting their experiences)
> > but what I have done is serviced enough pieces of equipment in order
> > to make my original statement. If the damm things are so tempermental
> > as regards care and feeding, why bother with them, remember the KISS
> > theorem.
>
> I'm a big believer in the Dr. Bronner's Soap school of engineering.
> "Derate! Derate! OK!"
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

For sure I would agree with that - I dont stock every voltage value of electrolytic, so the closest higher voltage gets put into the circuit under repair - or the next higher one if its all I have in stock and it physically fits!. Very occasionally I have to use the original rated component if the design engineer has been a smartarse and not left enough room on the PCB.

One use for tantalums that hasnt been mentioned is for "Audible Power Supply Fault Monitoring" - ie, if the tantalums blow themselves off the board then the power supply is overvolting, if you are quick enough you can see the smoking ruins and know whick rail is kaput.

I make no bones about it, I belong to the "dont use force, get a bigger hammer" school of engineering - if you cant find whats wrong, power it up and see what gets hot!

1482. 13.8V Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 08:31:37 UTC
From: Book <book16@optusnet.com.au>
Message-ID: <3d4a4366$0$29909$afc38c87@news.optusnet.com.au>
Source record: 42345

Can anyone suggest a 13.8V power supply kit/on-line schematic capable of about 10A?

Thanks,
--
Book

1483. Re: Help! Looking for axial-lead glass-bodied ceramic capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 08:53:35 UTC
From: la8ak.xnd@online.no
Message-ID: <3d49af20.726054852@news.online.no>
Source record: 42346
Cross-posted to: sci.electronics.design,sci.electronics.components,rec.radio.amateur.homebrew

On Wed, 31 Jul 2002 22:59:17 GMT, John Miles
<jmiles@pop.removethistomailme.net> wrote:

>Robert Baer wrote:
>>
>> I presume you are talking about those devices that look like glass
>> diodes.
>
>Yes. They resemble glass 1N400X diodes with chip capacitors mounted
>internally.
>
got some thousands of 471 (470pf) - not the most used value around
here, what is the specs?

73 JM
LA8AK
--
remove ,xnd to reply

1484. Re: AF CW peak/notch circuit sought

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 09:30:53 UTC
From: yeti@REMOVEcet.com
Message-ID: <3d4a509c.13668855@news.cet.com>
Source record: 42247

In <3D4A26EC.B1026795@earthlink.net>, Will White
<googlyelmo@earthlink.net> wrote:

>I need an audio peak/notch filter to use with my TT Scout. Looking for
>something simple but effective, with at least a 20 dB peak. Since this
>will be for mostly CW use, notching is less important than peaking.
>Anyone have a schematic they can send, or know of one on the web?
>Thanks!

bama.sbc.edu

Look at the Heathkit Q-multipliers. The QF-1 and HD-11 are the same
circuit except the HD-11 has it's own power supply and the QF-1 taps
it from the radio. You can download the entire manual from that site.

1485. Re: 13.8V Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 09:33:56 UTC
From: yeti@REMOVEcet.com
Message-ID: <3d4a51e6.13999668@news.cet.com>
Source record: 42248

In <3d4a4366$0$29909$afc38c87@news.optusnet.com.au>, "Book"
<book16@optusnet.com.au> wrote:

>Can anyone suggest a 13.8V power supply kit/on-line schematic capable of
>about 10A?
>
>Thanks,
>--
>Book

www.epanorama.net

Just follow the links.

1486. Re: Help! Looking for axial-lead glass-bodied ceramic capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 10:52:30 UTC
From: Ian Buckner <Ian_Buckner@agilent.com>
Message-ID: <1028285552.219449@cswreg.cos.agilent.com>
Source record: 42249
Cross-posted to: sci.electronics.design,sci.electronics.components,rec.radio.amateur.homebrew

"Tim Shoppa" <tshoppa@wmata.com> wrote in message
news:8327b166.0208011036.2b0d7960@posting.google.com...
> John Fields <jfields@texas.net> wrote in message
news:<3D493C9E.6EB5FB84@texas.net>...
> > I wonder why you can't/won't use the radial leaded ceramics that
are
> > ubiquitous and cheap?
>
> I was always under the impression that the axial parts had lower
inductance,
> and thus were superior for bypassing or VHF/UHF applications.
Again, leadless
> chip capacitors are today's real winner.
>
> Tim.

When actually put in a board the axial parts have about 3x the
inductance of the radial parts. You have to include the inductance
of the formed leads, which can't be bent right by the body for the
axials. ISTR measuring about 15nH vs 5nH (but that was a looong
time ago).

Ian

1487. Re: 13.8V Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 11:31:19 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ukkre6gcr94pb1@corp.supernews.com>
Source record: 42250

This is one of those few areas where I would rather buy than build. A power supply is a relatively simple thing to build, but it can be a real pain collecting the parts. Chances are, by the time you have collected together the necessary stuff, you are going to be in for more money than a high-end commercial supply. And it's not like a rig where building it allows you to tailor the features to what you want. A power supply has a pretty basic job, and it doesn't change. There's always that next neat feature for a rig, so in all probability, you will be buying a new rig in a couple of years (unless you build your rigs, in which case you are probably already working on the next one). A power supply sits there and pumps out 13.8 volts. Ten years from now, you are still going to want it to pump out 13.8 volts.

I would also suggest that 10 amps is a bad size. It sounds like it's going to be the primary station supply, and pretty soon you will need 15 then 20 then 25 ... Somewhere along the line the list will include some junk commercial supplies that will fail in a year or two, likely taking some equipment with them. Of course, if it's for some dedicated application, then a smaller supply is the right answer. But if it's the primary station supply, then going with the smaller supply is almost going to almost guarantee that over 5 or 10 years, you are going to be spending a whole lot of money on supplies, even if you build them.

My advice is to swallow hard and plunk down a pile of change for a 30 to 50 watt Astron. Yeah, it costs more than a VHF rig, but now you're done fooling with supplies for a decade or two. It would probably be quite satisfying building a really nice supply, but unless you are willing to invest years in collecting parts, the cost will be higher than a commercial supply.

If your primary requirement is cheap, however, I'd look into a St. Louis switcher (QRP Homebrewer #6). I wouldn't expect the greatest reliability from this approach, but it sidesteps the parts collection issue, and with a little creativity can probably get you on the air for less money than the caps in a traditional supply. This approach is probably limited to around 12 amps, but it sounds like that would meet your immediate needs.

..

"Book" <book16@optusnet.com.au> wrote in message
news:3d4a4366$0$29909$afc38c87@news.optusnet.com.au...
> Can anyone suggest a 13.8V power supply kit/on-line schematic capable of
> about 10A?
>
> Thanks,
> --

> Book
>
>

1488. Re: 13.8V Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 12:11:52 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <cGu29.735289$352.161246@sccrnsc02>
Source record: 42251

David Metz, WA0AUQ has a very good article that any builder should read.
http://www.seits.org/features/pwrsup.htm

Schematic for David Metz's design
http://www.seits.org/features/pwrsup.gif

Schematics of the Astron Linear Power Supplies
http://www.repeater-builder.com/rbtip/astronindex.html

It is really cheaper to fix the broken power supplies that are discarded,
I find these at commercial radio shops, rallys, hamfests and garage sales.

73 de w9gb
Greg

"Book" <book16@optusnet.com.au> wrote in message
news:3d4a4366$0$29909$afc38c87@news.optusnet.com.au...
> Can anyone suggest a 13.8V power supply kit/on-line schematic capable of
> about 10A?
>
> Thanks,
> --
> Book
>
>

1489. 603 beam and tower 4sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 13:11:51 UTC
From: Jeff <j.dauphinais@worldnet.att.net>
Message-ID: <ryv29.15297$pg2.1236015@bgtnsc05-news.ops.worldnet.att.net>
Source record: 42252
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.misc,rec.radio.amateur.homebrew

I have for sale 1 full size "HY-Gain" beam 10 meters. fully assembled for your inspection. 13' Boom and longest element is 22' $100.00 I also have a steel tower totaling 25'. this is in 3 sections 1 10 foot st8 and 1 5foot st8 and 1 10 foot top section. I don't not have a rotator. $50.00. pickup only from Nashua,NewHampshire. I am selling these because they are to big for my new QTH. This beam has spent a large portion of its life in storage. 73's Jeff AA1GR

1490. Re: 13.8V Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 13:23:04 UTC
From: w4pqwhs@aol.com
Message-ID: <20020802092304.23198.00000806@mb-mh.aol.com>
Source record: 42253

Book, why are you building a power supply? do you have all the parts?are you planning to save money? Reason I am asking these questions is ,you can buy a factory built regulated power supply with warranty for less than you would pay for usable parts to build one..good luck Harold W4PQW

1491. Re: AF CW peak/notch circuit sought

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 14:50:43 UTC
From: Rory Davis <n7cr@nospambellsouth.net>
Message-ID: <qYw29.88547$ND5.8178902@e3500-atl2.usenetserver.com>
Source record: 42254

> I need an audio peak/notch filter to use with my TT Scout. Looking for
> something simple but effective, with at least a 20 dB peak. Since this
> will be for mostly CW use, notching is less important than peaking.
> Anyone have a schematic they can send, or know of one on the web?
> Thanks!

Are you looking for something to use, or to learn about audio filtering?

The Autek QF-1 series of audio filters are very effective, and relatively inexpensive second hand. If you want more performance there are several DSP audio filter boxes on the market. There are also kits available from Ramsay and other sources.

If you want to roll your own, and learn in the process, you have lots of options. Don Lancaster's _Active Filter Cookbook_ has the information you need to create your own active audio filter. Several audio filter articles have appeared over the years in the _ARRL Handbook_, in 73 Magazine, QST, CQ and Ham Radio Magazine.

A $0.49 quad op-amp, a handful of passive components, a couple of potentiometers, a perfboard and an enclosure are about all you need to do it that way.

If you want to get more complicated and spend lots more money you can find a DSP evaluation board from most of the chip manufacturers and do it in software.

And, if you pack a notebook PC along with your Scout, you can always use one of the sound card DSP programs floating around out there.

73
Rory N7CR

1492. Re: AF CW peak/notch circuit sought

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 14:52:40 UTC
From: Rory Davis <n7cr@nospambellsouth.net>
Message-ID: <f_w29.88549$ND5.8178548@e3500-atl2.usenetserver.com>
Source record: 42255

> >I need an audio peak/notch filter to use with my TT Scout. Looking for
> >something simple but effective, with at least a 20 dB peak. Since this
> >will be for mostly CW use, notching is less important than peaking.
> >Anyone have a schematic they can send, or know of one on the web?
> >Thanks!
>
> bama.sbc.edu
>
> Look at the Heathkit Q-multipliers. The QF-1 and HD-11 are the same
> circuit except the HD-11 has it's own power supply and the QF-1 taps
> it from the radio. You can download the entire manual from that site.

The Q-Multipliers work at IF frequencies and require a mod to the
transceiver. Will is looking for an audio filter.

73/Rory N7CR

1493. Re: 13.8V Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 15:25:59 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3D4AA56C.C2FFB23F@rica.net>
Source record: 42256

Book wrote:
>
> Can anyone suggest a 13.8V power supply kit/on-line schematic capable of
> about 10A?
>
> Thanks,
> --
> Book

These are manufactured in such numbers that you can easily buy a
complete supply for less than the cost of the parts. If you want ot
build your own, buy a commercial unit, take it apart, and make your
own design from the parts.

Hosfelt has a 10 amp unit (with a 12 amp surge capability), part #
PSR-10, for $59.
Their paper catalog is better than their web site:
http://www.hosfelt.com/

They also have a nice adjustable 0-20 volt, 10 amp supply (part #
40-173) for $150.

--
John Popelish

1494. MANUALS FOR YOU

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 17:25:05 UTC
From: joeee1621@aol.com
Message-ID: <20020802132505.26982.00001729@mb-fi.aol.com>
Source record: 42257

NEED A MANUAL? WE PROBABLY HAVE IT. CONTACT US FOR A LIST-or take a look at this- http://www.myradioroom.com/manualsale.html -OVER 771 LISTINGS AT PRESENT. WE PROBABLY HAVE A COPY OF WHAT YOU NEED, IF YOU DONT SEE IT ASK. ALL MANUALS $16 SHIPPED UNLESS OTHERWISE NOTED

1495. Re: AF CW peak/notch circuit sought

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 17:33:16 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <aiefns$ji6$1@slb2.atl.mindspring.net>
Source record: 42258

Good suggestion. I used one of those for years. Sorta like 'pre-DSP' hi
hi.

Now if he really is into 'low-tech' find some old handbook and look up the
schematic for the old telephone 88mh toriodal filters. They worked too.

Dan/W4NTI

"Rory Davis" <n7cr@nospambellsouth.net> wrote in message
news:qYw29.88547$ND5.8178902@e3500-atl2.usenetserver.com...
>
> > I need an audio peak/notch filter to use with my TT Scout. Looking for
> > something simple but effective, with at least a 20 dB peak. Since this
> > will be for mostly CW use, notching is less important than peaking.
> > Anyone have a schematic they can send, or know of one on the web?
> > Thanks!
>
> Are you looking for something to use, or to learn about audio filtering?
>
> The Autek QF-1 series of audio filters are very effective, and relatively
> inexpensive second hand. If you want more performance there are several
DSP
> audio filter boxes on the market. There are also kits available from
Ramsay
> and other sources.
>
> If you want to roll your own, and learn in the process, you have lots of
> options. Don Lancaster's _Active Filter Cookbook_ has the information you
> need to create your own active audio filter. Several audio filter articles
> have appeared over the years in the _ARRL Handbook_, in 73 Magazine, QST,
> CQ and Ham Radio Magazine.
>
> A $0.49 quad op-amp, a handful of passive components, a couple of
> potentiometers, a perfboard and an enclosure are about all you need to do
it
> that way.
>
> If you want to get more complicated and spend lots more money you can find
a
> DSP evaluation board from most of the chip manufacturers and do it in
> software.
>
> And, if you pack a notebook PC along with your Scout, you can always use
one
> of the sound card DSP programs floating around out there.

>
> 73
> Rory N7CR
>
>
>
>
>
>

1496. Re: Info from old QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 17:35:38 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <aiefsacoo1@slb4.atl.mindspring.net>
Source record: 42259

Bob,

Any chance you could send me a copy of that? I'd love to add it to mine.

Dan/W4NTI

"Bob Liesenfeld" <wb0poq@visi.com> wrote in message
news:3D49F7C4.5CF7E4E1@visi.com...
>
>
> Bob Liesenfeld wrote:
>
> > Hi gang,
> > Does anyone have a copy of QST for Jan 1979 that they could copy/scan
> > a page or two out of? I understand there is an article or note about
> > adding weighting controls to the Accu-Keyer in it on page 50.
> >
> > Willing to pay costs etc.
> > Thanks!
> >
> > Bob L. WB0POQ
>
> Thanks to all that responded! I now have a copy. :)
>
> 72
> Bob
>
>

1497. Re: AF CW peak/notch circuit sought

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 18:04:05 UTC
From: Rory Davis <n7cr@nospambellsouth.net>
Message-ID: <Xns925E8740A56An7crnospambellsouthn@65.82.44.7>
Source record: 42260

There are three QF-1A (with simultaneous notch/bandpass or dual bandpass)
on ebay all below $20 right now...

73/Rory

"Dan/W4NTI" <w4nti@mindspringnospam.com> wrote in
news:aiefns$ji6$1@slb2.atl.mindspring.net:

> Good suggestion. I used one of those for years. Sorta like 'pre-DSP'
> hi hi.
>
> Now if he really is into 'low-tech' find some old handbook and look
> up the schematic for the old telephone 88mh toriodal filters. They
> worked too.
>
> Dan/W4NTI
>
> "Rory Davis" <n7cr@nospambellsouth.net> wrote in message
> news:qYw29.88547$ND5.8178902@e3500-atl2.usenetserver.com...
>>
>> > I need an audio peak/notch filter to use with my TT Scout. Looking
>> > for something simple but effective, with at least a 20 dB peak.
>> > Since this will be for mostly CW use, notching is less important
>> > than peaking. Anyone have a schematic they can send, or know of one
>> > on the web? Thanks!
>>
>> Are you looking for something to use, or to learn about audio
>> filtering?
>>
>> The Autek QF-1 series of audio filters are very effective, and
>> relatively inexpensive second hand. If you want more performance
>> there are several
> DSP
>> audio filter boxes on the market. There are also kits available from
> Ramsay
>> and other sources.
>>
>> If you want to roll your own, and learn in the process, you have lots
>> of options. Don Lancaster's _Active Filter Cookbook_ has the
>> information you need to create your own active audio filter. Several
>> audio filter articles have appeared over the years in the _ARRL
>> Handbook_, in 73 Magazine, QST, CQ and Ham Radio Magazine.
>>
>> A $0.49 quad op-amp, a handful of passive components, a couple of
>> potentiometers, a perfboard and an enclosure are about all you need

>> to do
> it
>> that way.
>>
>> If you want to get more complicated and spend lots more money you can
>> find
> a
>> DSP evaluation board from most of the chip manufacturers and do it in
>> software.
>>
>> And, if you pack a notebook PC along with your Scout, you can always
>> use
> one
>> of the sound card DSP programs floating around out there.
>>
>> 73
>> Rory N7CR
>>
>>
>>
>>
>>
>>
>
>
>

1498. Re: AF CW peak/notch circuit sought

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 18:09:30 UTC
From: Rory Davis <n7cr@nospambellsouth.net>
Message-ID: <Xns925E882B0A24An7crnospambellsouthn@65.82.44.7>
Source record: 42261

Oops... misspoke. QF-1A has dual notch or simultaneous notch &
lowpass/peak/highpass.

> There are three QF-1A (with simultaneous notch/bandpass or dual
> bandpass) on ebay all below $20 right now...
>
> 73/Rory
>

1499. Re: W8MMQ web page

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 19:47:25 UTC
From: Dave Allen <david_e_allen@agilent.com>
Message-ID: <3D4AE1CD.14E8116A@agilent.com>
Source record: 42262

Very Impressive! Ton of stuff. Nice and neat.
Thanks and 73, dave, wb0taq

1500. Re: 13.8V Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-02 22:44:11 UTC
From: Book <book16@optusnet.com.au>
Message-ID: <3d4b0b38$0$29913$afc38c87@news.optusnet.com.au>
Source record: 42263

Well I have the filter capacitor and a transformer.

--
Book

"W4pqw HS" <w4pqwhs@aol.com> wrote in message
news:20020802092304.23198.00000806@mb-mh.aol.com...
> Book, why are you building a power supply? do you have all the parts?are
you
> planning to save money? Reason I am asking these questions is ,you can
buy a
> factory built regulated power supply with warranty for less than you would
pay
> for usable parts to build one..good luck Harold W4PQW

1501. Re: How do you mount LEDs to a chassis?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-03 01:42:12 UTC
From: Chuck <wcmoore@ix.netcom.com>
Message-ID: <aifcnoiqq1@slb3.atl.mindspring.net>
Source record: 42264
Cross-posted to: sci.electronics,sci.electronics.basics,rec.radio.amateur.homebrew,sci.electronics.components

There are commercially manufactured holders for LED's that allow
you to mount the LED to the panel. Determine your LED size. Most
are T1 1/4 (T1.25). Some are slightly larger, some slightly smaller.
Future Active Electronics has the mounts , as well as Allied, Newark,
and other distributors. A bag of 100 usually runs around $10.00.

You will also need to have a drill bit the size recommended by the mount
manufacturer. The mount hole will be a snug fit for the holder. If you
need to remove the LED you slightly compress the holder and the LED/
Holder assembly slips out of the panel. Most holders allow you to insert the
LED from the front of the panel.

There is no rule saying the holder is the only proper way to install the
device but if you are a stickler for commercial appearance then it is about
the most economical way to mount a large number of LED's. If you are
using only a few LED's and you are striving for the high end commercial
then look at the Dialight series of panel mount LED's in mil style holders.

Good luck on your project.

Watson A.Name <alondra101@hotmail.com> wrote in message
news:MPG.17acdbaac74a6461989a32@news.la.sbcglobal.net...
> In article <3df9fd6c.0207271102.28964df3@posting.google.com>,
> richardgrise@yahoo.com talked about...
> > jason_hsu@my-deja.com (Jason Hsu) wrote in message
news:<f7d9a152.0207201212.50f61d9@posting.google.com>...
> > > When you build an electronics project that uses LEDs, how do you mount
> > > these devices? I find LEDs tricky to work with, because those leads
> > > are long, uninsulated, and fragile.
> > >
> > > I would like to hear your favorite methods.
> > >
> > > Jason Hsu, AG4DG
> > > usenet@@@jasonhsu.com
> > > http://www.jasonhsu.com/ham_radio-technical.html
> >
> > I've used those two-piece plastic things that other people
> > have mentioned - I've also used an ordinary rubber grommet,
> > and I've worked with a unit that had about a hundred LEDs
> > on a circuit board, which was mounted _behind_ a plexiglass
> > front panel that was silk-screened with an array of apertures,
> > one per each LED. Of course, the parallax (sp?) was
> > phenomenal, and so I grabbed a few soda straws at the local
> > fast-food joint, and cut them up such that each LED had its

> > own little shroud.
>
> I commend you on your ingenuity, Rich. You've found one more use for
those
> soda straws. I've used them for coil forms. :-0
>
> > I'd avoid anything that could break the LED by a mechanical
> > discontinuity between its panel mounting and the leads'
> > mounting to the board.
>
> > You could even possibly glue, grommet, or plastic two-piece
> > thingy the LED to the panel, and plug into it with a .1"
> > center Molex connector!
>
> Some older PCs use similar to connect the power, turbo and such LEDs.
> Sometimes I just cut the LED leads short and solder some fine stranded
wire
> to the leads. Then I cover the joints with shrink tubing. Makes it a lot
> more flexible.
>
> > Good Luck!
> > Rich
>
>
> --
> @@F@r@o@m@@O@r@a@n@g@e@@C@o@u@n@t@y@,@@C@a@l@,@@w@h@e@r@e@@
> My email address is whitelisted. *All* email sent to it
> goes directly to the trash unless you put NOSPAM in the
> Subject: line. alondra101 <at> hotmail.com
> Don't be ripped off by the big book dealers. Go to the URL
> that will give you a choice and save you money(up to half).
> http://www.everybookstore.com You'll be glad you did!
> Just when you thought you had all this figured out, the gov't
> changed it: http://physics.nist.gov/cuu/Units/binary.html
> @@t@h@e@@a@f@f@l@u@e@n@t@@m@e@e@t@@t@h@e@@E@f@f@l@u@e@n@t@@

1502. Re: FA: AC/DC PATHFINDER 10 BAND RADIO RECEIVER

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-03 05:13:15 UTC
From: w9wi@linux1.localdomain
Message-ID: <slrnakmpr4.i7g.w9wi@linux1.localdomain>
Source record: 42265
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,alt.radio.scanner,alt.radio.pirate,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Fri, 02 Aug 2002 11:08:17 -0500, martbalt <martbalt@netscape.net> wrote:
>This is a multi-part message in MIME format.

(followed by 837 more lines of HTML and JavaScript...)

Yikes.
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

1503. Ramsey Electronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-03 19:55:54 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <aihcf9bgv1@slb7.atl.mindspring.net>
Source record: 42266

I just eyeballed the latest Ramsey catalog. Send for one, they have a lot of really interesting stuff.

Dan/W4NTI

1504. WTB: Johnson Variable Capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-03 20:22:36 UTC
From: George Benko <gbenko@prodigy.net>
Message-ID: <gYW29.59$Hg3.2829554@newssvr15.news.prodigy.com>
Source record: 42269

I am looking for a Johnson Type C Dual Section variable capacitor, model number 152-0503-001. It is 198pf per section @ 7KV. It has 19 plates per section and about 13 inches long. Please email GBENKO@Prodigy.net with condition and price. Thank you, George, K8BRW

1505. cool...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-04 02:55:29 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <BI039.22883$KI6.1452389@bgtnsc04-news.ops.worldnet.att.net>
Source record: 42267

wow, anyone know of a group for cbers? Ive now subscribed to this group,
hope it will be a blessing

--
If first you don't suceed, do the same thing again...see what happens

1506. Re: cool...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-04 03:09:04 UTC
From: ogrowup@webtv.net
Message-ID: <29659-3D4C9AD0-184@storefull-2236.public.lawson.webtv.net>
Source record: 42268

You may feel a bit out of place, as most of the posters tend to be responsible adults (i.e., licensed amateurs), who tend to frown on the childish antics of bootleggers.

"Eagles may soar but weasels aren't sucked into jets."

1507. Re: cool...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-04 05:12:04 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3D4CB7A3.10007@ay.com.au>
Source record: 42270

P.L. O'Connor wrote:
> You may feel a bit out of place, as most of the posters tend to be
> responsible adults (i.e., licensed amateurs), who tend to frown on the
> childish antics of bootleggers.

Must we continue this CB operators are evil rubbish?

I've seen idiots on both sides of the fence, and the continued anomisity
from both sides is helping no one. CB is the prime source for new HAMs,
at a time were we need them more than they need us, this kind of
attitude is unwelcome.

--
Alan Yates
http://www.vk2zay.net/
The Moon is Waning Crescent (24% of Full)

1508. What is this?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-04 10:25:56 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d4cfffd.12176888@news.freeserve.net>
Source record: 42271

I've recently discovered a few passive devices in my junk box that I think are Return Loss Bridges, I've posted a circuit diagram of it here
http://www.qsl.net/m3msm/files/wotz_it.gif
anyone care to comment?.

thanks Mike W, G8NXD aka M3MSM qthr

1509. Re: cool...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-04 10:57:43 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.0000019b.0026bbfa@btinternet.com>
Source record: 42272

Hi,

Welcome!

As the group-title says, this is all about what makes radio communications gear tick and not generally just about the boxes, accessories and the operating thereof that one might expect from a purely CB newsgroup. However, if you are truly interested in the technical side of things, it makes no matter where you get your kicks. Just lurk and put your $0.02 worth in when you feel like it.

Remember, it isn't too difficult to get a basic ham license these days, so why not go for it and join the real fun.

73 de G3LLV, Joe

1510. Information about rf amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-04 12:48:27 UTC
From: Andres <aortiz@teleline.es>
Message-ID: <3D4D23B7.2A5DC881@teleline.es>
Source record: 42273

Hi

I'm looking information about design and construction of linear rf
amplifiers.
If anyone have this, please, send me an email.

Thank you.

Andres.

1511. Re: What is this?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-04 15:11:05 UTC
From: Arnold worthington <arworth@icomnet.com>
Message-ID: <aijg9g01kkt@enews4.newsguy.com>
Source record: 42274

look like a R/L bridge to me

1512. Re: Information about rf amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-04 17:08:53 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <Fcd39.94147$nm.3361388@bin5.nnrp.aus1.giganews.com>
Source record: 42275

Try the ARRL's Radio Amateurs Handbook. Lots of info in there. Almost any issue as far back as you like will have good info on it.

73, Bob

1513. Computer to Sound Card Interface

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-04 17:37:43 UTC
From: Jim Byers <jamesbyers@swbell.net>
Message-ID: <HDd39.126$Gv4.78973065@newssvr30.news.prodigy.com>
Source record: 42276

Does anyone know of anyone that produces a kit, or know where I can find a schematic to build this type of device? I would prefer building to buying.

1514. Re: Computer to Sound Card Interface

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-04 18:27:29 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <aijrtk$2vbj$1@newsreader.cetlink.net>
Source record: 42277

Look here.

http://www.packetradio.com/psk31.htm

Kit and schematics.

"Jim Byers" <jamesbyers@swbell.net> wrote in message
news:HDd39.126$Gv4.78973065@newssvr30.news.prodigy.com...
> Does anyone know of anyone that produces a kit, or know where I can find a
> schematic to build this type of device? I would prefer building to
buying.
>
>

1515. Re: Computer to Sound Card Interface

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-04 20:07:04 UTC
From: "r.crowley" <rcrowley7@xprt.net>
Message-ID: <ukr2be51chrl30@corp.supernews.com>
Source record: 42278

"Jim Byers" wrote ...
> Does anyone know of anyone that produces a kit, or know where I can find a
> schematic to build this type of device? I would prefer building to
buying.

http://www.epanorama.net/links/pc/sound.html#interfacing

1516. Re: AF CW peak/notch circuit sought

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-04 20:31:59 UTC
From: Mark Hall <mark.hall34@verizon.net>
Message-ID: <3D4DB969.2381E7E7@verizon.net>
Source record: 42279

I'd say try one of those Audio switched capacitor filters if you're going to roll your own. They have a tuneable Fo and bandwidth (with Potentiometers),and are real easy to cascade without high percision components. In the old days, the "MF10" by National was in vogue.. I'm sure Maxim or some other chip maker has more modern devices these days. Check out the application notes for whatever chip you find.

'73 KI4Z

"yeti@REMOVEcet.com" wrote:

> In <3D4A26EC.B1026795@earthlink.net>, Will White
> <googlyelmo@earthlink.net> wrote:
>
> >I need an audio peak/notch filter to use with my TT Scout. Looking for
> >something simple but effective, with at least a 20 dB peak. Since this
> >will be for mostly CW use, notching is less important than peaking.
> >Anyone have a schematic they can send, or know of one on the web?
> >Thanks!
>
> bama.sbc.edu
>
> Look at the Heathkit Q-multipliers. The QF-1 and HD-11 are the same
> circuit except the HD-11 has it's own power supply and the QF-1 taps
> it from the radio. You can download the entire manual from that site.

1517. Re: cool...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-04 21:24:12 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <NYg39.2640$tm4.21678@newsfep3-gui.server.ntli.net>
Source record: 42280

"Alan Yates" <alany@ay.com.au> wrote in message
news:3D4CB7A3.10007@ay.com.au...
> P.L. O'Connor wrote:
> > You may feel a bit out of place, as most of the posters tend to be
> > responsible adults (i.e., licensed amateurs), who tend to frown on the
> > childish antics of bootleggers.
>
> Must we continue this CB operators are evil rubbish?
>
> I've seen idiots on both sides of the fence, and the continued anomisity
> from both sides is helping no one. CB is the prime source for new HAMs,
> at a time were we need them more than they need us, this kind of
> attitude is unwelcome.
>
> --
> Alan Yates
> http://www.vk2zay.net/
> The Moon is Waning Crescent (24% of Full)
>

Well said that man.

Alec Wood M1BNK
Teesside UK

1518. Re: cool...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-04 22:31:01 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <FWh39.19062$pg2.1530166@bgtnsc05-news.ops.worldnet.att.net>
Source record: 42281

im a big boy...dont require any hand holding....yall be cool with me, ill be cool with yall, peace out

--
If first you don't suceed, do the same thing again...see what happens

1519. Re: Help! Looking for axial-lead glass-bodied ceramic capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-04 22:52:54 UTC
From: John Fields <jfields@texas.net>
Message-ID: <3D4DACCD.81BE6D02@texas.net>
Source record: 42282
Cross-posted to: sci.electronics.design,sci.electronics.components,rec.radio.amateur.homebrew

John Miles wrote:
>
> John Fields wrote:
> >
> > I wonder why you can't/won't use the radial leaded ceramics that are
> > ubiquitous and cheap?
>
> They're too big. Downright huge by comparison.
>
> I tend to pack my parts very densely when I hand-wire an assembly. I
> can usually beat an equivalent surface-mount PCB layout by 50%. :)

I'll post a picture (crummy...) of a 0.1ï¿½F/50V ceramic from BC
(K104M15Z5UF5TL2) next to a 1N4148 so you can see the difference in
sizes. Check "Bypass" on a.b.s.e. Also, it's in the digi-Key catalog
if you want the dimensions.

John Fields
Professional circuit designer
http://www.austininstruments.com

1520. Re: 13.8V Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-05 01:24:27 UTC
From: Bob Allen <mcamp@gmavt.net>
Message-ID: <3D4DD3CB.C783F1D@gmavt.net>
Source record: 42283

CHeck this out for a cheap power supply!
http://www.antennex.com/preview/archive3/powers.htm

Book wrote:
>
> Well I have the filter capacitor and a transformer.
>
> --
> Book
>
> "W4pqw HS" <w4pqwhs@aol.com> wrote in message
> news:20020802092304.23198.00000806@mb-mh.aol.com...
> > Book, why are you building a power supply? do you have all the parts?are
> you
> > planning to save money? Reason I am asking these questions is ,you can
> buy a
> > factory built regulated power supply with warranty for less than you would
> pay
> > for usable parts to build one..good luck Harold W4PQW

1521. Re: 4cx250 2m amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-05 02:27:41 UTC
From: Mike Burch <mburch46@mchsi.com>
Message-ID: <3D4DC3C8.3FBB8BB7@mchsi.com>
Source record: 42284

Hi Chris,

I built one quite a while ago. Do your research and make sure you use the correct sockets!!! There is a capacitive component within the sockets that must be looked after. If you ignore this you could trash up your project.
Good luck.

Mike Burch K8MB
Apache Junction AZ.

1522. Re: What is this?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-05 10:17:03 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0508020617380001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42285

In article <3d4cfffd.12176888@news.freeserve.net>,
mike@corn2.freeserve.co.uk wrote:

> I've recently discovered a few passive devices in my junk box that I
> think are Return Loss Bridges, I've posted a circuit diagram of it
> here
> http://www.qsl.net/m3msm/files/wotz_it.gif
> anyone care to comment?.
>
> thanks Mike W, G8NXD aka M3MSM qthr

Mike,

I think you're sort of right on the return loss bridge. The top part is
an obvious current transformer and the last section is a voltage sample.
Apparently the bottom port is the product of voltage and current or
impedance amplitude. With no phase info, this is somewhat limited in
measurement info, but it gives you a good idea if you are in the ball park
for a match.

Happy Trails,
Steve WB4CZR

1523. Re: 13.8V Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-05 10:29:11 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0508020629460001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42286

In article <3D4DD3CB.C783F1D@gmavt.net>, Bob Allen <mcamp@gmavt.net> wrote:

> CHeck this out for a cheap power supply!
> http://www.antennex.com/preview/archive3/powers.htm
>
>
> Book wrote:
> >
> > Well I have the filter capacitor and a transformer.
> >
> > --
> > Book
> >
> > "W4pqw HS" <w4pqwhs@aol.com> wrote in message
> > news:20020802092304.23198.00000806@mb-mh.aol.com...
> > > Book, why are you building a power supply? do you have all the parts?are
> > you
> > > planning to save money? Reason I am asking these questions is ,you can
> > buy a
> > > factory built regulated power supply with warranty for less than you would
> > pay
> > > for usable parts to build one..good luck Harold W4PQW

Looks good, but you may want to put a overvoltage crowbar on the output (I don't believe many of these supplies include this) as well as a whole lot of transient suppression as a switcher has no line or load regulation for sudden changes. Also, if you plan to use this for 160 Mtrs or lower, you may need some shielding and rfi consideration. If I was setting up a low freq station and was worried about signal sensitivity, I would be using a linear supply. Lots of copper and iron and that's why they're expensive.

Steve WB4CZR

1524. Re: What is this?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-05 12:07:12 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ailppg$66a$1@knossos.btinternet.com>
Source record: 42287

> Apparently the bottom port is the product of voltage and current or
> impedance amplitude.

==========

There is no product or multiplication. The output is a SUM, either addition
or subtraction depending on the direction of transmission through the box.

1525. Re: Computer to Sound Card Interface

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-05 14:21:46 UTC
From: N9BC <brentc316@yahoo.com>
Message-ID: <3d4e8808$0$13956$39cecf19@nnrp1.twtelecom.net>
Source record: 42288

Check out this site.

http://www.qsl.net/wm2u/psk31.html

-Brent

"Jim Byers" <jamesbyers@swbell.net> wrote in message
news:HDd39.126$Gv4.78973065@newssvr30.news.prodigy.com...
> Does anyone know of anyone that produces a kit, or know where I can find a
> schematic to build this type of device? I would prefer building to
buying.
>
>

1526. Weather Radio Plans?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-05 15:03:31 UTC
From: newsguy <harpoon32@yahoo.com>
Message-ID: <aim44701gs0@enews4.newsguy.com>
Source record: 42289

Does anyone know of a site having plans for a weather radio?
Thanks.

1527. Re: 4cx250 2m amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-05 17:33:41 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <aimctl$k7j$0@206.97.58.81>
Source record: 42290

I've got a couple of T-217 amplifier assemblies. These originally ran a pair of 4X150's at 50 or so watts output in the 220 - 400 MHz range. They are beautifully constructed (by Collins I believe), and compact, using a servo driven curved tuned line (a little larger than an old fashioned lunch box). I know of a couple of folks that added padding in the form of a couple of small copper straps across the plate end of the line and ran a kW input on the low end of 2M in FM mode. They used the original 4X150A's but increased the air across them.
I also heard of people using them on 432 MHz. Of course if one wanted, 4CX250B's could be directly substituted but I've compared the two data sheets and really don't see any advantage as long as sufficient air is available for the '150's.

One of the units is original with blower and the other is less blower and partially mounted on a 19 inch panel. I doubt if I will ever get around to using these so if there's interest, I'll retrieve them from storage.

73 de Jack

Mike Burch <mburch46@mchsi.com> wrote in message
news:3D4DC3C8.3FBB8BB7@mchsi.com...
> Hi Chris,
>
> I built one quite a while ago. Do your research and make sure you use
> the correct sockets!!! There is a capacitive component within the
> sockets that must be looked after. If you ignore this you could trash
> up your project.
> Good luck.
>
> Mike Burch K8MB
> Apache Junction AZ.
>

1528. Re: Information about rf amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-05 19:06:14 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <w1A39.1025$Dw7.86396039@news.inreach.com>
Source record: 42291

Andres:

If you do a search using Google, Altavista or one of the other internet search engines with the words "linear amplifier" you will get a lot of sites with information.

One example: http://ac6v.com/homebrew.htm

Good luck,

Roger K6XQ

1529. NEW QUALITY AMERICAN MADE PADDLE AVAILABLE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-05 19:39:04 UTC
From: Jerry Parker <qrpradio@charter.net>
Message-ID: <uktku13rar3h90@corp.supernews.com>
Source record: 42292

[No readable article body recovered]

1530. Re: 13.8V Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-05 20:20:21 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3D4EDDEF.8E6AAE23@bellatlantic.net>
Source record: 42293

Book wrote:
>
> Can anyone suggest a 13.8V power supply kit/on-line schematic capable of
> about 10A?
>
> Thanks,
> --
> Book

I saw a lot of posts that essentially said "don't
build - buy". I built. Cost me $1.97 for an LM317
when I built it. The rest of the parts - line cord,
enclosure, resistors, transformer, pass transistors
etc I scrounged for nothing. The thing is ugly -
but it works great.

Anyway, the circuit I used is simple - collector wrap
around. An example of that technique is seen at:

http://ourworld.compuserve.com/homepages/Bill_Bowden/page12.htm#317pass.gif

The example shown would need to be modified for a 10 amp
supply, by additional pass transistors with emitter
resistors. I'd change the emitter resistor to .1 ohms,
and add two transistors, each with its own .1 ohm emitter
resistor. The three bases and three collectors are
all connected to the same point as the single one shown
in the diagram. Each emitter resistor connects to
a single transistor at one end. The other ends of the
emitter resistors all connect to the junction of the
.3 ohm and .7 ohm resistors and +18 in the diagram.
Essentially, you are adding two transistors and two resistors
to the existing diagram, and changing the value of the existing
emitter resistor from .3 ohms to .1 ohms.

There is another approach, requiring more components:
http://www.rason.org/Projects/powsupply/powsupply.htm

As someone mentioned, parts acquisition can be
difficult. The transistors are easy and cheap, but
you can have some problems getting a big heat sink, capacitors
and transformer without spending a lot. Still, I
have picked up some huge heatsinks at hamfests for
a couple of bucks, and I bought two 12 volt, 10 amp
transformers for $5 each, so it can be done. The years
of scrounging someone mentioned might be on target.

1531. Re: 13.8V Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-05 21:55:07 UTC
From: Idontwantspam@net
Message-ID: <3d4ef3f3.2487667@news.bellatlantic.net>
Source record: 42294

On Mon, 05 Aug 2002 20:20:21 GMT, ehsjr@bellatlantic.net wrote:

>I saw a lot of posts that essentially said "don't
>build - buy". I built. Cost me $1.97 for an LM317
>when I built it. The rest of the parts - line cord,
>enclosure, resistors, transformer, pass transistors
>etc I scrounged for nothing. The thing is ugly -
>but it works great.
>
>Anyway, the circuit I used is simple - collector wrap
>around. An example of that technique is seen at:
>
Out of curiosity, how clean is the output?

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

1532. Re: Receiver IC TEA6200

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-05 23:34:33 UTC
From: la8ak.xnd@online.no
Message-ID: <3d4f0651.186113367@news.online.no>
Source record: 42295

On 31 Jul 2002 21:22:40 -0700, blackm00@cam.org (Michael Black) wrote:

>la8ak.xnd@online.no (J M Noeding) wrote in message
news:<3d479495.588167418@news.online.no>...
>> Founda a source for TEA6200
>> wonder if somebody has some experience using it as converter?
>> See
>> http://www-us9.semiconductors.com/acrobat/datasheets/TEA6200_CNV_2.pdf
>>
>> 73
>> LA8AK
>
>This is the first I've heard of that IC, but it certainly is interesting.
>I've often wondered why most AM broadcast radios still use the same
>conversion scheme of 50 years ago. I've decided it's because the
>design works and has had plenty of testing over the years, and maybe
>because nobody wants to make the effort of change.
>
>(For those who haven't looked at the data sheet, it uses an upconversion
>to 10.7MHz, where the IF and detector resides. They do away with
>preselection, say so long to adjusting the tracking, and make do
>with a presumably good mixer and a low pass filter between the
>antenna and the mixer.)
>
>It's too bad the data sheet doesn't provide the internals of the
>IC, so you could get an idea of what they are using there.
>
> Michael VE2BVW

Tnx for your comments.
The device is probably meant for the European consumer marked and
should simplify the construction of an LW/MW receiver (LW=150-300kHz,
MW=550-1560kHz) and such receiver covers the two bands as one.

I am not sure if it will simplify an amateur radio receiver, one
suggestion is a 136kHz RX. It is rather uncertain what the RF-stages
does, is it just an overload protection or does it have gain?
In-/output impedances for the pre-amplifier is not mentioned, nor is
any gain, while the mixer has 10-40k input impedance and 3.5mA/V
forward conductance.
Also difficult to see whether the OSC is an oscillator or just a
buffer for the VCO.
A 135-140khz receiver could be built using a simple VXO on 10564kHz++,
a 10.7MHz ladder filter, and NE612 as product detector, and yet
another wideband FM ceramic filter to stabilize IF amplifier

It seems little point in constructing just another AM receiver using envelope detector as this has, would rather have synchronous detector with TDA1576 or SO41P, possibly SA604, but the latter is really a waste, since TEA6200 has its own AGC detector which could drive an S-meter. TDA1576, SO41P, MC1351P, SN76660N/TBA120, and SA604 may well function as multimode detectors - at least for AM and CW/SSB.

73
Jan-Martin
LA8AK

http://www.laud.no/la6nca/la8ak/
--
remove ,xnd to reply

1533. 603 beam and tower 4sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-10 11:46:30 UTC
From: Jeff <j.dauphinais@worldnet.att.net>
Message-ID: <q2759.5760$Ke2.479428@bgtnsc04-news.ops.worldnet.att.net>
Source record: 42296
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.amateur.homebrew

I have for sale 1 full size "HY-Gain" beam 10 meters. fully assembled for your inspection. 13' Boom and longest element is 22' $100.00 I also have a steel tower totaling 25'. this is in 3 sections 1 10 foot st8 and 1 5foot st8 and 1 10 foot top section. I don't not have a rotator. $50.00. pickup only from Nashua,NewHampshire. I am selling these because they are to big for my new QTH. This beam has spent a large portion of its life in storage. 73's Jeff AA1GR

1534. Amplifier websites

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-10 14:13:51 UTC
From: rob34 <rob34@infinet.com>
Message-ID: <3d567098$0$1429$4c5ecdc7@news.erinet.com>
Source record: 42208

I was wondering if anybody might know of some good websites for the construction of homebrew amplifiers using the GS-43B Russian tube and maybe some some construction ideas on building a socket for it? Thanks, Rob WB8VWI

1535. Re: just released, Antennas and more

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-10 16:48:35 UTC
From: whagen6@cs.com
Message-ID: <20020810124835.09817.00002763@mb-cf.news.cs.com>
Source record: 42197

I bet this is a popular addition to the ham radio operators library!

1536. MORE< MORE< MORE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-10 18:29:58 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <GYc59.6101$Ke2.516747@bgtnsc04-news.ops.worldnet.att.net>
Source record: 42198

ive just completed a very nice, easy to follow cd with plans to build 11 meter (CB) antennas, with MORE info on tune-ups, convertions, mic wiring, you name it...this thing is loaded with useful info on doing your own repairs and modifications. Explains how toos, and pdf file on home-kits and MORE...pictures are high quality, formulas, and do-nots that will get you up and sounding great...want to install your own talk-back, echo board, want to make your own swing-kit? well theres More, More, More (title of my cd) anyone interested, email me. Many hours and weekends compiling all this info in an easy to read format...Ive decided NOT to copyright this, as friends and 'Masters' have help write this/ you'll be amazed at how much you'll learn..
.'Golden Screwdriver' is a drop in the
bucket.... email me at horseflygk@att.net I'm 10-7, later

If first you don't suceed, do the same thing again...see what happens

1537. Re: Johnson Variable Capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-10 18:35:24 UTC
From: Peter Thoms <P.Thoms@t-online.de>
Message-ID: <B97B298A.D98C%P.Thoms@t-online.de>
Source record: 42199

in Beitrag aivng2$17ceh0$1@ID-61331.news.dfncis.de schrieb Hans Summers
unter Hans.Summers@Tudor.Com am 09.08.2002 8:29 Uhr:
> [...]
> suitable Jackson
> Brothers
> [...]

Many thanks Hans,

I see it like a small ham-treasure today! Possebly I will build an RF-bridge
but first Iï¿½m waiting for some special documents to avoid
constuction-mistakes.

What about the expressions "capacitance law: s.l.c" or "linear Type H"?

Iï¿½d prefer a linear or log. capacitor. At what abbreviation have I to look
for??

vy 73 de Peter, DL6LAT

1538. Re: MORE< MORE< MORE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-10 21:25:31 UTC
From: "Fulano de Tal (Bill)" <therealexray@netscape.net>
Message-ID: <3D5584CB.898C9CA2@netscape.net>
Source record: 42200

George Kinzer wrote:
>
>
> convertions,
> you name it...this thing is loaded with useful info on doing your own
> repairs and modifications. Explains how toos, and pdf file on home-kits and
> MORE...pictures are high quality, formulas, and do-nots that will get you up
> and sounding great...want to install your own talk-back, echo board, want to
> make your own swing-kit?

What is a swing-kit and a talk-back?

-BM

1539. Re: MORE< MORE< MORE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-11 01:30:08 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <A6j59.7352$Ep6.529035@bgtnsc05-news.ops.worldnet.att.net>
Source record: 42201

swing kit is a kit you make and install to vary your dead key wattage (say
.25 watts to 4+ watts) or MORE
talk-back is being able to here your self similar to PA when you talk,
usually adds depth to your speech pattern..

--
If first you don't suceed, do the same thing again...see what happens

1540. how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-11 01:45:33 UTC
From: newsguy <harpoon32@yahoo.com>
Message-ID: <aj4fl7011nv@enews2.newsguy.com>
Source record: 42202

Hello! I am intending to get my license, however I am worried about one thing. I live in a 'mobile home community' (trailer park, for the non-euphemistic :) I have a yard about 45 x 50 and 1 tree. I really dont think they are going to appreciate me if I erect some huge yagi thats 60' tall and almost bigger than my home, and yet I dont want to be limited to talking local, I would like a range of 1000 miles at least. Do I have any options? Will a good 'stealthy' dipole do this for me?
Thanks

1541. Re: MORE< MORE< MORE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-11 03:15:38 UTC
From: Gary McAdams <g.m.mcadams@worldnet.att.net>
Message-ID: <uFk59.6660$Ke2.563640@bgtnsc04-news.ops.worldnet.att.net>
Source record: 42203

George Kinzer <horseflygk@worldnet.att.net> wrote in message
news:A6j59.7352$Ep6.529035@bgtnsc05-news.ops.worldnet.att.net...
> swing kit is a kit you make and install to vary your dead key wattage (say
> .25 watts to 4+ watts) or MORE
> talk-back is being able to here your self similar to PA when you talk,
> usually adds depth to your speech pattern..

'Ol George here has spammed most of the Amateur
radio news groups with this garbage.

I guess that he also does not know the difference between
Amateur radio and CB.

George, Amateur radio operators don't need information
on swing kits, echo mikes, roger beeps or any
of the other trash that sells so well to the CB
crowd.

Please peddle your papers over there, OK?

Gary

BTW: Plonk!

1542. Re: MORE< MORE< MORE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-11 04:51:43 UTC
From: Lou <tech@dp.net>
Message-ID: <aj4rci$h6t$1@news.dp.net>
Source record: 42204

a swing kit and talk back is junk normally installed in CBs to make them talk "better". You know, all the illegal, non FCC Certified garbage.

I've yet to see a set operate properly or sound decent with this trash.

Just my opinion.

Lou/Tech@DP.NET

"Fulano de Tal (Bill)" <therealexray@netscape.net> wrote in message news:3D5584CB.898C9CA2@netscape.net...
> George Kinzer wrote:
> >
> >
> > convertions,
> > you name it...this thing is loaded with useful info on doing your own
> > repairs and modifications. Explains how toos, and pdf file on home-kits and
> > MORE...pictures are high quality, formulas, and do-nots that will get you up
> > and sounding great...want to install your own talk-back, echo board, want to
> > make your own swing-kit?
>
> What is a swing-kit and a talk-back?
>
> -BM

1543. Re: MORE< MORE< MORE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-11 06:08:40 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <Ibn59.6796$Ke2.579497@bgtnsc04-news.ops.worldnet.att.net>
Source record: 42205

Man asked a question, not your opinion....

--
If first you don't suceed, do the same thing again...see what happens

1544. Re: MORE< MORE< MORE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-11 06:10:44 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <Edn59.6799$Ke2.579505@bgtnsc04-news.ops.worldnet.att.net>
Source record: 42206

shall I put a few PORN SITES up for ya?, want me to shit on your post?
--
If first you don't suceed, do the same thing again...see what happens

1545. Re: Looking for some panel Meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-11 12:59:57 UTC
From: warren weber <hiview@worldnet.att.net>
Message-ID: <hdt59.7902$Ep6.581966@bgtnsc05-news.ops.worldnet.att.net>
Source record: 42207
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Chris.. Give me a good e mail address and I will tell you what I have.
Warren

NI4L <ni4l@charter.net> wrote in message
news:3D5443F1.1070902@charter.net...
> Hello
> I am looking for 4 panel meters.
> 3 1/2" must take 2 3/4" hole the round ones or square is ok but sorta
> looking for the military style.
> Already have panel with holes in it.
> 1) 0-150 vac
> 2) 0-300 vac 1) center 0 vdc eithier 140 or say 200 vdc ? If not
> then a 0-300vdc
> can anyone help?
> Oh one more thing any body have a AC timer meter this size also?
> thanks for looking
> Chris NI4L
>
> --
> NI4L CUSTOM RESONANT DIPOLE
> LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
> Made with the same components used by our military forces today
> Custom made to YOUR FREQUENCY of operation
> Let me take the hassle out of making a RESONANT DIPOLE for you.
> Click here for more info... http://www.angelfire.com/nb/ni4l/
>

1546. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-11 15:06:28 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <U3v59.61467$UU1.10927@sccrnsc03>
Source record: 42209

Please post in: rec.radio.amateur.antenna

"newsguy" <harpoon32@yahoo.com> wrote in message
news:aj4fl7011nv@enews2.newsguy.com...
> Hello! I am intending to get my license, however I am worried about one
> thing. I live in a 'mobile home community' (trailer park, for the
> non-euphemistic :) I have a yard about 45 x 50 and 1 tree. I really
> dont think they are going to appreciate me if I erect some huge yagi
thats
> 60' tall and almost bigger than my home, and yet I dont want to be limited
> to talking local, I would like a range of 1000 miles at least. Do I have
> any options? Will a good 'stealthy' dipole do this for me?
> Thanks
>
>

1547. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-11 17:41:50 UTC
From: WG <nojunk@mail.com>
Message-ID: <ylx59.34360$Z5.1233441@news1.telusplanet.net>
Source record: 42210

At least you can put up an antenna. The rules in the city I live in is no Ham or CB antenna more then 12 feet off the ground. For you I would recommend a multi-band vertical but they will cost you. Also perhaps the Yeasu ATAS-100 with the ground plane kit. Good luck and I know what you are going through as I am stuck with all my antennas in the house. I have already had 2 visits from our fines and by-laws department for my city for having a coat hanger 2 meter antenna in a cherry tree.

"newsguy" <harpoon32@yahoo.com> wrote in message
news:aj4fl7011nv@enews2.newsguy.com...
> Hello! I am intending to get my license, however I am worried about one
> thing. I live in a 'mobile home community' (trailer park, for the
> non-euphemistic :) I have a yard about 45 x 50 and 1 tree. I really
> dont think they are going to appreciate me if I erect some huge yagi
thats
> 60' tall and almost bigger than my home, and yet I dont want to be limited
> to talking local, I would like a range of 1000 miles at least. Do I have
> any options? Will a good 'stealthy' dipole do this for me?
> Thanks
>
>

1548. Re: MORE< MORE< MORE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-11 17:48:57 UTC
From: WG <nojunk@mail.com>
Message-ID: <dsx59.34361$Z5.1233851@news1.telusplanet.net>
Source record: 42211

You asked your question in the wrong NG. It makes me wonder if you can't tell the difference between Amateur and CB then what is the accuracy of the CD you are putting out???

"George Kinzer" <horseflygk@worldnet.att.net> wrote in message news:Ibn59.6796$Ke2.579497@bgtnsc04-news.ops.worldnet.att.net...
> Man asked a question, not your opinion....
>
> --
> If first you don't suceed, do the same thing again...see what happens
>
>

1549. Re: Amplifier websites

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-11 18:22:36 UTC
From: UnTale <i@i.com>
Message-ID: <MXx59.57759$lu5.1649614@twister1.libero.it>
Source record: 42212

> I was wondering if anybody might know of some good websites for the
> construction of homebrew amplifiers using the GS-43B Russian tube and
maybe
> some some construction ideas on building a socket for it? Thanks, Rob
> WB8VWI

I don't know if in the following link you'll find what you need....

http://i5uxj-2.cln.it/amp/
http://www.vcnet.com/measures/
http://rmrlent.dtgnet.com/amp/index.htm
--

73 de iz7ath, Talino

Homebrew, RF projects and digital tecniques on
http://www.qsl.net/iz7ath
IZ7ATH Talino +39 338 5029196

1550. Re: AF CW peak/notch circuit sought

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-11 18:54:55 UTC
From: John Fletcher <johnfletch@2e1gmv.freeserve.co.uk>
Message-ID: <aj6bu0$hh0$1@news7.svr.pol.co.uk>
Source record: 42213

One of the best peak / notch / Q cicuits involve 4 of 741 IC's.

I have made 2, They are superb! circuit in rear of RSBG Handbook Rx section.
or in
an early Tech topics book, Can E mail you the diagram if u want, dead easy!

1551. Re: MORE< MORE< MORE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-11 19:23:12 UTC
From: Lou <tech@dp.net>
Message-ID: <aj6efgsec1@news.dp.net>
Source record: 42215

If it was MY "opinion" being referring to (down below), I gave it. And I stick by it. THAT IS CB JUNK. Amateurs DO NOT as a rule, use it - nor are they allowed to by law....
But then again, neither are the CBers! SO, go as the man said, to the CB group. They'll be a bit more sympathetic to your CB related toys, questions and concerns thereof. THIS is an "Amateur" Radio Newsgroup. Further more, no amateur that runs a decent station needs extra trash to sound good. And they know it! They can be proud of their "STOCK" as the CBers put it - stations.....

Not only am I an Amateur Radio Operator - for many years, but I've been on CB for many years, albeit not much in last couple. I've NEVER had to use such garbage to convey my messages or sound better. So don't even try to hand me the crap about how wonderful it is.

The only reason I've not been on CB is because most of the idiots around here do nothing but fight, yell hello 24/7 or play with their wonderful toys and clog the airwaves. I can find better things to do.

Lou/Tech@DP.NET

"WG" <nojunk@mail.com> wrote in message
news:dsx59.34361$Z5.1233851@news1.telusplanet.net...
> You asked your question in the wrong NG. It makes me wonder if you can't
> tell the difference between Amateur and CB then what is the accuracy of
the
> CD you are putting out???
>
> "George Kinzer" <horseflygk@worldnet.att.net> wrote in message
> news:Ibn59.6796$Ke2.579497@bgtnsc04-news.ops.worldnet.att.net...
> > Man asked a question, not your opinion....
> >
> > --
> > If first you don't suceed, do the same thing again...see what happens
> >

1552. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-11 19:39:05 UTC
From: Russell Hltn <reply@2newsgroup.com>
Message-ID: <aj6eg4$9u3$1@nntp-m01.news.aol.com>
Source record: 42214

Do you live in the US? Wouldn't PRB-1 help your situation? I can't
believe this is "reasonable accommodation".

"WG" <nojunk@mail.com> wrote in message
news:ylx59.34360$Z5.1233441@news1.telusplanet.net...
> At least you can put up an antenna. The rules in the city I live in
is no
> Ham or CB antenna more then 12 feet off the ground. For you I would
> recommend a multi-band vertical but they will cost you. Also perhaps
the
> Yeasu ATAS-100 with the ground plane kit. Good luck and I know what
you are
> going through as I am stuck with all my antennas in the house. I
have
> already had 2 visits from our fines and by-laws department for my
city for
> having a coat hanger 2 meter antenna in a cherry tree.
>
> "newsguy" <harpoon32@yahoo.com> wrote in message
> news:aj4fl7011nv@enews2.newsguy.com...
> > Hello! I am intending to get my license, however I am worried
about one
> > thing. I live in a 'mobile home community' (trailer park, for
the
> > non-euphemistic :) I have a yard about 45 x 50 and 1 tree. I
really
> > dont think they are going to appreciate me if I erect some huge
yagi
> thats
> > 60' tall and almost bigger than my home, and yet I dont want to be
limited
> > to talking local, I would like a range of 1000 miles at least. Do
I have
> > any options? Will a good 'stealthy' dipole do this for me?
> > Thanks
> >
> >
>
>

1553. Re: MORE< MORE< MORE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-11 21:02:38 UTC
From: JWheeler <kd5bcu@yahoo.com>
Message-ID: <uldk74tof74j67@corp.supernews.com>
Source record: 42216

Well, that's prety amazing... my icom radio will 'deadkey' 40 watts on AM. Why would I want a 'swing-kit' to turn it down to 4 watts? Oh, wait a minute. You must be talking about illegal CB mods. Sorry. My mistake. Actually, it was YOUR mistake for posting such nonsense on an amateur radio newsgroup. Go away. Go far away. Don't come back.

JWheeler

"George Kinzer" <horseflygk@worldnet.att.net> wrote in message news:A6j59.7352$Ep6.529035@bgtnsc05-news.ops.worldnet.att.net...
> swing kit is a kit you make and install to vary your dead key wattage (say
> .25 watts to 4+ watts) or MORE
> talk-back is being able to here your self similar to PA when you talk,
> usually adds depth to your speech pattern..
>
> --
> If first you don't suceed, do the same thing again...see what happens
>
>

1554. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-11 21:06:43 UTC
From: JWheeler <kd5bcu@yahoo.com>
Message-ID: <uldkeollf7o0ca@corp.supernews.com>
Source record: 42217

"newsguy" <harpoon32@yahoo.com> wrote in message
news:aj4fl7011nv@enews2.newsguy.com...
> Hello! I am intending to get my license, however I am worried about one
> thing. I live in a 'mobile home community' (trailer park, for the
> non-euphemistic :) I have a yard about 45 x 50 and 1 tree. I really
> dont think they are going to appreciate me if I erect some huge yagi
thats
> 60' tall and almost bigger than my home, and yet I dont want to be limited
> to talking local, I would like a range of 1000 miles at least. Do I have
> any options? Will a good 'stealthy' dipole do this for me?
> Thanks
>
>
There is no reason why you couldn't put up a good dipole antenna anchored in
your tree. If the tree is not close enough to the house, you could simply
put up a good tv antenna mast and anchor your antenna there. I used a
similar set up and could easily talk all over North America on 20 meters.
There are other options as well. Someone has suggested a multi-band
vertical. Many more options are available that what may be obvious. Good
luck.

JWheeler

1555. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-11 22:54:11 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <aj6pujood0@206.97.58.129>
Source record: 42218

Your idea of the huge 60' tall yagi is good. It will by far outperform a dipole and will have
a secondary function of being a landmark in your neighborhood. It would also reduce the
problems of BCI/TVI in the area. Go for it!

73 de Jack

newsguy <harpoon32@yahoo.com> wrote in message news:aj4fl7011nv@enews2.newsguy.com...
> Hello! I am intending to get my license, however I am worried about one
> thing. I live in a 'mobile home community' (trailer park, for the
> non-euphemistic :) I have a yard about 45 x 50 and 1 tree. I really
> dont think they are going to appreciate me if I erect some huge yagi thats
> 60' tall and almost bigger than my home, and yet I dont want to be limited
> to talking local, I would like a range of 1000 miles at least. Do I have
> any options? Will a good 'stealthy' dipole do this for me?
> Thanks
>
>

1556. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-11 23:09:20 UTC
From: Peter Völpel <qro1750@compuserve.de>
Message-ID: <3D56EEA0.AFAB7FBA@compuserve.de>
Source record: 42219

Put a doublet 2x20m inverted Vee or whatever length is possible, fed by
open wire
feeder and matchbox, and we can talk to each other
(I am in northern Germany)

Peter

newsguy wrote:
>
> Hello! I am intending to get my license, however I am worried about one
> thing. I live in a 'mobile home community' (trailer park, for the
> non-euphemistic :) I have a yard about 45 x 50 and 1 tree. I really
> dont think they are going to appreciate me if I erect some huge yagi thats
> 60' tall and almost bigger than my home, and yet I dont want to be limited
> to talking local, I would like a range of 1000 miles at least. Do I have
> any options? Will a good 'stealthy' dipole do this for me?
> Thanks

1557. Re: MORE< MORE< MORE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-12 15:08:19 UTC
From: Bruce Lane <feedspammerstosharks.4.spamvac@spamgourmet.com>
Message-ID: <MPG.17c16f3f9c770ff9989972@news.drizzle.com>
Source record: 42220

In article <GYc59.6101$Ke2.516747@bgtnsc04-news.ops.worldnet.att.net>,
horseflygk@worldnet.att.net says...

<nothing of consequence>

PLONK!

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

1558. Re: MORE< MORE< MORE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-13 04:07:47 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <nC%59.10132$Ep6.792556@bgtnsc05-news.ops.worldnet.att.net>
Source record: 42221

well for ya infomation, also includes a very large file on antennas, of course with the formulas provided, not just 11 meter is covered, but wait..EVERYONE allready knows how to build , install, and ground that antenna..But they could just call you and you'll do everything for nothing, right?
--
If first you don't suceed, do the same thing again...see what happens

1559. Re: MORE< MORE< MORE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-13 04:09:05 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <BD%59.10135$Ep6.792665@bgtnsc05-news.ops.worldnet.att.net>
Source record: 42222

just read the other questions in this group....talk about off subject....

If first you don't suceed, do the same thing again...see what happens

1560. Ramsey Kits??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-13 04:59:14 UTC
From: newsguy <harpoon32@yahoo.com>
Message-ID: <aja3oe01lbg@enews3.newsguy.com>
Source record: 42223

I am planning on starting out with building a Ramsey 2m receiver kit (no license yet) and was wondering if anyone who had used them could comment on them? Granted they are very inexpensive, but are they at least semi usable ? also any comment on the 2m transceiver is welcome too, as that is next once license is in hand.
thank you!

1561. Manuals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-13 13:03:40 UTC
From: joeee1621@aol.com
Message-ID: <20020813090340.16571.00000030@mb-ch.aol.com>
Source record: 42224

http://hometown.aol.com/joeee1621/myhomepage/business.html

1562. Re: Ramsey Kits??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-13 14:33:25 UTC
From: Lou <tech@dp.net>
Message-ID: <ajb6ae$21rr$1@news.dp.net>
Source record: 42225

I had a friend of mine who bought a 220 MHz or 440 kit, can't recall which at moment.

He built it, and it did not work. He brought it to me, I looked at it, couldn't find anything wrong with it so far as his work was concerned. Took it to another friend of ours, a fellow radio tech, he couldn't find fault with the building either. We didn't want to "alter" anything until no other alternative, such as you'll see as you read on.

My friend called Ramsey. They said send it in with $18.95 (if memory serves me correct) and they would go over it. The kit cost him about that to start with! Not wanting to invest more into it, he asked that we look over it some more, this time swapping out components. We did manage to get it to start receiving something, but no where near a useable signal. I'd be a bit leery of them...

In building a kit or a circuit from scratch, especially as a "beginner", a working circuit boosts one's interest and provides pleasure from using it, having been done by one's own hands. However, ONE bad experience can shatter an interest or give you a sour taste and can drive one away. I've seen a few quit after one failure. Even if not their fault. And that is sad.....WE NEED people to be interested in "building" . This hobby has lost "THAT" touch.

On the other hand, in defense of Ramsey, I've built other Ramsey kits and had success with them. So I can not say Ramsey items as a whole are not worth buying. IF you're still intent on buying the kit, ASK about the procedures for troubleshooting, customer service, return, warranty - BEFORE buying. Their policy may have changed since our experience.

You might be better off just listening to it on a scanner! OR buying a cheap used or even a newer 2 meter set up if intent on getting the license. Just don't transmit. Good luck!

Lou/Tech@DP.NET

"newsguy" <harpoon32@yahoo.com> wrote in message
news:aja3oe01lbg@enews3.newsguy.com...
> I am planning on starting out with building a Ramsey 2m receiver kit (no
> license yet) and was wondering if anyone who had used them could comment
on
> them? Granted they are very inexpensive, but are they at least semi
usable
> ? also any comment on the 2m transceiver is welcome too, as that is next
> once license is in hand.
> thank you!

>
>

1563. Re: MORE< MORE< MORE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-13 15:03:50 UTC
From: Lou <tech@dp.net>
Message-ID: <ajb83b$221i$1@news.dp.net>
Source record: 42226

Hmmm. "I" replied to the question of the "talk back" boxes and so on - the "toys" that was asked in an otherwise AMATEUR newsgroup. A group not typically known for using such items. Not sure where the antenna stuff came in to play, unless it was the other guy mentioning the CD for sale and pointing out it's having info for 11 meters on it.

However, if your or who's ever it was - CD offers info for both worlds, then might it have been better left unsaid as to which band - but instead, list as - Topics include Antenna building, design, grounding, etc? 160 to 10 meters would have covered 11 meters without singling it out. It may not have come across as a purely CB related CD then. And "I" apologize for this part because I didn't see the CD ad being referred to. At least not the initial ad.

"I" even with all my experience, do not know it all. Nor do I claim to. Even "with" knowledge, things come into play that are unplanned for and must be dealt with. FEW systems are usually installed - bug free.

There are many books and other CDs I'm sure, out there as well, with information for Hams and CBers alike. It's all in how it's advertised. I guess it is just the idea of trying to market something "seemingly" fit to one crowd, in a place where that crowd isn't hanging out.

Good luck with the CD......

Lou/Tech@DP.NET

"George Kinzer" <horseflygk@worldnet.att.net> wrote in message
news:nC%59.10132$Ep6.792556@bgtnsc05-news.ops.worldnet.att.net...
> well for ya infomation, also includes a very large file on antennas, of
> course with the formulas provided, not just 11 meter is covered, but
> wait..EVERYONE allready knows how to build , install, and ground that
> antenna..But they could just call you and you'll do everything for
nothing,
> right?
> --
> If first you don't suceed, do the same thing again...see what happens
>
>

1564. Re: Ramsey Kits??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-13 16:44:06 UTC
From: troglodite@aol.com
Message-ID: <20020813124406.21748.00000087@mb-cg.aol.com>
Source record: 42227

>
>I am planning on starting out with building a Ramsey 2m receiver kit (no
>license yet) and was wondering if anyone who had used them could comment on
>them?

My experience with the Ramsey VHF gear has not been good, and I've read comments from others that seemed to indicate the same. I can, however, highly recommend the TenTec 1220 kit. The instruction manual is extremely detailed, leaving little room for error. You build the kit one section at a time, gaining the theory of operation of that portion, and going through a checklist on the completion of a section. By the time you are finished, you will understand how the radio works, and it most likely WILL work the first try. Mine is running mobile in an SUV and gets plenty of rough treatment, but has performed flawlessly for two years.

If you are in an area with 2m repeater activity, you will do fine with the basic model. (Also fine if you are strapped for funds.) If you need more power, you can order it with a 30W amplifier, or you can add it later.

Also, though 2m is lots of fun, don't neglect your code practice! Have fun while preparing for the next level.

Doug Moore KB9TMY (Formerly K6HWY)

1565. Re: LM372 Info Needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-13 17:30:13 UTC
From: k7itm@aol.com
Message-ID: <3200347.0208130930.6e2246c@posting.google.com>
Source record: 42228

It isn't on the National website. Isn't in the National Linear
Databook for 1982. Is it a National Semiconductor part? Are you
looking for it because you have one? If so, let us know the date code
and manufacturer, and also a description of the package, and maybe we
can do better.

Cheers,
Tom

"Dallas Lankford" <dallas@bayou.com> wrote in message
news:<o1_49.441$Yq3.23083092@news.bayou.com>...
> I need a copy of the data sheet for the LM372. Thanks, Dallas

1566. Re: LM372 Info Needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-13 18:18:33 UTC
From: k7itm@aol.com
Message-ID: <3200347.0208131018.692283b9@posting.google.com>
Source record: 42229

"Dallas Lankford" <dallas@bayou.com> wrote in message
news:<o1_49.441$Yq3.23083092@news.bayou.com>...
> I need a copy of the data sheet for the LM372. Thanks, Dallas

I just posted that it's not on National's website or their '82
databook. It is in the '76 data book. I could make a photocopy for
you. Please email me to make arrangements if you still want it.

Cheers,
Tom

1567. Re: Ramsey Kits??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-13 18:56:09 UTC
From: john graesser <graesser@tca.net>
Message-ID: <ulili136e2ef20@corp.supernews.com>
Source record: 42230

"Lou" <tech@dp.net> wrote in message news:ajb6ae$21rr$1@news.dp.net...
> I had a friend of mine who bought a 220 MHz or 440 kit, can't recall which
> at moment.
>
> He built it, and it did not work. He brought it to me, I looked at it,
> couldn't find anything wrong with it so far as his work was concerned.
Took
> it to another friend of ours, a fellow radio tech, he couldn't find fault
> with the building either. We didn't want to "alter" anything until no
other
> alternative, such as you'll see as you read on.

The design of the 440 version was flawed from the start, it just plain didn't work, and Ramsey should refund everyone suckered into buying one, it was pulled from their catalog a couple of years ago.

The 2 meter version worked after a fashion, but a far better design, is the Tentec rig.

Tentec's design has full band digital tuning, pl encode, memory channels, repeater offset and the ability to build in a 30 watt amp (instead of the 5 watt normal version).

I built the Tentec 6 meter version and it worked fine with minimal tuning up, it also had good sensitivity, better than the specs admitted to, power was in the middle of the range that they specified and I had no problems when testing the rig with hams in the area that had less than optimum setups, all of them heard me, and I heard them all.
thanks, John.
KC5DWD

1568. Whats happening?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-13 19:23:55 UTC
From: John Buck <kh7t@arrl.net>
Message-ID: <3D595CC1.6080105@arrl.net>
Source record: 42231

Haven't heard from you since the I'm here message.

Dad

1569. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-13 22:02:43 UTC
From: dt@dt.prohosting.com
Message-ID: <uu1lys9h8.fsf@dt.prohosting.com>
Source record: 42232

Naturally if you could get a big beam up nice and high, that would be fantastic. If your antenna will need to be mounted low, you're probably better off with a vertical and ground radials. Not only will it work more efficiently near ground, it won't radiate as much under the antenna (where your neighbors' TV sets are).

You didn't specify what bands you want to work. I have posted a design for a homebrew vertical that is only 11 feet tall (a little more if you use sloping radials) which works on 20, 15 and 10 meters. It's not exactly "stealth" but it is fairly inexpensive to make. So far two of these have been built that I know of, and performance is roughly equivalent to a quarter wave ground plane on each band. Mine is mounted at 10 meters above ground, but my friend's is mounted directly on the ground, with buried radials.

http://dt.prohosting.com/hacks/antenna/

David

1570. Re: Ramsey Kits??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-14 02:36:11 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d59bf2a.2504681@news.peakpeak.com>
Source record: 42233

On Mon, 12 Aug 2002 23:59:14 -0500, "newsguy" <harpoon32@yahoo.com>
wrote:

>I am planning on starting out with building a Ramsey 2m receiver kit (no
>license yet) and was wondering if anyone who had used them could comment on
>them? Granted they are very inexpensive, but are they at least semi usable
>? also any comment on the 2m transceiver is welcome too, as that is next
>once license is in hand.
>thank you!
>
>
I built the older Ramsey 2M transceiver (FTR-144) many years ago, and
I did get it to work. But it's no beginners' kit. Tune-up was not as
easy as the manual described, requiring stretch-and-squeeze of several
coils to get the correct drive level for the PA. It performs OK for
local packet operations, which is what I wanted it for. But 5W output
and diode-programmed channels limit its usefulness (compared to what
most hams use). I wouldn't want to have it as my only 2M radio.

--KR0U

1571. Re: Ramsey Kits??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-14 03:53:22 UTC
From: "M.M." <markem@cervnet.com>
Message-ID: <Xns9269D48076309nobodynowhere@68.6.19.6>
Source record: 42234

Tim Groat wrote:
> I built the older Ramsey 2M transceiver (FTR-144) many years ago, and
> I did get it to work. But it's no beginners' kit. Tune-up was not as
> easy as the manual described, requiring stretch-and-squeeze of several
> coils to get the correct drive level for the PA. It performs OK for
> local packet operations, which is what I wanted it for. But 5W output
> and diode-programmed channels limit its usefulness (compared to what
> most hams use). I wouldn't want to have it as my only 2M radio.

Me too. It worked OK for local packet and light use into the local repeater (before they PL'ed it...) but the design had a couple flaws that probably made it marginally legal...something about the way the PLL locked, I forget the details. I built a few other Ramsey kits and they mostly worked, too, but were not great design or quality components. John (?) Ramsey himself used to read these newsgroups and would often dump on anyone who criticised his stuff. I think he (and the company) had some legal problems with the FCC over a couple of the kits he was selling (not that that necessarily has any relevance in this discussion...),

Someone else suggested the Ten-Tec kit. While I don't have any experience with their VHF kits, I've found the othere to be of very high quality. You can also probably find decent used commercial gear for decent prices and you'd likely be better off with it in the long run, compared to Ramsey.

My two cents worth...

Mark AA7TA

1572. Re: LM372 Info Needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-14 09:38:05 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1408020538440001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42235

In article <3200347.0208131018.692283b9@posting.google.com>, k7itm@aol.com (Tom Bruhns) wrote:

> "Dallas Lankford" <dallas@bayou.com> wrote in message news:<o1_49.441$Yq3.23083092@news.bayou.com>...
> > I need a copy of the data sheet for the LM372. Thanks, Dallas
>
> I just posted that it's not on National's website or their '82
> databook. It is in the '76 data book. I could make a photocopy for
> you. Please email me to make arrangements if you still want it.
>
> Cheers,
> Tom

It's an AM IF strip. I don't think it was very popular. I have a catalog, but no scanner. I can answer questions however.

Steve WB4CZR

1573. Re: Ramsey Kits??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-14 11:26:48 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ulkfkkd8tnlm76@corp.supernews.com>
Source record: 42236

"M.M." <markem@cervnet.com> wrote in message
news:Xns9269D48076309nobodynowhere@68.6.19.6...

> Someone else suggested the Ten-Tec kit. While I don't have any experience
> with their VHF kits, I've found the othere to be of very high quality.
> You can also probably find decent used commercial gear for decent prices
> and you'd likely be better off with it in the long run, compared to
> Ramsey.

Ten-Tec has a great rep, but their 2 meter kit is the same price, with far less features, than the low end rice boxes. In essence, you pay a significant price, feature-wise, in order to build it. The quality of the Yaecommwoods is pretty good, even at the bottom end, so I can't really see where Ten-Tec's quality would be such a big win, either.

Interesting, their web page says you don't have to settle for a stripped down radio, but a quick comparison:

Ten-Tec Icom
$195 $179
15 memories 100 memories
1 nonstandard split 100 nonstandard splits
6 digit LED 6 char alpha LCD custom
display with lots besides
numbers
5 watts 50 watts
plastic front panel steel front panel
- VFO/Memory scan
- PL Scan
PL PL + PL Squelch
Recv 143.5-148.5 Recv 136-174

I'm sure the Yaseau and Kenwood offerings are similar to the Icom, I just happened to have the Icom specs handy. Alinco, ADI and others have slightly lower priced offerings at, some would argue, slightly lower quality.

On the other hand, I have heard that they really treat visitors to their facility well, so if you are planning a trip to Dollywood, a stop by Seiverville might be a worthwhile thing.

..

1574. ** FLEA at MIT ** Sunday August 18th Cambridge MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-14 11:40:55 UTC
From: w1gsl@mit.edu
Message-ID: <3d5a41c7$0$3949$b45e6eb0@senator-bedfellow.mit.edu>
Source record: 42237
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.info,sci.electronics.misc,ne.forsale,ne.general,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

This coming Sunday....

!! ** More Buyers PARKING is available ** for details see
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Come to the city for a great flea - plenty of free parking.

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*** Attention Sellers ***
Prepaid vendors.. Season Pass or monthly,
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<<<<<<<<<<<<<<<<<<<<<<< cut here >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Mail the coupon below by the 5th of the month to be a Prepaid Vendor.

FLEA at MIT 2002 Rates

SELLERS

This year each vendor must have a Cambridge Vendor License.
We will do all the paperwork to get the one day Cambridge licenses.
To keep the spaces affordable we are discounting your first space.
To use your spaces the named vendor MUST be present.
Rates include one admission per space.

Advance $17 First space - includes $10 Cambridge Vendor License
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** You may not sell. **
$15 per person at the gate.

****************************** cut here ******************************

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****
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PO Box 82 MIT Br Cambridge MA 02139-7082 617 258 3754
****

1575. Re: Ramsey Kits??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-14 14:05:40 UTC
From: troglodite@aol.com
Message-ID: <20020814100540.21758.00000420@mb-cg.aol.com>
Source record: 42238

>
> Ten-Tec Icom
> $195 $179
>

I think your price is off for the TenTec. Perhaps what you are quoting is the assembled price?

1576. Re: Litz Wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-14 14:09:44 UTC
From: Alan Hutchison <ahutch0@optusnet.com.au>
Message-ID: <3d5a64a7$0$28866$afc38c87@news.optusnet.com.au>
Source record: 42239

If you consider the skin effect.
The skin gets thinner the higher the freq.
So the conductivity of the conductor is less important.
So above say 50 Megs, aluminium may be a better bet than copper since the higher DC resistance causes a thicker skin and therefore lower (relative to cu) hf/vhf "resistance".

I have n't calculated anything but this is just a gut feeling that may relate to the question.

Alan.

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message news:ai33cd$7l$3@venus.btinternet.com...
> Do you know why Litz wire stops working around 10 MHz and above ?
>
>

1577. Litz and other Wire US sources?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-14 14:28:01 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3D5A68F0.45828DF7@ix.netcom.com>
Source record: 42240

Does anyone know a source of small quantities of 15/44 litz wire?

And while I'm asking; how about small rolls of 22 gauge Tinned Copper
ditto?

73
Dan

1578. Re: Litz Wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-14 15:08:52 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1408021109320001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42241

In article <3d5a64a7$0$28866$afc38c87@news.optusnet.com.au>, "Alan Hutchison" <ahutch0@optusnet.com.au> wrote:

> If you consider the skin effect.
> The skin gets thinner the higher the freq.
> So the conductivity of the conductor is less important.
> > Do you know why Litz wire stops working around 10 MHz and above ?
> >
> >

Why does anyone care about Litz wire anyway? I can understand this if someone is looking for fine wire that is flexible and small, but other than that, I don't have a clue for the reason. I never used it in the 25 years of rf engineering that I've done except to use it in earpiece assemblies that had to be light in weight. Please! Don't give me the skin effect excuse. This was the original intent, but things got better over the years with winding techiques, core materials, etc.

BTW, don't try to use this wire if you don't have a whole pot full of patience. It is highly springy and usually doesn't solder easily.

Some day, Mankind won't have to put up with RF or liberals; or at least I hope so. :-)

Steve WB4CZR

1579. Re: Litz and other Wire US sources?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-14 15:12:37 UTC
From: Fulano de Tal <therealexray@netscape.net>
Message-ID: <3D5A7365.9C47598D@netscape.net>
Source record: 42242

Dan Rae wrote:
>
> Does anyone know a source of small quantities of 15/44 litz wire?
>
> And while I'm asking; how about small rolls of 22 gauge Tinned Copper
> ditto?
>
> 73
> Dan

Try shortcircuit@attbi.com
-BM

1580. Re: Ramsey Kits??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-14 16:09:00 UTC
From: "Ken Knox (N1JRO)" <knox_k@nemaine.com>
Message-ID: <840lluo36qqjau8t3qp7kg47jfppver54s@4ax.com>
Source record: 42243

On 14 Aug 2002 14:05:40 GMT, troglodite@aol.com (Troglodite) wrote:

>>
>> Ten-Tec Icom
>> $195 $179
>>
>
>I think your price is off for the TenTec. Perhaps what you are quoting is the
>assembled price?

The price he gave is what is listed on their website:

http://www.tentec.com/Xcvrkit.htm

1581. Re: Ramsey Kits??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-14 17:10:57 UTC
From: troglodite@aol.com
Message-ID: <20020814131057.04992.00000378@mb-fc.aol.com>
Source record: 42244

>>
>I think your price is off for the TenTec. Perhaps what you are quoting is
>the
>>assembled price?
>
>The price he gave is what is listed on their website:
>

I stand corrected. Apparently the price has gone up since I bought mine two
years ago.

1582. Re: Litz Wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-14 18:41:35 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D5AA45F.5060401@eznec.com>
Source record: 42245

The skin depth is inversely proportional to the square root of the conductivity and inversely proportional to the square root of the frequency. So at any frequency at which the wire is at least several skin depths in diameter, the effective resistance is proportional to the square root of the DC resistance. For example, if one wire is twice as conductive as another at DC, it will be 1.414 times as conductive at RF. Copper is 1.77 times as conductive as pure aluminum at D.C., so it's 1.33 times as conductive at any radio frequency, providing the wire is at least several skin depths thick. (The ratio will, of course, be different for alloys.) Aluminum never "catches up" with copper.

Roy Lewallen, W7EL

Alan Hutchison wrote:
> If you consider the skin effect.
> The skin gets thinner the higher the freq.
> So the conductivity of the conductor is less important.
> So above say 50 Megs, aluminium may be a better bet than copper since the
> higher DC resistance causes a thicker skin and therefore lower (relative to
> cu) hf/vhf "resistance".
>
> I have n't calculated anything but this is just a gut feeling that may
> relate to the question.
>
> Alan.

1583. Re: Ramsey Kits??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-14 18:55:08 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ull9su7v100m8e@corp.supernews.com>
Source record: 42246

Yes exactly, and the Icom price was from AES's latest catalog. The 2100H has gone up in price recently as they have switched to a different microphone, a few months ago you could find one for 129.

Compare:

http://www.icomamerica.com/amateur/2mmobile/index.html

with

http://www.tentec.com/Tk1220.htm

for more details.

The other radio on the Icom page, the V8000, is about 279 so quite a bit more money but it's 75 watts, has a front firing speaker, 3 sets of scan edges, 200 channels, and on and on....

..

"Ken Knox (N1JRO)" <knox_k@nemaine.com> wrote in message news:840lluo36qqjau8t3qp7kg47jfppver54s@4ax.com...
>
> The price he gave is what is listed on their website:

1584. ALC voltage on TS-790

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-14 21:21:31 UTC
From: Leif Holmgren <nosmap.sm4rpq@nospam.amsat.org>
Message-ID: <3D5AC9DB.AFD7710B@nospam.amsat.org>
Source record: 42147

Hi All!

I've just built me a new sequencer to protect my preamps and relays when working the 70cm and 23cm bands. I'm really proud of it, fast switching, double security circuits, and It won't steal any part of my CW signals since it uses a digital delay-line. If anyone is interested, I'm working on redrawing my schematics and can send them upon request.

Now to my question.

I tried it out using my kenwood TR-751 and TR-851. The sequencer manouvers the ALC voltage to make sure that even the switch on the fron-panel is disabled when the preamp is connected. The manual does not say anything about the voltage needed but -6.2V Po ~ -30dBm. However, when connected to my fathers TS-790 the ALC circuit does not seem to have any effect. In the manual for the TS-790 there is a line saying "ALC Threshold is about -6V".

How negative must I make the ALC input of the TS-790 to totally disable the power output? Will the circuits in the TR-751 cope with this also, or is there any risk that I will exceed the Ugs limits of some of the FET's that the ALC signal ends at? I have not found any useful data sheets for these transistors on the internet.

With best regards.
Leif / SM4RPQ

1585. Re: Litz and other Wire US sources?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-14 23:27:38 UTC
From: "Jim Hill, w6ivw" <Xslimjim71@cox.net>
Message-ID: <9nolluc4k9o2ankbv3cr0opk5uospjjjje@4ax.com>
Source record: 42148

Two more sources for litz:
Join the Yahoo the crystal set radio club (bring up
http://www.yahoo.com/ and search for it. Be careful; there are other
groups with similar names - this one has over a thousand posts). Ask
for the wire; I have seen members mention they have small strand count
litz.

If your "small quantity" can be stretched to about a pound, it can be
ordered from a manufacturer such as Kerrigan Lewis in Chicago, IL.
Phone 773-772-7208. They need to set up machinery, so much less than
a pound is impractical, cost-wise. They sell to individuals.

22 gage tinned copper wire can be ordered from Newark Electronics,
www.newark.com stock 02F5296 Except for the $25 minimum, they
are a good company to deal with. Also try small radio stores near
where you live.

Hope this helps,
Jim

On Wed, 14 Aug 2002 07:28:01 -0700, Dan Rae <rae4@ix.netcom.com>
wrote:

>Does anyone know a source of small quantities of 15/44 litz wire?
>
>And while I'm asking; how about small rolls of 22 gauge Tinned Copper
>ditto?
>
>
>73
>Dan

1586. FS: Belden 9913.....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-15 00:23:04 UTC
From: Nadine Hamon <nhpd@sympatico.ca>
Message-ID: <fvC69.4397$%R5.1134909@news20.bellglobal.com>
Source record: 42150
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy

I have a lots of cable for sale

Belden 9913
Equivalent to belden 9913
RG8X
All kind of other coax cables and much more....

In Montreal, Canada, can ship anywhere in North America

Email me with any request you have, I have access to anything at a very very
low price

Thanks
Nad

1587. LM372 Info Received

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-15 00:48:21 UTC
From: Dallas Lankford <dallas@bayou.com>
Message-ID: <Y_C69.460$WS4.23827473@news.bayou.com>
Source record: 42149

Thank you to everyone who sent or offered to send information on the LM372.
73, Dallas

1588. Re: just released, Antennas and more

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-15 06:33:35 UTC
From: "Michael R. McCarrey" <wa7qzr.take-out-the-junk@NOSPAMattbi.com>
Message-ID: <2XH69.32856$ZI2.8093@sccrnsc02>
Source record: 42151

On Sat, 10 Aug 2002 09:48:35 -0700, William F. Hagen wrote:

> I bet this is a popular addition to the ham radio operators library!

I don't know what's worse. Cross-posting CB'ers or cross-posting,
cross-dressing purveyors of porn.

1589. Re: Litz Wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-15 07:03:30 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d5b4ec6.23765314@news.peakpeak.com>
Source record: 42152

"Alan Hutchison" <ahutch0@optusnet.com.au> wrote:

> Do you know why Litz wire stops working around 10 MHz and above ?

The many strands in the Litz wire behave like a multi-layer winding, even when you only have one layer of Litz. This means there are high proximity losses unless each strand is much less than one skin depth in diameter. In fact, proximity losses will quickly make the wire **worse** than solid copper as you exceed the critical frequency for the strand size. At 10MHz, the appropriate strand diameter is about 50 AWG (0.0001 inch = 0.025mm diameter), which approaches the practical limit for copper wire. It's hard to make it smaller, and it's all too easy to break strands that small.

So don't waste your money on Litz wire for frequencies above 10MHz. And below that, be sure the strand size is appropriate for the frequency.

-73-

KR0U

1590. Re: Litz Wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-15 07:13:16 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d5b53b5.159191@news.peakpeak.com>
Source record: 42153

On Thu, 15 Aug 2002 07:03:30 GMT, tmgroat"at"peakpeak"dot"com (Tim Groat) wrote:

>At 10MHz, the appropriate strand diameter is about 50
>AWG (0.0001 inch = 0.025mm diameter), which approaches the practical
>limit for copper wire. It's hard to make it smaller, and it's all too
>easy to break strands that small.
>

I had an order-of-magnitude brain freeze here. 50 AWG is 0.001" = 0.25mm. 0.0001" would be 70 AWG, which would be pretty amazing stuff to see--and you'd have pretty amazing eyes if you COULD see it!

Sorry about that!

--KR0U

1591. Re: 13.8V Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-15 10:11:54 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <OtN69.1192$Vu3.34413@newsfep2-gui>
Source record: 42154

"W4pqw HS" <w4pqwhs@aol.com> wrote in message
news:20020802092304.23198.00000806@mb-mh.aol.com...
> Book, why are you building a power supply? do you have all the parts?are
you
> planning to save money? Reason I am asking these questions is ,you can
buy a
> factory built regulated power supply with warranty for less than you would
pay
> for usable parts to build one..good luck Harold W4PQW
==========
This being an amateur radio homebrew NG , we all should encourage people building their own equipment ,taking into account all the requirements for adequate ,safe and RF protected power.
There is no reason not to build a safe and reliable Power Supply Unit from recycled components which will last a lifetime .
But one has to be aware of all the requirements .....and these are ably stated by the various contributions to this NG.

For those building a hefty linear PSU in the 30-50 Amperes range with a big (non-toroidal) transformer ,I would suggest that when fitting the unit in a steel enclosure the transformer iron should be kept away at least 1 inch (25 mm) from the enclosure .
If not there is a risk that the transformer / enclosure acts as a HUM generating transducer (100 or 120 Hz)

Enjoy your homebrew activities.

Frank gm0csz.kn6wh@ntlworld.com

1592. RFI- Monitor Shielding ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-15 14:46:12 UTC
From: newsguy <harpoon32@yahoo.com>
Message-ID: <ajgf0f01s0r@enews2.newsguy.com>
Source record: 42155

Everything I have seen involved elaborately made metal boxes in the $700 range. Yikes!
Given how many people use a computer these days with thier radio, there has to be a cheaper way? But I havent come across anything yet.

1593. Re: RFI- Monitor Shielding ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-15 15:19:21 UTC
From: "Ken Knox (N1JRO)" <knox_k@nemaine.com>
Message-ID: <nihnlu01tdqs38cag23lkfmrad4th4cj04@4ax.com>
Source record: 42156

On Thu, 15 Aug 2002 09:46:12 -0500, "newsguy" <harpoon32@yahoo.com>
wrote:

>Everything I have seen involved elaborately made metal boxes in the $700
>range. Yikes!
>Given how many people use a computer these days with thier radio, there has
>to be a cheaper way? But I havent come across anything yet.
>

By far, the most RF you will get from a monitor will be from it's
connecting cables.

1594. FS: TUBES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-15 15:51:33 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <96Q69.195000$L02.9015201@news1.west.cox.net>
Source record: 42157
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Large quantity of receiving, special purpose & TV tubes priced from $.35 each. E-mail w6krc@arrl.net for a detailed list.

1595. Sanyo 2.4ghz phone frequency

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-15 18:25:51 UTC
From: va2lam@remove.hotmail.nospam.com.me
Message-ID: <3d5be7be.21827315@news.aei.ca>
Source record: 42158
Cross-posted to: rec.radio.scanner,rec.radio.amateur.homebrew

Ok, first of all the disclaimer:

*** I AM NOT IN THE USA AND YOUR CORDLESS/CELL PHONE LAWS DO NOT APPLY HERE. ***

Now, on to my question.

I would like to know if anyone has the exact frequencies used by a Sanyo DSS 2.4ghz cordless phone, model CLT-2410 (or similar 40 channel Sanyo phones).

I would like to adapt the plans for a 2.4ghz wireless network colinear antenna I built for my wireless network to my phone and at those high frequencies, a few mhz and a few milimetres does make a big difference.

This BTW is to be used at my fishing shack which is really in the middle of nowhere (lake with 2 houses on it), so interference to others is really not an issue. I am on one side of a lake with no phone or electricity (or roads) and I want to use a cordless base which will be at my sisters across the lake (she has power and phone service). I am already sharing her internet access with a 2.4ghz wireless network we put up and it works perfectly (though sharing a 56 K conection that barely connects at 28.8 at the best of times is a little tedious!).

As it is the cordless phone baaaarely works on the front porch, a decent colinear like we use for the wireless network would be perfect (btw we did try a yagi for the wireless network, worked fine, but with the colinear signal is just as nice AND I can be sitting in my canoe anywhere on the lake and "working" on my laptop while fishing (keeps the boss happy)

va2lam - Pat

1596. Re: Sanyo 2.4ghz phone frequency

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-15 19:06:53 UTC
From: Fah Q too <a@b.c>
Message-ID: <hZS69.29462$X5.4957905@news2.telusplanet.net>
Source record: 42159
Cross-posted to: rec.radio.scanner,rec.radio.amateur.homebrew

why don't you just say you live here in canada or something.

"Pat" <va2lam@remove.hotmail.nospam.com.me> wrote in message
news:3d5be7be.21827315@news.aei.ca...
> Ok, first of all the disclaimer:
>
> *** I AM NOT IN THE USA AND YOUR CORDLESS/CELL PHONE LAWS DO NOT APPLY
> HERE. ***
>
> Now, on to my question.
>
> I would like to know if anyone has the exact frequencies used by a
> Sanyo DSS 2.4ghz cordless phone, model CLT-2410 (or similar 40 channel
> Sanyo phones).
>
> I would like to adapt the plans for a 2.4ghz wireless network colinear
> antenna I built for my wireless network to my phone and at those high
> frequencies, a few mhz and a few milimetres does make a big
> difference.
>
> This BTW is to be used at my fishing shack which is really in the
> middle of nowhere (lake with 2 houses on it), so interference to
> others is really not an issue. I am on one side of a lake with no
> phone or electricity (or roads) and I want to use a cordless base
> which will be at my sisters across the lake (she has power and phone
> service). I am already sharing her internet access with a 2.4ghz
> wireless network we put up and it works perfectly (though sharing a 56
> K conection that barely connects at 28.8 at the best of times is a
> little tedious!).
>
> As it is the cordless phone baaaarely works on the front porch, a
> decent colinear like we use for the wireless network would be perfect
> (btw we did try a yagi for the wireless network, worked fine, but with
> the colinear signal is just as nice AND I can be sitting in my canoe
> anywhere on the lake and "working" on my laptop while fishing (keeps
> the boss happy)
>
> va2lam - Pat

1597. FS:Norcal 40 & Cascade SSB kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-15 19:32:25 UTC
From: Sasquatch Roadkill <sasquatch_roadkill@NO*SPAMhotmail.com>
Message-ID: <ajgvk7$1an$1@nnrp.atgi.net>
Source record: 42160

All,
Wondering if anyone might be interested in purchasing these two NON-working kits.

Norcal 40 CW rig.
There are no (?) bad solders. I sent it to someone in the Norcal club who looked at it. He got the recieve portion to work, but not the transmit. He suggested that I change out the NE602 (?). I have the manual & schematic for this.

Also have the norcal qrp club Cascade 80/40 meter SSB radio.
After building it I did get it to work (recieve) never tested it on transmit. One night it just did not work after powering it on. Smelled something from inside. Has the manual & schematics and the 40 & 80 meter band plugins.

Ideally, I would keep these and get them working, but they've been sitting in my garage for 5 years. I don't see it happening. These are probably easy fixes for someone more technically inclined. And I need to support my growing camera hobby.

Please send serious offers to sasquatch_roadkill@NO*SPAMhotmail.com
remove the no spam to reply.
If I posted in the wrong NG, my apologies.
73's de WL7KV

1598. Re: Sanyo 2.4ghz phone frequency

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-15 20:25:46 UTC
From: va2lam@remove.hotmail.nospam.com.me
Message-ID: <3d5c0cfe.31365274@news.aei.ca>
Source record: 42161
Cross-posted to: rec.radio.scanner,rec.radio.amateur.homebrew

On Thu, 15 Aug 2002 19:06:53 GMT, "Fah Q too" <a@b.c> wrote:

>why don't you just say you live here in canada or something.

Because the important thing is where I am *NOT* :)

I've been reading this group for a while and noticed any time anyone
mentions "cordless" or "cellular" in any context, someone immediately
starts to jump up and down beating their chest and screaming out
"illegal illegal!"

Wanted to avoid that...

Pat

1599. HELP:HP8554B SPECTRUM PLUG-IN!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-15 20:50:11 UTC
From: jos <soj@sympatico.ca>
Message-ID: <3D5C1402.BDFB393D@sympatico.ca>
Source record: 42162

HI!

The HP8554B is the 1250 Mhz plug-in. Can anyone tell me what are the output frequencies available from this plug-in when it is used with a HP8444A .5-1300 Mhz Tracking generator. One of them is the first LO output which is the sweeping one (Min. and Max. frequency) Is there a second LO and what frequency. There is a third LO and what frequency. Thanks! Regards! Jos. VE2AUC

1600. Re: Sanyo 2.4ghz phone frequency

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-15 22:24:46 UTC
From: Fah Q too <a@b.c>
Message-ID: <OSV69.52118$Vj3.2854196@news0.telusplanet.net>
Source record: 42163
Cross-posted to: rec.radio.scanner,rec.radio.amateur.homebrew

hehe. so you are most likely like me and live in Canada. where it IS NOT illegal to listen to anything. unless you divulge what you here. or Europe AU. but I would say Canada. cause of fishing. hehe. but. most users besides newbie's should know by now it isn't illegal.

Dev

"Pat" <va2lam@remove.hotmail.nospam.com.me> wrote in message news:3d5c0cfe.31365274@news.aei.ca...
> On Thu, 15 Aug 2002 19:06:53 GMT, "Fah Q too" <a@b.c> wrote:
>
> >why don't you just say you live here in canada or something.
>
> Because the important thing is where I am *NOT* :)
>
> I've been reading this group for a while and noticed any time anyone
> mentions "cordless" or "cellular" in any context, someone immediately
> starts to jump up and down beating their chest and screaming out
> "illegal illegal!"
>
> Wanted to avoid that...
>
> Pat
>

1601. Packet Radio to Internet Portal

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-15 23:50:01 UTC
From: The Smith Family <wsbg@sympatico.ca>
Message-ID: <A4X69.5687$%R5.1420783@news20.bellglobal.com>
Source record: 42164

Picture this: an external USR 56k v92 modem connected to the COM port (or tty in Linux) of a box running your favorite BBS package and having it work well as it does right now.
Now picture: an external TNC (sort of like a modem for the air waves) connected to the COM port (or tty in Linux) of a box running your favorite BBS package and have it work well serving not only dial-up phone connections, but connections from Packet Radio (a digital packet transfer ability with Amateur (HAM) Radio.

Both modems can use a com port, both can send signals indicating a connection has been made, and both are fairly similar. There are some things that would have to be added though (easily done) which would be the sending and receiving of "this is my identification letter and number block" which may even be able to be done through IEMSI and have IEMSI log the QSLs (radio identification numbers).

For those of you that don't know IEMSI is a way of programming your terminal program (ie. Terminate!) to automatically negotiate ones name, password, etc. It may not be applicable to your BBS software as it may not yet support it. But don't fret, it's not needed to bring in support for this.

Now for you sysops: Imagine this: You've got a sweet box running your favorite BBS software. It's connected to the Internet, you've got regular modem, and you've got a packet radio modem. Now you can have callers experience your BBS using telnet from anywhere around the world, you've got access for local folk via your phone modem, and you've now got people possibly connecting from areas so far around the world with their radio modems. Wouldn't that be cool. You're last user lister could list people from almost anywhere, and also list their method of connection whether it be by phone, telnet session, or radio modem. It'd be cool, huh? Now for the great stuff. Imagine that BBS software had PPP connect options so that people using HAM Packet Radio Modems or Phone System Modems could get on the internet:

A HAM to Internet portal, oh my! :)

Well if you can make it happen, why not? Try. Try hard.

1602. Re: RFI- Monitor Shielding ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-16 00:32:10 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <ajhhee$g7l$1@newsreader.cetlink.net>
Source record: 42165

There is some conducting spray that you can use to paint the inside of the cabinet with. Don't know the name or how effective it is.

"newsguy" <harpoon32@yahoo.com> wrote in message news:ajgf0f01s0r@enews2.newsguy.com...
> Everything I have seen involved elaborately made metal boxes in the $700
> range. Yikes!
> Given how many people use a computer these days with thier radio, there has
> to be a cheaper way? But I havent come across anything yet.
>
>

1603. Re: Sanyo 2.4ghz phone frequency

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-16 03:39:43 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <ajhs62ble1@nntp9.atl.mindspring.net>
Source record: 42166
Cross-posted to: rec.radio.scanner,rec.radio.amateur.homebrew

----- Original Message -----
"Pat" <va2lam@remove.hotmail.nospam.com.me> Wrote:
Subject: Sanyo 2.4ghz phone frequency

>
> I would like to know if anyone has the exact frequencies used
> by a Sanyo DSS 2.4ghz cordless phone, model CLT-2410 (or similar
> 40 channel Sanyo phones).
>
> I would like to adapt the plans for a 2.4ghz wireless network
> colinear antenna I built for my wireless network to my phone
> and at those high frequencies, a few mhz and a few milimetres
> does make a big difference.
>

You can pretty much assume it is in the 2400-2483 MHz band, perhaps toward the lower portion of that frequency range, although the different channels may have some of them in the higher part of the band. For that matter, the Spread Spectrum is probably taking up a large part of the band at the best of times.

At least, according to how they are meant to be in the USA....

This, by the way, is most likely the identical frequency range your 2.4 GHz wireless network is in.

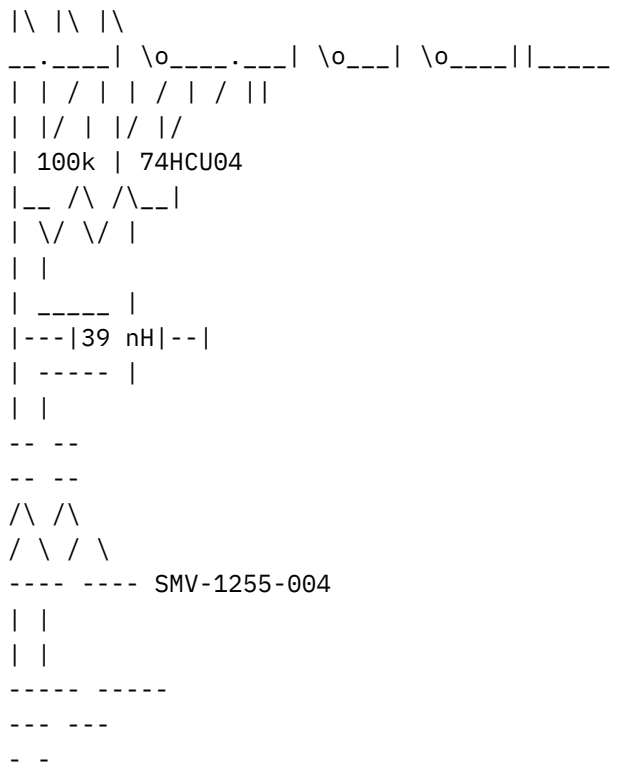
Oh yes, the upper part of this range is overlapped by signals escaping from microwave ovens. They are more or less around 2490 but the frequency control for a microwave oven is crude and they are often down in the band used by wireless telephones and wireless networks.

Jim Pennell
N6BIU

1604. cmos hex oscillator resonant frequency

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-16 06:42:44 UTC
From: sin-lip_tan@agilent.com
Message-ID: <b2eae9d5.0208152242.38648899@posting.google.com>
Source record: 42168

Anyone know how to calculate the resonant frequency below? I replaced two varactor with two 22nF ceramic capacitor. And the resonant frequency is around 139MHz. Or anyone have any broadband VCO circuit that can go to 200/300MHz?



Thanks.

1605. Re: Litz Wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-16 06:44:19 UTC
From: rrichard <rrichard@zianet.com>
Message-ID: <3d5c9cbe.0@oracle.zianet.com>
Source record: 42167

There is litz wire for sale now on eBay auction site under the group of
Consumer Electronics, radio equipment, ham radio, antennas for what seems
like a low price in 100 foot lots. Good luck!
Robert K5DXN

<tmgroat at peakpeak dot com (Tim Groat)> wrote in message
news:3d5b53b5.159191@news.peakpeak.com...
> On Thu, 15 Aug 2002 07:03:30 GMT, tmgroat"at"peakpeak"dot"com (Tim
> Groat) wrote:
>
>
> >At 10MHz, the appropriate strand diameter is about 50
> >AWG (0.0001 inch = 0.025mm diameter), which approaches the practical
> >limit for copper wire. It's hard to make it smaller, and it's all too
> >easy to break strands that small.
> >
>
> I had an order-of-magnitude brain freeze here. 50 AWG is 0.001" =
> 0.25mm. 0.0001" would be 70 AWG, which would be pretty amazing stuff
> to see--and you'd have pretty amazing eyes if you COULD see it!
>
> Sorry about that!
>
> --KR0U
>

1606. Re: 13.8V Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-16 11:43:25 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <xz579.42382$983.57992@rwcrnsc53>
Source record: 42169

Here is another good design link
http://www.seits.org/features/pwrsup.htm

http://www.seits.org/features/pwrsup.gif

w9gb

"Bob Allen" <mcamp@gmavt.net> wrote in message
news:3D4DD3CB.C783F1D@gmavt.net...
>
> CHeck this out for a cheap power supply!
> http://www.antennex.com/preview/archive3/powers.htm
>
>
> Book wrote:
> >
> > Well I have the filter capacitor and a transformer.
> >
> > --
> > Book
> >
> > "W4pqw HS" <w4pqwhs@aol.com> wrote in message
> > news:20020802092304.23198.00000806@mb-mh.aol.com...
> > > Book, why are you building a power supply? do you have all the
parts?are
> > you
> > > planning to save money? Reason I am asking these questions is ,you
can
> > buy a
> > > factory built regulated power supply with warranty for less than you
would
> > pay
> > > for usable parts to build one..good luck Harold W4PQW

1607. Re: HELP:HP8554B SPECTRUM PLUG-IN!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-16 14:54:35 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3D5D122A.C8135DA3@ix.netcom.com>
Source record: 42170

1st LO swept 2050 to 3300 MHz, used by TG
2nd LO fixed 1500 MHz not taken to outside world, but there is an output
terminated inside, if you see what I mean.
3rd LO 500 MHz fixed, used by TG

From what I remember these are quite tricky to adjust. Both the outputs
you need for the TG are available on the front panel. The TG has it's
own 1.5 GHz Osc. The Opt 59 version also has a built-in 500 MHz osc
for use with the 8555

73 Dan

1608. Re: HELP:HP8554B SPECTRUM PLUG-IN!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-16 15:37:16 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3D5D1C2C.70CC93A1@ix.netcom.com>
Source record: 42171

Dan Rae wrote:

> 3rd LO 500 MHz fixed, used by TG

Actually, it's slightly more complicated than that; the 3rd LO is swept in
the narrow sweep widths while the1st LO is phase locked...
dr

1609. RFI phase cancelling for VHF.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-16 16:11:59 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ajj86s$j35$1@slb7.atl.mindspring.net>
Source record: 42172

I am looking for a circuit for a noise phase canceling device, I know MFJ has on for HF the 1025 and the 1026. But it does not go into 50mhz and above. Any idea's?

Dan/W4NTI

1610. Manual for Trio R820 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-16 22:18:14 UTC
From: Mike Tatum <miket@cybatek.fsnet.co.uk>
Message-ID: <pan.2002.08.16.22.18.14.867263.9100@cybatek.fsnet.co.uk>
Source record: 42173

hi All,

Not quite homebrew but Home repair !

Anyone know where I can download a copy of the manual for a Trio R820
receiver ?

Just got hold of one that needs some work ...

Thanks in advance ...

MikeT ...
M0AWS
http://www.cybatek.fsnet.co.uk/m0aws/

1611. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-16 23:50:49 UTC
From: WG <nojunk@mail.com>
Message-ID: <tdg79.796$1L4.85993@news1.telusplanet.net>
Source record: 42174

No, I live in Canada and even RAC is no help. The city is able to make its own by-laws. They just changed the antenna by-law on satellite dishes to permit the Minnie-dish a few months ago. Hell we can't even cut down a tree on our own propriety. The funny thing about it is that the city is looking for Hams to provide emergency communications during an emergency and they have had to go to other municipalities to get them and we have over 400 thousand people in this city. Kind of ridiculous if you ask me.

"Russell Hltn" <reply@2newsgroup.com> wrote in message
news:aj6eg4$9u3$1@nntp-m01.news.aol.com...
> Do you live in the US? Wouldn't PRB-1 help your situation? I can't
> believe this is "reasonable accommodation".
>
> "WG" <nojunk@mail.com> wrote in message
> news:ylx59.34360$Z5.1233441@news1.telusplanet.net...
> > At least you can put up an antenna. The rules in the city I live in
> is no
> > Ham or CB antenna more then 12 feet off the ground. For you I would
> > recommend a multi-band vertical but they will cost you. Also perhaps
> the
> > Yeasu ATAS-100 with the ground plane kit. Good luck and I know what
> you are
> > going through as I am stuck with all my antennas in the house. I
> have
> > already had 2 visits from our fines and by-laws department for my
> city for
> > having a coat hanger 2 meter antenna in a cherry tree.
> >
> > "newsguy" <harpoon32@yahoo.com> wrote in message
> > news:aj4fl7011nv@enews2.newsguy.com...
> > > Hello! I am intending to get my license, however I am worried
> about one
> > > thing. I live in a 'mobile home community' (trailer park, for
> the
> > > non-euphemistic :) I have a yard about 45 x 50 and 1 tree. I
> really
> > > dont think they are going to appreciate me if I erect some huge
> yagi
> > thats
> > > 60' tall and almost bigger than my home, and yet I dont want to be
> limited
> > > to talking local, I would like a range of 1000 miles at least. Do
> I have
> > > any options? Will a good 'stealthy' dipole do this for me?

> > > Thanks
> > >
> > >
> >
> >
>
>

1612. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 00:20:56 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ajk4ri$f5n$1@slb2.atl.mindspring.net>
Source record: 42175

I guess that is what happens when you are in a 'socialistic society'. Is
this what we have to look forward to?

Dan/W4NTI

"WG" <nojunk@mail.com> wrote in message
news:tdg79.796$1L4.85993@news1.telusplanet.net...
> No, I live in Canada and even RAC is no help. The city is able to make its
> own by-laws. They just changed the antenna by-law on satellite dishes to
> permit the Minnie-dish a few months ago. Hell we can't even cut down a
tree
> on our own propriety. The funny thing about it is that the city is looking
> for Hams to provide emergency communications during an emergency and they
> have had to go to other municipalities to get them and we have over 400
> thousand people in this city. Kind of ridiculous if you ask me.
>
> "Russell Hltn" <reply@2newsgroup.com> wrote in message
> news:aj6eg4$9u3$1@nntp-m01.news.aol.com...
> > Do you live in the US? Wouldn't PRB-1 help your situation? I can't
> > believe this is "reasonable accommodation".
> >
> > "WG" <nojunk@mail.com> wrote in message
> > news:ylx59.34360$Z5.1233441@news1.telusplanet.net...
> > > At least you can put up an antenna. The rules in the city I live in
> > is no
> > > Ham or CB antenna more then 12 feet off the ground. For you I would
> > > recommend a multi-band vertical but they will cost you. Also perhaps
> > the
> > > Yeasu ATAS-100 with the ground plane kit. Good luck and I know what
> > you are
> > > going through as I am stuck with all my antennas in the house. I
> > have
> > > already had 2 visits from our fines and by-laws department for my
> > city for
> > > having a coat hanger 2 meter antenna in a cherry tree.
> > >
> > > "newsguy" <harpoon32@yahoo.com> wrote in message
> > > news:aj4fl7011nv@enews2.newsguy.com...
> > > > Hello! I am intending to get my license, however I am worried
> > about one
> > > > thing. I live in a 'mobile home community' (trailer park, for
> > the
> > > > non-euphemistic :) I have a yard about 45 x 50 and 1 tree. I
> > really
> > > > dont think they are going to appreciate me if I erect some huge

> > yagi
> > > thats
> > > > 60' tall and almost bigger than my home, and yet I dont want to be
> > limited
> > > > to talking local, I would like a range of 1000 miles at least. Do
> > I have
> > > > any options? Will a good 'stealthy' dipole do this for me?
> > > > Thanks
> > > >
> > > >
> > >
> > >
> >
> >
>
>

1613. CLEANING THE CLOSET .....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 00:55:16 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3D5D9EF4.5080604@charter.net>
Source record: 42176

HV PLATE TRANSFORMER
It is 3000v @ 4 amps 120/220 primaries. It is a heavy rascal though
about 100lbs. I have been trying to sell it have it listed been asking
300.00 for it OBO
time you filtered and rectified should do over 3500v 14" tall x 11 3/4"
wide x 7 1/2" deep
I know it can be shipped probably around 60.00 or so
I just had a transformer sent to me from texas it weighed 110lbs and
shipping was 65.00

Several nice Big Air variables Not really sure about the actual cap of
them but they are big and beefy.

Oil Caps

1-10mf@1500vdc
1- 2mf@5000vdc
4-1mf@2000vdc
2-1mf@3600vdc
2-1mf@600vdc
4- 250mf@450vdc screw in caps computer grade

I have a mobile amp Pride 100 Bi Linear amplifier says 10-80 meters on
the front
has ssb/am preamp

Also Have a 10 METER 2 pill driver amp About 60-75 watts out with a 10
amp 13.8 vdc power supply built in so you could run a mobile in the
house on it.

Collins 300G plate Transformer

part # 672-1360-00
Pr) 0-105-110-115-120-125 vac 60 hz 1 ph
S1)1200 vct @ 0.283 ccs
DM) Ht= 7.000 Wt = 7.500 Dt = 6.500
weight aprox 45 lbs

All of the above items are for trade or sale. Looking for Pieces for a homebrew amp i am
working on GU-84B
Thanks Chris

--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation

Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

1614. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 00:58:00 UTC
From: WG <nojunk@mail.com>
Message-ID: <sch79.807$1L4.89549@news1.telusplanet.net>
Source record: 42177

Luckily it is only this city, 44 square miles so I could move and go as high as I like. In your country it is the government of the country that would make the law and has like the cell-phone laws and they are harder to fight then a city council. So I wouldn't call us a socialist country remember the UN rated us higher then the US in being a truly free country. I think the US was down the list at about number 70 and we were in the top 50 of all of the industrial nations. Off topic I know but moving 20 miles to put up an antenna is better then moving out of the country all together. I do think that the law in part will fall for hams as the city knows that they need us. It was enacted in the CB boom years so one more thing we can blame on them. It is not being enforced unless your neighbors complain and mine wanted the tree down so they did what they could. The tree is still up but the antenna is down.

"Dan/W4NTI" <w4nti@mindspringnospam.com> wrote in message
news:ajk4ri$f5n$1@slb2.atl.mindspring.net...
> I guess that is what happens when you are in a 'socialistic society'. Is
> this what we have to look forward to?
>
> Dan/W4NTI
>
> "WG" <nojunk@mail.com> wrote in message
> news:tdg79.796$1L4.85993@news1.telusplanet.net...
> > No, I live in Canada and even RAC is no help. The city is able to make
its
> > own by-laws. They just changed the antenna by-law on satellite dishes to
> > permit the Minnie-dish a few months ago. Hell we can't even cut down a
> tree
> > on our own propriety. The funny thing about it is that the city is
looking
> > for Hams to provide emergency communications during an emergency and
they
> > have had to go to other municipalities to get them and we have over 400
> > thousand people in this city. Kind of ridiculous if you ask me.
> >
> > "Russell Hltn" <reply@2newsgroup.com> wrote in message
> > news:aj6eg4$9u3$1@nntp-m01.news.aol.com...
> > > Do you live in the US? Wouldn't PRB-1 help your situation? I can't
> > > believe this is "reasonable accommodation".
> > >
> > > "WG" <nojunk@mail.com> wrote in message
> > > news:ylx59.34360$Z5.1233441@news1.telusplanet.net...
> > > > At least you can put up an antenna. The rules in the city I live in
> > > is no

> > > > Ham or CB antenna more then 12 feet off the ground. For you I would
> > > > recommend a multi-band vertical but they will cost you. Also perhaps
> > > the
> > > > Yeasu ATAS-100 with the ground plane kit. Good luck and I know what
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> > > > going through as I am stuck with all my antennas in the house. I
> > > have
> > > > already had 2 visits from our fines and by-laws department for my
> > > city for
> > > > having a coat hanger 2 meter antenna in a cherry tree.
> > > >
> > > > "newsguy" <harpoon32@yahoo.com> wrote in message
> > > > news:aj4fl7011nv@enews2.newsguy.com...
> > > > > Hello! I am intending to get my license, however I am worried
> > > about one
> > > > > thing. I live in a 'mobile home community' (trailer park, for
> > > the
> > > > > non-euphemistic :) I have a yard about 45 x 50 and 1 tree. I
> > > really
> > > > > dont think they are going to appreciate me if I erect some huge
> > > yagi
> > > > thats
> > > > > 60' tall and almost bigger than my home, and yet I dont want to be
> > > limited
> > > > > to talking local, I would like a range of 1000 miles at least. Do
> > > I have
> > > > > any options? Will a good 'stealthy' dipole do this for me?
> > > > > Thanks
> > > > >
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> > >
> > >
> >
>

1615. FRS Radios into Ham Radio service?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 02:23:36 UTC
From: "Joel (AG4QC)" <joel@cyberbest.com>
Message-ID: <2ti79.2749$Yu.895406194@twister2.starband.net>
Source record: 42178

I noticed the FRS radios are dropping in price so you can now buy them at Sam's for about $50.00/pair. They operate in the 462-467MHZ range and some even have CTSS codes. I was just thinking they are only about 20MHZ or so from the ham band and wondering if anyone had any experiences with conversion.

Joe Loucka AG4QC

1616. Quad FET?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 07:59:31 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <29wOOpfjJgX9EwQk@fslife.co.uk>
Source record: 42179

A question on behalf of a friend.

He asks:

I'm wondering if anyone makes a quad FET like the old Siliconix Si8909
anymore. That was designed as an active balanced mixer, that could make
a front end about as immune to overload as you could possibly imagine.

Appreciate any thoughts.

(((73)))
--
Philip de Cadenet G4ZOW
1050 WLYC
Williamsport
Pa

1617. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 08:55:45 UTC
From: Russell Hltn <reply@2newsgroup.com>
Message-ID: <ajl6qc$2mh$2@nntp-m01.news.aol.com>
Source record: 42180

> No, I live in Canada and even RAC is no help. <

Neeeeever Miiiiind. <g>

> The funny thing about it is that the city is looking
> for Hams to provide emergency communications during an emergency and
they
> have had to go to other municipalities to get them and we have over
400
> thousand people in this city. Kind of ridiculous if you ask me.

Well, it sounds like the best move is to sign up and then advise them
on the issue. Then you can work on getting it over-turned. I hadn't
done anything that grand, I have found that one person who acts DOES
make a difference.

1618. Re: cmos hex oscillator resonant frequency

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 10:27:10 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <ajl8dulqe4@venus.btinternet.com>
Source record: 42181

"sinlip" <sin-lip_tan@agilent.com> wrote in message
news:b2eae9d5.0208152242.38648899@posting.google.com...
> Anyone know how to calculate the resonant frequency below? I replaced
> two varactor with two 22nF ceramic capacitor. And the resonant
> frequency is around 139MHz. Or anyone have any broadband VCO circuit
> that can go to 200/300MHz?

Maxim has some nice VCO chips that go up to that freq. range, I think

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

1619. Re: Quad FET?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 10:54:04 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <ajla0ccvs1@paris.btinternet.com>
Source record: 42182

"Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message
news:29wOOpfjJgX9EwQk@fslife.co.uk...
> A question on behalf of a friend.
>
> He asks:
>
> I'm wondering if anyone makes a quad FET like the old Siliconix Si8909
> anymore. That was designed as an active balanced mixer, that could make
> a front end about as immune to overload as you could possibly imagine.

The Fairchild FST3125 bus-switch tends to be used for high-performance
mixers these days. A properly designed mixer using one of these is about as
good as you can get; you start running into non-linearity problems with
other parts of the system, like the IF filter. I've designed a mixer PCB
using one of these, but haven't got round to making it, yet. I'm using a
circuit from RadCom, which you will find here:

http://www.geocities.com/CapeCanaveral/Lab/9595/fst3125.html

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

1620. Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 11:22:51 UTC
From: Zed <G@G.com>
Message-ID: <M6q79.26383$dr.5100984@e3500-atl1.usenetserver.com>
Source record: 42183

most of the world uses metric system , USA uses the imperial system ,just
as easily we could have used a different system to count frequency.
Think about it , we're so used to 0-9 to count , measure ,anything.Its hard
to think outside this.
it was developed by asian/indian culture, because of the number of fingers
on both hands.
could you Imagine a radio frequency with a hex readout ?

it could have been worst that the chinese alphabet (5000 to understand 95%
of what out there, 60,000 to cover everything)
counting to infinity a new symbol for each count progression

We make the frequency count fit into our way of counting, base10 , but can
frequency find a harmonius or perfect counting system?

1621. Re: Quad FET?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 11:58:53 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <PYnQ3MG9pjX9EwlE@fslife.co.uk>
Source record: 42184

Hi Leon,

>The Fairchild FST3125 bus-switch tends to be used for high-performance
>mixers these days. A properly designed mixer using one of these is about as
>good as you can get; you start running into non-linearity problems with
>other parts of the system, like the IF filter. I've designed a mixer PCB
>using one of these, but haven't got round to making it, yet. I'm using a
>circuit from RadCom, which you will find here:
>
>http://www.geocities.com/CapeCanaveral/Lab/9595/fst3125.html
Many thanks for the info above.

These folks are playing with AM stereo mod's.

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

1622. FS: 11-piece Chassis Punch Set

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 13:23:08 UTC
From: Jim W8ZR <w8zr@arrl.net>
Message-ID: <ajlinu$87o$1@tribune.oar.net>
Source record: 42185

Hi Guys,
I've listed on EBay a set of new and unused chassis punches. There are eleven punches, ranging in size from 1/2 inch to 1-1/2 inch, including a 1 inch square punch. I paid $200+ for them, but they're not attracting much interest and looks like I could get taken to the cleaners. I'm trying to drum up some interest, so if you're a homebrewer, check these out!
The URL (all one line) is
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1372934423&rd=1
73,
-Jim W8ZR

1623. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 14:54:16 UTC
From: "John S. MacKay" <k35454@direct.ca>
Message-ID: <ulsp6dckd03qdd@corp.supernews.com>
Source record: 42186

Russell Hltn <reply@2newsgroup.com> wrote in message
news:ajl6qc$2mh$2@nntp-m01.news.aol.com...
> > No, I live in Canada and even RAC is no help. <
>
> Neeeeever Miiiiind. <g>
>
> > The funny thing about it is that the city is looking
> > for Hams to provide emergency communications during an emergency and
> they
> > have had to go to other municipalities to get them and we have over
> 400
> > thousand people in this city. Kind of ridiculous if you ask me.
>
> Well, it sounds like the best move is to sign up and then advise them
> on the issue. Then you can work on getting it over-turned. I hadn't
> done anything that grand, I have found that one person who acts DOES
> make a difference.
>
I just got my pc back from the repair shop... in what province
is the "over 400 thousand" located, and are you interested in details for a
compact top-loaded mag-mount mobile of my own design with which I work the
Pacific Rim, South America and East Coast North America on 40m to 10m and
down to 2m for locals (that is,
when the bands are alive, which at my location in British Columbia they are
NOT just now). Miki, VE7AFN/M.

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.381 / Virus Database: 214 - Release Date: 8/2/2002

1624. Re: FRS Radios into Ham Radio service?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 15:42:17 UTC
From: Bruce Lane <feedspammerstosharks.4.spamvac@spamgourmet.com>
Message-ID: <MPG.17c80eb0a20522b989986@news.drizzle.com>
Source record: 42187

In article <2ti79.2749$Yu.895406194@twister2.starband.net>, "Joel \(
AG4QC \)" <joel@cyberbest.com> says...

> I noticed the FRS radios are dropping in price so you can now buy them at
> Sam's for about $50.00/pair. They operate in the 462-467MHZ range and some
> even have CTSS codes. I was just thinking they are only about 20MHZ or so
> from the ham band and wondering if anyone had any experiences with
> conversion.

I've not, but then again it's not something I would choose to
bother with for multiple reasons. Mainly the fact that, with most FRS
radios, their innards are not what I would call "quality" (remember,
they're a mass-produced item, made to sell as cheaply and as quickly as
possible to as many people as possible).

I would also be concerned about their long-term reliability.
Another thing to remember is that they don't put out more than a couple
hundred milliwatts. That makes them pretty much useless for anything
other than their designed purpose.

I really think you'd be better off scaring up some retired Motorola
portables at a ham swap, and putting them on your frequency of choice.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

1625. FA not FS Re: 11-piece Chassis Punch Set

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 16:51:43 UTC
From: Bill & Suzie Whatley <spud286@attbi.com>
Message-ID: <zav79.136882$UU1.23538@sccrnsc03>
Source record: 42188

FA not FS.

1626. Tayloe detector again

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 16:58:05 UTC
From: bpasaric@mac.com
Message-ID: <1fh2nc4.v96a5213if6fcN%bpasaric@mac.com>
Source record: 42189

In the QEX for July-August there are two interesting articles about the Tayloe receiver. The first one is "Dirodyne: A New Radio Architecture?" written by Rod Green, VK6KRG. The second one is "Software-Defined Radio for Masses" Part 1 - written by Gerald Youngblood, AC5OG.

In fact the Tayloe detector is a bi-directional device: if you go from left to the right, you will get an SSB receiver; if you go from right to the left, you will get an SSB exciter. In order to avoid the audio phaseshift network (APN) Rod Green connects the two Tayloe detectors back-to back and in the output he gets an IF SSB signal at the standard 453 kHz IF, which then goes to the third mixer. The performance numbers he has achieved are quite impressive, although there is some more noise - probably because of the three mixers in a chain.

The second article is going to describe a complete transciever (for masses!) using a PC sound card and some software - used instead of the APN (there will be three more articles).

It seems to me that the main idea in both the articles was how to avoid the APN which consists of 24 1% resistors and 24 5% capacitors. I made a Tayloe receiver myself a few months ago, and making a good APN was no problem. After all, they could be factory-made and brought to the market with even higher quality. The greatest problem I had was soldering the demultiplexer 3253 to the PCB, because they are all of the SMD type, which exhausted my nerves - although I was working with a magnifying glass and a micro soldering iron (I'm 70 now). Also, it was not easy to find those chips and get them. Besides that, in my opinion even a beginner could make the Tayloe receiver if he had a ready made PCB with a 3253 on it, or a kit with a ready APN.

I would also like to draw your attention to an article published in the British SPRAT No. 101. That is Jan Verduyn's "An Experimantal DC Receiver". He successfully uses a VFO with two times the input frequency (insted of four times) which is a great simplification and help for homebrewers.

Anyhow, Tayloe has hiven a lot if stimulation for new ideas and experiments which are revealing and enlightening. No doubt, Tayloe is my choice.

Any experience so far, or comments?
Bozidar, 9A2HL

1627. Re: FRS Radios into Ham Radio service?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 18:46:29 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3D5E9A05.96B2AC75@nettally.com>
Source record: 42190

There is a european version of FRS which opeates in the 70CM band. You might want to look for those radios. However they are likely to be simplex only like our FRS.

"Joel (AG4QC)" wrote:

> I noticed the FRS radios are dropping in price so you can now buy them at
> Sam's for about $50.00/pair. They operate in the 462-467MHZ range and some
> even have CTSS codes. I was just thinking they are only about 20MHZ or so
> from the ham band and wondering if anyone had any experiences with
> conversion.
>
> Joe Loucka AG4QC

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

1628. Re: FRS Radios into Ham Radio service?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 18:59:06 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d5e9c61.23689753@news.freeserve.net>
Source record: 42191

On Sat, 17 Aug 2002 14:46:29 -0400, Joe Leikhim
<jleikhim@nettally.com> wrote:

>There is a european version of FRS which opeates in the 70CM band. You might
>want to look for those radios. However they are likely to be simplex only like
>our FRS.
>
sadly the EU version (PMR446 in UK) operates on 8 channels at a
frequency between 446.0 and 446.5 iirc, our UHF band is 430-440 Mhz.
As for mods to bring them onto our frequencies.. none I've found.

1629. Re: FRS Radios into Ham Radio service?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 20:21:40 UTC
From: Russell Hltn <reply@2newsgroup.com>
Message-ID: <ajmb88aja1@nntp-m01.news.aol.com>
Source record: 42192

In the US, the band plan for 445.00-447.00 is "Shared by auxiliary and control links, repeaters and simplex (local option)" with 446.00 being the "National simplex frequency"

Sounds like they'd fit right in in the US - for licensed operation. I did see where someone has a proposal in front of the FCC to make those frequencies available for visitors. I kinda doubt if it will fly.

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message news:3d5e9c61.23689753@news.freeserve.net...
> On Sat, 17 Aug 2002 14:46:29 -0400, Joe Leikhim
> <jleikhim@nettally.com> wrote:
>
> >There is a european version of FRS which opeates in the 70CM band. You might
> >want to look for those radios. However they are likely to be simplex only like
> >our FRS.
> >
> sadly the EU version (PMR446 in UK) operates on 8 channels at a
> frequency between 446.0 and 446.5 iirc, our UHF band is 430-440 Mhz.
> As for mods to bring them onto our frequencies.. none I've found.

1630. RFI from unknown device

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 21:20:47 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <ultfgbfoajh2ac@corp.supernews.com>
Source record: 42193

Something in the neighborhood has started producing RFI birdies every 60.074 kHz in the upper HF region (at least 20 to 29 MHz). The birdies appear not to be harmonics of the spacing and appear to be weakly modulated at about 130 Hz (which could be 120 Hz).

The birdies are not all of equal strength, but some are S4. The duty cycle seems to be 24/7.

What sort of device should I be looking for?
Thanks, Mac N8TT
--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net

1631. Re: FRS Radios into Ham Radio service?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 21:33:18 UTC
From: Markus B�rtschi <markus@markus.org>
Message-ID: <MPG.17c8df8864147f90989703@maba>
Source record: 42194

I've bought a PMR446 radio and could 'open' it have modified it to cover
the entire UHF band (420-470Mhz). As far as I know it is the only PMR446
modifyable this way. The radio is a 'Team Tecom'. The mod allows to
switch between the PMR mode, LPD mode and HAM mode. It can transmit with
0.5W power and has a SMA antenna connector.
It is really small and works fine on four AAA-cells.

Here a link with a picture:
http://www.thunderpole.co.uk/tecom.htm

The PMR frequencies are the following:
Channel 1 - 446.00625
Channel 2 - 446.01875
Channel 3 - 446.03125
Channel 4 - 446.04375
Channel 5 - 446.05625
Channel 6 - 446.06875
Channel 7 - 446.08125
Channel 8 - 446.09375

Markus

In article <2ti79.2749$Yu.895406194@twister2.starband.net>, "Joel \(
AG4QC \)" <joel@cyberbest.com> says...
> I noticed the FRS radios are dropping in price so you can now buy them at
> Sam's for about $50.00/pair. They operate in the 462-467MHZ range and some
> even have CTSS codes. I was just thinking they are only about 20MHZ or so
> from the ham band and wondering if anyone had any experiences with
> conversion.
>
> Joe Loucka AG4QC
>
>
>

--
Markus Baertschi Phone: ++41 (21) 807 1677
Bas du Ross&#65533; 14b Fax : ++41 (21) 807 1678
CH-1163, Etoy Email: markus@markus.org
Switzerland Homepage: www.markus.org

1632. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-17 23:22:38 UTC
From: WG <nojunk@mail.com>
Message-ID: <2VA79.32093$X5.5912019@news2.telusplanet.net>
Source record: 42195

"John S. MacKay" <k35454@direct.ca> wrote in message
news:ulsp6dckd03qdd@corp.supernews.com...
>
> Russell Hltn <reply@2newsgroup.com> wrote in message
> news:ajl6qc$2mh$2@nntp-m01.news.aol.com...
> > > No, I live in Canada and even RAC is no help. <
> >
> > Neeeeever Miiiiind. <g>
> >
> > > The funny thing about it is that the city is looking
> > > for Hams to provide emergency communications during an emergency and
> > they
> > > have had to go to other municipalities to get them and we have over
> > 400
> > > thousand people in this city. Kind of ridiculous if you ask me.

The city is Vancouver BC of cores. The same city that was the first to ban
smoking in doors in restaurants and the like. Also the same city that ban
the use of radio control planes and gliders and has tried the same ban with
RC boats and cars. The same city that ban Neon signs and the list goes on
and on and on.

> >
> > Well, it sounds like the best move is to sign up and then advise them
> > on the issue. Then you can work on getting it over-turned. I hadn't
> > done anything that grand, I have found that one person who acts DOES
> > make a difference.
> >
> I just got my pc back from the repair shop... in what
province
> is the "over 400 thousand" located, and are you interested in details for
a
> compact top-loaded mag-mount mobile of my own design with which I work the
> Pacific Rim, South America and East Coast North America on 40m to 10m and
> down to 2m for locals (that is,
> when the bands are alive, which at my location in British Columbia they
are
> NOT just now). Miki, VE7AFN/M.
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.381 / Virus Database: 214 - Release Date: 8/2/2002
>

>

1633. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 01:10:26 UTC
From: Fulano de Tal <therealexray@netscape.net>
Message-ID: <3D5EF402.A5DEF16A@netscape.net>
Source record: 42196

WG wrote:
>
> > > >
> > > > The funny thing about it is that the city is looking
> > > > for Hams to provide emergency communications during an emergency and
> > > they
> > > > have had to go to other municipalities to get them and we have over
> > > 400
> > > > thousand people in this city. Kind of ridiculous if you ask me.
>
> The city is Vancouver BC of cores. The same city that was the first to ban
> smoking in doors in restaurants and the like. Also the same city that ban
> the use of radio control planes and gliders and has tried the same ban with
> RC boats and cars. The same city that ban Neon signs and the list goes on
> and on and on.
>

Seems to me that public apathy is the ruling force and a handful of
Hush-Puppied elite are having things their way.
I'd recommend long hair and a penchant for jumping on top of people's
desks. And hey, smoke a cigarette, that really gets 'em.

Welcome to the New Millenium.

-BM

1634. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 01:23:28 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D5EF710.7000403@eznec.com>
Source record: 42097

WG wrote:
>
> The city is Vancouver BC of cores. The same city that was the first to ban
> smoking in doors in restaurants and the like. Also the same city that ban
> the use of radio control planes and gliders and has tried the same ban with
> RC boats and cars. The same city that ban Neon signs and the list goes on
> and on and on.
>

Sounds like it's time to overthrow your representative form of
government and replace it with a dictatorship. Just be careful choosing
your dictator. . .

Roy Lewallen, W7EL

1635. Re: how to deal with limited antenna space?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 01:28:11 UTC
From: "John S. MacKay" <k35454@direct.ca>
Message-ID: <ultu37ro64p33f@corp.supernews.com>
Source record: 42098

TOP POSTING TO SAVE TIME. You are in Vancouver... I am in Burnaby. Contact me directly: k35454@ direct.ca if you like. The last time I tried to help someone out over the ng, my sweet voice of reason was drowned out by the braying of the arrl/rac donkeys for whom if it isn't in the index, it either isn't any good or doesn't exist. Miki VE7AFN/M.
WG <nojunk@mail.com> wrote in message
news:2VA79.32093$X5.5912019@news2.telusplanet.net...
>
> "John S. MacKay" <k35454@direct.ca> wrote in message
> news:ulsp6dckd03qdd@corp.supernews.com...
> >
> > Russell Hltn <reply@2newsgroup.com> wrote in message
> > news:ajl6qc$2mh$2@nntp-m01.news.aol.com...
> > > > No, I live in Canada and even RAC is no help. <
> > >
> > > Neeeeever Miiiiind. <g>
> > >
> > > > The funny thing about it is that the city is looking
> > > > for Hams to provide emergency communications during an emergency and
> > > they
> > > > have had to go to other municipalities to get them and we have over
> > > 400
> > > > thousand people in this city. Kind of ridiculous if you ask me.
>
> The city is Vancouver BC of cores. The same city that was the first to ban
> smoking in doors in restaurants and the like. Also the same city that ban
> the use of radio control planes and gliders and has tried the same ban
with
> RC boats and cars. The same city that ban Neon signs and the list goes on
> and on and on.
>
> > >
> > > Well, it sounds like the best move is to sign up and then advise them
> > > on the issue. Then you can work on getting it over-turned. I hadn't
> > > done anything that grand, I have found that one person who acts DOES
> > > make a difference.
> > >
> > I just got my pc back from the repair shop... in what
> province
> > is the "over 400 thousand" located, and are you interested in details
for
> a
> > compact top-loaded mag-mount mobile of my own design with which I work
the

> > Pacific Rim, South America and East Coast North America on 40m to 10m
and
> > down to 2m for locals (that is,
> > when the bands are alive, which at my location in British Columbia they
> are
> > NOT just now). Miki, VE7AFN/M.
> >
> >
> > ---
> > Outgoing mail is certified Virus Free.
> > Checked by AVG anti-virus system (http://www.grisoft.com).
> > Version: 6.0.381 / Virus Database: 214 - Release Date: 8/2/2002
> >
> >
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.381 / Virus Database: 214 - Release Date: 8/2/2002

1636. looking for a few items and some help on maxar 80 conversions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 01:36:18 UTC
From: WebMonkey <kb0wlf@earthlink.net>
Message-ID: <5butlusdq26kfvjgl38cd9dbq79i7vgsqj@4ax.com>
Source record: 42099

does anyone know if the maxar 80 , 800mhz crystal rig can be converted
for 900 ham use ?

have 4 of these in good working order and want to use them as link
txcvr for my repeater system if they can be converted fairly easily.
the shift is pretty far, almost 100 megs. so if it's not feasable,
i'll just have to sell them off.

also, does anyone have a pa for the ge mastr exec lowband mobile ?

kinda roasted the one i had and would like to replace it fairly
cheaply =]

thanks for your time
A.C. Curtis
KBï¿½WLF - owner operator of the mighty 45 multicast repeater system
53.45 and 442.45, 77.0Hz enc/dec, hf/2m remote base, IRLP #745
mailto:demoman@rollanet.org
http://www.rollanet.org/~demoman

1637. Re: RFI from unknown device

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 02:12:29 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <hoD79.17121$Ke2.1414840@bgtnsc04-news.ops.worldnet.att.net>
Source record: 42100

how bout one of them invisible dog fences?

--
If first you don't succeed, do the same thing again...see what happens

1638. Re: Pot

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 03:14:20 UTC
From: Mr Ronald E Paul <Aeons2c@solardata.net>
Message-ID: <ajn3a2$3v8$1@news.chatlink.com>
Source record: 42101

--
Mr Ronald E Paul
www.aeonsciltd.net

"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0208071149.7574e1b3@posting.google.com...
> I'd use audio taper.
>
> Cheers,
> Tom
>
> "Bill Hennessy" <bhennessy@281.com> wrote in message
news:<3d513662$0$2434$9a6e19ea@news.newshosting.com>...
> > If one wanted to use a 10K pot with a LM386 chip for a volume control
would
> > one use a audio or liner taper?

1639. Re: RFI from unknown device

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 04:39:56 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3D5F251C.2BA5BFDC@nettally.com>
Source record: 42102

Harmonic of TV horizontal oscillator? 15 KHz

"J. McLaughlin" wrote:

> Something in the neighborhood has started producing RFI birdies every
> 60.074 kHz in the upper HF region (at least 20 to 29 MHz). The birdies
> appear not to be harmonics of the spacing and appear to be weakly
> modulated at about 130 Hz (which could be 120 Hz).
>
> The birdies are not all of equal strength, but some are S4. The duty
> cycle seems to be 24/7.
>
> What sort of device should I be looking for?
> Thanks, Mac N8TT
> --
> J. Mc Laughlin - Michigan USA
> Home: JCM@Power-Net.Net

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

1640. A simple FM receiver awaits you!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 05:23:49 UTC
From: braincambre500@yahoo.com
Message-ID: <85a87c6c.0208172123.423e2cc9@posting.google.com>
Source record: 42103

Hello all,

Without taking too much time here, I have designed a one transistor FM receiver. I call it the 'Radio Shack Special', since all of the parts may be purchased there, except for the variable capacitor, which can be skinned a different way!

Philip from Florida just got thru making it and was astouded. I know, I was astounded too when I completed my design...sensitivity...selectivity... and great audio output is what you will get with the simple one transistor MPF102. Yes, IT MUST BE AN MPF102. I have experimented with this transistor for nearly one year and have to it done pat!

So, without further ado...go to my website and scrool down 'till you see 'The Radio Shack Special Project', and then read what Pedro, Dick and Philip had to say about it too...just don't take my words.

I thank you for your time and surrender this project to anyone who loves simple and yet, dynamic endings!

My website is at: http://braincambre500.freeservers.com

a friend, Patrick

1641. Re: Pot

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 05:47:40 UTC
From: Fulano de Tal <therealexray@netscape.net>
Message-ID: <3D5F34FC.544940FF@netscape.net>
Source record: 42104

Mr Ronald E Paul wrote:
Seems MISTER Ronald E fancies himself as a pot dealer!?!
-ex

>
> --
> Mr Ronald E Paul
> www.aeonsciltd.net
>
> "Tom Bruhns" <k7itm@aol.com> wrote in message
> news:3200347.0208071149.7574e1b3@posting.google.com...
> > I'd use audio taper.
> >
> > > Cheers,
> > > Tom
> >
> > "Bill Hennessy" <bhennessy@281.com> wrote in message
> news:<3d513662$0$2434$9a6e19ea@news.newshosting.com>...
> > > If one wanted to use a 10K pot with a LM386 chip for a volume control
> would
> > > one use a audio or liner taper?

1642. Re: Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 08:25:18 UTC
From: John Fletcher <John@kanga.demon.co.uk>
Message-ID: <ZkDP$CAun1X9EwFR@kanga.demon.co.uk>
Source record: 42105

One of my pet topics!

Hello Zed and the group,

In article <M6q79.26383$dr.5100984@e3500-atl1.usenetserver.com>, Zed
<G@G.com> writes
>most of the world uses metric system , USA uses the imperial system ,just
>as easily we could have used a different system to count frequency.

The metric system and the decimal system are two different things. The
metric system is a decimal system, yes, but decimal is used in parts of
the imperial system (tenths/hundredths/thousandths of an inch, and I
think there are ten US pints in a gallon - in the UK we have eight
pints).

>Think about it , we're so used to 0-9 to count , measure ,anything.Its hard
>to think outside this.
> it was developed by asian/indian culture, because of the number of fingers
>on both hands.

It's an unfortunate choice. The value of a numbering system increases
with the number of factors.

10 - halfs, fifths, tenths three
12 - halfs, thirds, quarters, sixths, twelfths five
16 - halfs, quarters, eighths, sixteenths four

Looks like base twelve gives best value, and we only have to invent two
new symbols.

>could you Imagine a radio frequency with a hex readout ?

Not easily, but I was taught to count in tens, to my disadvantage. Years
ago when I programmed the Z80 without an assembler I could do hex
addition and subtraction in my head for calculating jumps, so I expect I
could learn. I have an uncomfortable feeling, though, that once I'd read
the display I'd be converting it back into decimal.
>
>We make the frequency count fit into our way of counting, base10 , but can
>frequency find a harmonius or perfect counting system?
>
Binary might be good. Doubling the frequency just shifts everything to
the left one notch. The display could be very cheap too. 25 LEDs cover
from DC to the top of HF (33,554,431 Hz) with 1 Hz resolution. 28 LEDs
in four 7-segment displays only go to 9,999 Hz.

Any other suggestions?

John G4EDX

--
John Fletcher

1643. Re: A simple FM receiver awaits you!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 09:56:40 UTC
From: c.a.m@nospammam.blueyonder.co.uk
Message-ID: <mnrulusp6d1mlpgfat2aerd7jfjp9tqrad@4ax.com>
Source record: 42106

This guy should be banned, all he does is post this to this NG as regular as clockwork :(

Come up with something new and interesting and maybe people might have an interest.

Lexx

1644. Re: Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 12:37:48 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D5F951C.9000801@eznec.com>
Source record: 42107

For the record, we also have 8 pints to a gallon. But our pints are 16 ounces instead of 20. Our ounces are the same size as yours, so the net result is that our pints, quarts, and gallons are 4/5 the size of the imperial versions. Here, a "pint's a pound, the world around" (pint of water, that is). There, a "pint of water weighs a pound and a quarter".

Once again, my hat's off to our neigbors to the north. Canada did the conversion to metric, and did it right.

Roy Lewallen, W7EL

John Fletcher wrote:
>
> The metric system and the decimal system are two different things. The
> metric system is a decimal system, yes, but decimal is used in parts of
> the imperial system (tenths/hundredths/thousandths of an inch, and I
> think there are ten US pints in a gallon - in the UK we have eight
> pints)
> . . .

1645. Want to print quality QSL card? No problem!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 13:19:52 UTC
From: Gennady Treus <ux5uo@qsl.net>
Message-ID: <ajo76rnah2@ns2.nursat.net>
Source record: 42108

You may order your new QSL-cards from "UX5UO print":
Almost any type of QSL cards is available today.

Price of 1000 QSL-cards (including handling and mailing fee) is:
"Simple" (single colour one side 150 g/sq.m paper) cards - 22 USD*
"Advanced" (single colour one side 200 g/sq.m paper) cards - 26 USD
"Middle" (two colours one side 200 g/sq.m paper) cards - 32 USD
"Middle2" (two colours double sided 200 g/sq.m paper) cards - 38 USD
"Business" (200 g/sq.m paper double sided matt photo) cards - 44 USD
"Luxury" (200 g/sq.m paper double sided glossy photo) cards - 56 USD

Discount for ordering 3000 and more cards as well.
500 cards is possible as exception. Special discount for DX stations.

Cards will be printed within 3-4 weeks upon receiving order and payment
for all types of cards except picture cards (within 2 months for photo
cards).

Send your order (photos, rough design, text data etc) via mail:
P.Box 925 Kiev-100 02100 Ukraine
Phone (38044) 450-3752

or via e-mail to UX5UO ux5uo@qsl.net

Send the payment* (cheque, IRC, cash via REGISTERED mail) to:
Mr Vlad PASHYN (M0UNF)
Address: 43 Nine Acres Road, Cuxton, Kent, ME2 1EN, U.K.
e-mail: vladimir@clara.net

Visit my website: http://www.qsl.net/ux5uo http://www.i.com.ua/~ux5uo
and look at this page: http://www.eham.net/reviews/detail/1136

73 de Gennady UX5UO
mailto: ux5uo@qsl.net

1646. Re: Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 14:08:37 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.000001b1.007c293c@btinternet.com>
Source record: 42109

Hi,

Did Boeing design the 777 using feet and inches and what
about the standards used during any of the joint aerospace
projects between the US, Europe and the Russians?

Just curious - Joe, G3LLV

1647. Re: RFI from unknown device

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 14:57:43 UTC
From: John O'Flaherty <wewelcomespam@blackhole.net>
Message-ID: <rddvlugb24nkqikjrpcnqarunhuaorgnhe@4ax.com>
Source record: 42110

On Sat, 17 Aug 2002 17:20:47 -0400, "J. McLaughlin"
<JCM@Power-Net.Net> wrote:

>Something in the neighborhood has started producing RFI birdies every
>60.074 kHz in the upper HF region (at least 20 to 29 MHz). The birdies
>appear not to be harmonics of the spacing and appear to be weakly
>modulated at about 130 Hz (which could be 120 Hz).
>
>The birdies are not all of equal strength, but some are S4. The duty
>cycle seems to be 24/7.
>
>What sort of device should I be looking for?

Maybe a nearby switching power supply?

--
john

1648. Re: RFI from unknown device

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 14:58:13 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <9CO79.7078$0p1.125869@news2.ulv.nextra.no>
Source record: 42111

"J. McLaughlin" <JCM@Power-Net.Net> wrote in message
news:ultfgbfoajh2ac@corp.supernews.com...
> Something in the neighborhood has started producing RFI birdies every
> 60.074 kHz in the upper HF region (at least 20 to 29 MHz). The birdies
> appear not to be harmonics of the spacing and appear to be weakly
> modulated at about 130 Hz (which could be 120 Hz).

Could it be a 100Mbps ethernet which is not properly balanced? It will emit
at about every 31.5 kHz or so

73, Sverre

www.qsl.net/la3za

1649. Re: RFI- Monitor Shielding ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 15:15:26 UTC
From: John O'Flaherty <wewelcomespam@blackhole.net>
Message-ID: <geevlu00guijebm53ku0iqdngf6ldeljqj@4ax.com>
Source record: 42112

On Thu, 15 Aug 2002 09:46:12 -0500, "newsguy" <harpoon32@yahoo.com>
wrote:

>Everything I have seen involved elaborately made metal boxes in the $700
>range. Yikes!
>Given how many people use a computer these days with thier radio, there has
>to be a cheaper way? But I havent come across anything yet.

$700? Can't you get an lcd monitor for less than that? I would think
those would have much less rfi.
--
john

1650. buffing the hm-102

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 16:12:31 UTC
From: Gary & Angela Belcaster <gbelcas@charter.net>
Message-ID: <gbelcas-9F6EF7.11123118082002@corp.supernews.com>
Source record: 42113

I have been looking for another project for a bit and stumbled on a construction project in the '99 Handbook. The article details an accurate directional wattmeter and is on page 22.36. Both this circuit and one in a Feb '90 QST article (A Simple and Accurate QRP Directional Wattmeter) use a post-detector correction circuit to substantially improve low power and swr accuracy. Ultimately, I'm wondering if I can use the detector circuit in the venerable and nearly ubiquitous heathkit hf swr/wattmeter (hm-102) as a core for an enhanced accuracy meter. Now the first broad question - can this correction be done in software (got a sleeve of 8051's to use up!). Is there a wattmeter guru out there who can get me started ?? Thanks in advance.

Gary

1651. Re: Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 16:17:33 UTC
From: mcalhoun@ksu.edu
Message-ID: <ajohat$p3@unix2.cc.ksu.edu>
Source record: 42114

>For the record.... Here, a "pint's a pound, the world around" (pint of
>water, that is). There, a "pint of water weighs a pound and a quarter".

>Once again, my hat's off to our neigbors to the north.
>Canada did the conversion to metric, and did it right.

An unknown (at least to me) someone once said, and I repeat it regularly,
that the United States has been inching its way toward the metric system
for many, many years!

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

1652. Re: Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 16:22:36 UTC
From: mcalhoun@ksu.edu
Message-ID: <ajohkc$rg@unix2.cc.ksu.edu>
Source record: 42116

>....[snip]....
>It's an unfortunate choice. The value of a numbering system increases
>with the number of factors.

>10 - halfs, fifths, tenths three
>12 - halfs, thirds, quarters, sixths, twelfths five
>16 - halfs, quarters, eighths, sixteenths four

Didn't the Aztecs use base SIXTY?
60 - halfs, thirds, quarters, fifths, sixths, tenths,
twelfths, fifteenths, twentieths, thirtieths ten divisors!

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

1653. 6M Maxtrac Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 16:29:02 UTC
From: NJSCAN <njscan@lycos.com>
Message-ID: <dXP79.46549$EJ4.1419338@news4.srv.hcvlny.cv.net>
Source record: 42115

I've recently programmed a 42-50 Mhz Motorola Maxtrac to the 6M amateur band. I used the modification on the "Batlabs" page, adding some solder to get it to transmit beyond 50 Mhz. It helped, but only to the point where I can get full output to about 51.6 mhz. Beyond that, the power folds back to about 20W. Does anyone know of any modifications that can be done to extend the coverage by another 1 Meg or so? How about any other web sites that discuss the issue? Please, if you can help, drop me an E mail at njscan@lycos.com Mt ISP is having issues with USENET so I can't always access it. Thanks

Bob

Bergen County, NJ

1654. Re: Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 16:42:08 UTC
From: George Tyrebyter <GeoTyrebyter@netscape.net>
Message-ID: <3D5FCE60.76671531@netscape.net>
Source record: 42117

John Fletcher wrote:
>
> ...., and I
> think there are ten US pints in a gallon - in the UK we have eight
> pints).

No, eight pints per gallon in the US. 16 fluid ounces per pint, which
means a pint's a pound at standard temperature and pressure.

> It's an unfortunate choice. The value of a numbering system increases
> with the number of factors.
>
> 10 - halfs, fifths, tenths three
> 12 - halfs, thirds, quarters, sixths, twelfths five
> 16 - halfs, quarters, eighths, sixteenths four
>
> Looks like base twelve gives best value, and we only have to invent two
> new symbols.

You left out
60 - halfs, thirds, quarters, fifths, sixths, eighths, tenths, twelfths,
fifteenths, twentieths, thirtieths, sixtieths.
And we already have experience with 60,-- time and angles.

--
George Tyrebyter

1655. Re: Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 17:09:50 UTC
From: Dave Holford <holford@sympatico.ca>
Message-ID: <3D5FD4DE.60F29AE6@sympatico.ca>
Source record: 42119

Roy Lewallen wrote:
>
> For the record, we also have 8 pints to a gallon. But our pints are 16
> ounces instead of 20. Our ounces are the same size as yours, so the net
> result is that our pints, quarts, and gallons are 4/5 the size of the
> imperial versions. Here, a "pint's a pound, the world around" (pint of
> water, that is). There, a "pint of water weighs a pound and a quarter".
>
> Once again, my hat's off to our neigbors to the north. Canada did the
> conversion to metric, and did it right.
>
> Roy Lewallen, W7EL
>

Interestingly enough, for some things that officialdom obviously feels important, we regress to imperial. Example is whenever some individual is wanted by the police their height and weight are almost invariably given in imperial rather than metric - at least in Ontario.

I also find it surprising that my grandkids and the kid who cuts my grass are very comfortable with imperial, although they have some difficulty using a dial phone or telling time from an analog clock.

I also find it amazing that Hams would want to use anything other than metric.

Dave Holford
VE3HLU

1656. Re: Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 17:14:22 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <2tkvlu47cd5rjrjmhv3dc6rjrmpgivt6p5@4ax.com>
Source record: 42118

On Sun, 18 Aug 2002 14:08:37 +0000 (UTC), Joe McElvenney <ximac@btinternet.com> wrote:
> Did Boeing design the 777 using feet and inches and what
>about the standards used during any of the joint aerospace
>projects between the US, Europe and the Russians?

NASA tried to go all metric, but their suppliers balked. So they
give dimensions in both systems in their contract proposals.
That doesn't pose any problems as long as a supplier works
consistently in one set of units or the other. Where things
can get nasty is if they transpose one set of units for the other
when communicating with each other. That has happened.

Gary

1657. Re: Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 17:19:17 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d5fd2ed.85306729@news.triconet.org>
Source record: 42121

On Sun, 18 Aug 2002 09:25:18 +0100, John Fletcher
<John@kanga.demon.co.uk> wrote:

|Any other suggestions?

Yes. Metric bolts should have 10 flats on them so I can get a clue as
to what wrench to use. <g>

Nothing quite as pathetic as US manufacturers' early attempts to
metricize by using a mix of metric and SAE fasteners on the same
vehicle. It took four different wrench sizes to adjust the belt
tension on one of my trucks.

1658. Re: Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 17:25:16 UTC
From: "r.crowley" <rcrowley7@xprt.net>
Message-ID: <ulvm3ftbk5415a@corp.supernews.com>
Source record: 42120

Number system has nothing to do with accuracy (or lack of it).
A given number (at least integer) is identical in ANY number system.
Note that many frequency counters use a different number system to count
than they use to display. Apparently I'm missing the point of the original
question.

1659. Re: Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 17:36:14 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <0cmvlukunjtitqn1pgm61mh0l7odv8lopt@4ax.com>
Source record: 42122

On 18 Aug 2002 11:22:36 -0500, mcalhoun@ksu.edu (Myron A Calhoun) wrote:
>>....[snip]....
>>It's an unfortunate choice. The value of a numbering system increases
>>with the number of factors.
>
>>10 - halfs, fifths, tenths three
>>12 - halfs, thirds, quarters, sixths, twelfths five
>>16 - halfs, quarters, eighths, sixteenths four
>
>Didn't the Aztecs use base SIXTY?
> 60 - halfs, thirds, quarters, fifths, sixths, tenths,
> twelfths, fifteenths, twentieths, thirtieths ten divisors!

Don't know about the Aztecs, but the Babylonians used
base 60. That's why there are 60 seconds to the minute
and 60 minutes to the hour, also 360 degrees in a circle.
They were the first systematic astronomers (astrologers)
and needed convenient ways to keep track of time and
angles. Having a lot of whole number divisors made their
calculations easier. (The decimal point and zero hadn't
been invented yet. The arabs did that later.)

Gary

1660. Re: Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 19:33:07 UTC
From: Mark Hall <mark.hall34@verizon.net>
Message-ID: <3D6020A2.92D87B8@verizon.net>
Source record: 42123

Personally, I think the world should be Hexadecimal..

'73 KI4Z

George Tyrebyter wrote:

> John Fletcher wrote:
> >
> > ...., and I
> > think there are ten US pints in a gallon - in the UK we have eight
> > pints).
>
> No, eight pints per gallon in the US. 16 fluid ounces per pint, which
> means a pint's a pound at standard temperature and pressure.
>
> > It's an unfortunate choice. The value of a numbering system increases
> > with the number of factors.
> >
> > 10 - halfs, fifths, tenths three
> > 12 - halfs, thirds, quarters, sixths, twelfths five
> > 16 - halfs, quarters, eighths, sixteenths four
> >
> > Looks like base twelve gives best value, and we only have to invent two
> > new symbols.
>
> You left out
> 60 - halfs, thirds, quarters, fifths, sixths, eighths, tenths, twelfths,
> fifteenths, twentieths, thirtieths, sixtieths.
> And we already have experience with 60,-- time and angles.
>
> --
> George Tyrebyter

1661. Re: 6M Maxtrac Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 19:33:20 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <4ES79.13164$IJ.1686@sccrnsc02>
Source record: 42124

Bob -

Although you can program many commercial radios for the amateur frequencies, I have found that an "alignment" of the radio for the new frequency coverage - is often desirable. This is especially true of the 30-50 MHz (low band VHF) and some 150-174 MHz (high band VHF) radios.

This is specifically covered under the "Hard Fix" section low band VHF Maxtrac radios moved to 6 meters.
http://www.batlabs.com/6mmax.html

If you don't have the equipment (dummy load, RF wattmeter - Bird, signal generator), a Motorola shop can make these adjustments (Receive sensitivity and TX output) in an hour or less. A Cushman would be handy for this adjustment.

Greg
w9gb
"NJSCAN" <njscan@lycos.com> wrote in message
news:dXP79.46549$EJ4.1419338@news4.srv.hcvlny.cv.net...
> I've recently programmed a 42-50 Mhz Motorola Maxtrac to the 6M amateur
> band. I used the modification on the "Batlabs" page, adding some solder to
> get it to transmit beyond 50 Mhz. It helped, but only to the point where I
> can get full output to about 51.6 mhz. Beyond that, the power folds back
to
> about 20W. Does anyone know of any modifications that can be done to
extend
> the coverage by another 1 Meg or so? How about any other web sites that
> discuss the issue? Please, if you can help, drop me an E mail at
> njscan@lycos.com Mt ISP is having issues with USENET so I can't always
> access it. Thanks
>
>
>
> Bob
>
> Bergen County, NJ
>
>

1662. Re: Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 19:57:26 UTC
From: "r.crowley" <rcrowley7@xprt.net>
Message-ID: <ulvv186jrb735@corp.supernews.com>
Source record: 42125

"Mark Hall" wrote ...
> Personally, I think the world should be Hexadecimal..
> '73 KI4Z

So is that "73" decimal, or hex?
What does 115 mean? :-)

1663. Re: RFI- Monitor Shielding ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 20:05:18 UTC
From: MS Bob <msbob@hotmail.com-edy>
Message-ID: <4avvluslf5ts5vdr2ct49eeaegffsdcvqi@4ax.com>
Source record: 42126

On Sun, 18 Aug 2002 10:15:26 -0500, John O'Flaherty
<wewelcomespam@blackhole.net> wrote:

>On Thu, 15 Aug 2002 09:46:12 -0500, "newsguy" <harpoon32@yahoo.com>
>wrote:
>
>>Everything I have seen involved elaborately made metal boxes in the $700
>>range. Yikes!
>>Given how many people use a computer these days with thier radio, there has
>>to be a cheaper way? But I havent come across anything yet.
>
>$700? Can't you get an lcd monitor for less than that? I would think
>those would have much less rfi.

According to "Soft Tempest: Hidden Data Transmission Using
Electromagnetic" <http://www.cl.cam.ac.uk/~mgk25/ih98-tempest.pdf> by
Kahn and Anderson, I wouldn't bet on it. The LCD in a laptop generated
a easier to read signal than a traditional CRT monitors. I interpreat
the clearer reception as meaning a stronger signal.

1664. Re: Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 20:13:46 UTC
From: John Fletcher <John@kanga.demon.co.uk>
Message-ID: <BuGptDA6$$X9Ewmf@kanga.demon.co.uk>
Source record: 42137

Thanks, Roy. I knew the US pint was a fluid pound, but I thought our gallons were the same.

73,

John G4EDX

In article <3D5F951C.9000801@eznec.com>, Roy Lewallen <w7el@eznec.com> writes
>For the record, we also have 8 pints to a gallon. But our pints are 16
>ounces instead of 20. Our ounces are the same size as yours, so the net
>result is that our pints, quarts, and gallons are 4/5 the size of the
>imperial versions. Here, a "pint's a pound, the world around" (pint of
>water, that is). There, a "pint of water weighs a pound and a quarter".
>

--
John Fletcher

1665. Re: Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 20:18:18 UTC
From: John Fletcher <John@kanga.demon.co.uk>
Message-ID: <7RlXSHAKEAY9EwLU@kanga.demon.co.uk>
Source record: 42138

Now that's good thinking!

>Yes. Metric bolts should have 10 flats on them so I can get a clue as
>to what wrench to use. <g>

--
John Fletcher

1666. Re: looking for a few items and some help on maxar 80 conversions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 20:57:16 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <MST79.14366$IJ.1805@sccrnsc02>
Source record: 42127

A.C. -

With any Motorola product, I start at the "Batlabs"
http://www.batlabs.com/index.html

Other informative repeater web sites:

SEITS (just to the north of you)
http://www.seits.org/

Repeater Elmers
http://www.repeater-builder.com/rbtip/elmers.html

Repeater Builder's Technical Info. Page
http://www.repeater-builder.com/rbtip/

Repeater Builder's Page
http://www.cdi2.com/build_it/

w9gb

"WebMonkey" <kb0wlf@earthlink.net> wrote in message
news:5butlusdq26kfvjgl38cd9dbq79i7vgsqj@4ax.com...
> does anyone know if the maxar 80 , 800mhz crystal rig can be converted
> for 900 ham use ?
>
> have 4 of these in good working order and want to use them as link
> txcvr for my repeater system if they can be converted fairly easily.
> the shift is pretty far, almost 100 megs. so if it's not feasable,
> i'll just have to sell them off.
>
> also, does anyone have a pa for the ge mastr exec lowband mobile ?
>
> kinda roasted the one i had and would like to replace it fairly
> cheaply =]
>
> thanks for your time
> A.C. Curtis
> KB WLF - owner operator of the mighty 45 multicast repeater system
> 53.45 and 442.45, 77.0Hz enc/dec, hf/2m remote base, IRLP #745
> mailto:demoman@rollanet.org
> http://www.rollanet.org/~demoman

1667. Re: A simple FM receiver awaits you!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 21:26:19 UTC
From: John Fletcher <johnfletch@2e1gmv.freeserve.co.uk>
Message-ID: <ajp3dv$rk9$1@news7.svr.pol.co.uk>
Source record: 42128

looks like a nice project to do,for a bit of fun, thanks!

1668. Re: Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 22:03:32 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ajp5jj$4t9$1@knossos.btinternet.com>
Source record: 42129

Hello Gary. Nice to see you back to add some sanity to the group.

G4FGQ

1669. Re: buffing the hm-102

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 22:12:12 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D601BBC.8050005@eznec.com>
Source record: 42130

I don't see any reason it couldn't be done with software. The whole scheme is very temperature sensitive, though, so you'd have to restrict operation to a fairly narrow temperature range or sense the temperature and compensate.

As it is, the correction used in the QRP wattmeter, at least, isn't exact -- the DC correction only approximates the AC error. It does, however, correct well enough to give very good accuracy. But it would be possible in theory to do even better with software.

You'll find useful equations in the original QST article in the February 1990 issue, but don't depend on them for determining temperature compensation. Temperature is explicitly shown in the equation relating diode voltage and current. But what isn't usually shown is that the saturation current Is is temperature dependent and that dependency usually dominates the overall temperature characteristics.

If nothing else, the project should give you a good introduction to solid state physics if you're not already acquainted with it.

Roy Lewallen, W7EL

Gary & Angela Belcaster wrote:
> I have been looking for another project for a bit and stumbled on a
> construction project in the '99 Handbook. The article details an
> accurate directional wattmeter and is on page 22.36. Both this circuit
> and one in a Feb '90 QST article (A Simple and Accurate QRP Directional
> Wattmeter) use a post-detector correction circuit to substantially
> improve low power and swr accuracy. Ultimately, I'm wondering if I can
> use the detector circuit in the venerable and nearly ubiquitous heathkit
> hf swr/wattmeter (hm-102) as a core for an enhanced accuracy meter. Now
> the first broad question - can this correction be done in software (got
> a sleeve of 8051's to use up!). Is there a wattmeter guru out there who
> can get me started ?? Thanks in advance.
>
> Gary

1670. Re: Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 22:18:14 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <G2V79.49741$eb.3558238@news2.west.cox.net>
Source record: 42131

Original question -- guess it is good as any??

To the hex proposer -- If the creator wanted us to count in hexadecimal he would have given us sixteen fingers. That is fingers 0 thru 9 and fingers Alpha thru Fox --- hmmmm

73 in Hex is 115 for the one who asked -- and he/she was probably kidding.

Then again 73 + 88 = 161 (seen that one yet on your QSL card or on CW ???

And in CB it is passing the good numbers - slowly invading the Ham bands along with the "first personal is"
All in good (number) fun.

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com

1671. Re: Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-18 23:08:03 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ajp9ci$9bj$1@paris.btinternet.com>
Source record: 42132

It took four different wrench sizes to adjust the belt
> tension on one of my trucks.
==========

Yeah, international standardisation of measurements, currencies, company accounts, languages, is a matter of economics, saving of labour and a reduction of friction.

It's a long tedious process. It takes at least two human generations to achieve any significant improvement. And then only after determined agreed international effort.

Something must be done to find room on this tiny overpopulated, polluted environment, dangerous Earth. Otherwise the basic animal instincts of survival of the fittest will find their own solutions.

Is this what everybody wants? Are we to follow the dinasaurs? Should we search for another uninhabited planet somewhere else in the Galaxy and pollute that?

Or should we relax and safe-sex masturbate in front of 24-hour pornography on the TV and wait for the inevitable?

Get your FREE radio design software from the following website -
---
==========
Regards from Reg G4FGQ
Go to http://www.g4fgq.com
==========

>

1672. Help Identify this radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-19 03:26:43 UTC
From: tayl0rr@yahoo.com
Message-ID: <F27DEF24F7A3CA02.49F52902ABEB90DE.AB903E6591D11DFD@lp.airnews.net>
Source record: 42133

Please help me identify this radio. I believe it is a 40 meter transceiver home built. It has 4 xtals that all say 4.0 on them. It has 4 ic's, I believe the power regulator is a 2n3553-452. I looked at Kanga and I don't think it is one of theirs. I would like to know what it is, what voltage to power it with, and how to tune it. I have two pictures posted at, sorry they are not perfectly clear.

http://www.greendot.net/radio1.JPG
http://www.greendot.net/radio2.JPG

Thanks
Robert

1673. Voice capable transceiver kits?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-19 03:28:39 UTC
From: tayl0rr@yahoo.com
Message-ID: <BD097DBC642488F2.B7921C19E108C19A.5BD93727B9A5CE70@lp.airnews.net>
Source record: 42134

Is anyone still making voice capable transceiver kits? 20 meter, 40 meter?

Thanks
Robert

1674. Re: A simple FM receiver awaits you!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-19 04:54:17 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <ZR_79.19204$Ke2.1563374@bgtnsc04-news.ops.worldnet.att.net>
Source record: 42135

nice work...

--
If first you don't succeed, do the same thing again...see what happens

1675. More...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-19 04:56:10 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <KT_79.19206$Ke2.1565236@bgtnsc04-news.ops.worldnet.att.net>
Source record: 42136

ive just completed a very nice, easy to follow cd with plans to build 11 meter (CB) antennas, with MORE info on tune-ups, convertions, mic wiring, you name it...this thing is loaded with useful info on doing your own repairs and modifications. Explains how toos, and pdf file on home-kits and MORE...pictures are high quality, formulas, and do-nots that will get you up and sounding great...want to install your own talk-back, echo board, want to make your own swing-kit? well theres More, More, More (title of my cd) anyone interested, email me. Many hours and weekends compiling all this info in an easy to read format...Ive decided NOT to copyright this, as friends and 'Masters' have help write this/ you'll be amazed at how much you'll learn..
.'Golden Screwdriver' is a drop in the
bucket.... email me at horseflygk@att.net I'm 10-7, later

--
If first you don't succeed, do the same thing again...see what happens

1676. Re: Voice capable transceiver kits?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-19 11:51:23 UTC
From: me@nowwhere.com
Message-ID: <3D60DBBA.6B449317@swbell.net>
Source record: 42139

Rob wrote:

> Is anyone still making voice capable transceiver kits? 20 meter, 40
> meter?
>
> Thanks
> Robert

try :http://elecraft.com/

kd5foy

1677. Re: Voice capable transceiver kits?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-19 13:42:15 UTC
From: "Mark J. Dulcey" <mark@buttery.org>
Message-ID: <pan.2002.08.19.13.42.13.984231@buttery.org>
Source record: 42140

On Sun, 18 Aug 2002 23:28:39 -0400, Rob wrote:

> Is anyone still making voice capable transceiver kits? 20 meter, 40
> meter?

Small Wonder Labs (http://www.smallwonderlabs.com) has the White Mountain
series for 75, 40, and 20 meters.

1678. Re: Help Identify this radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-19 14:42:09 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3D6103C1.FF391BB9@ix.netcom.com>
Source record: 42141

It looks like one of Rick Littlefield's designs from about 12 years ago...
But from those out of focus pictures, I'm really guessing.

dr

1679. Re: Tayloe detector again

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-19 15:15:26 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <ajr22f$1cso11$1@ID-61331.news.dfncis.de>
Source record: 42142

I have become a big supporter of the Tayloe method, see my receiver here: http://www.hanssummers.com/radio/polyphase/index.htm, but no time yet for drawing circuit diagrams I'm afraid.

I built an 8-stage polyphase network using 0.1% resistors, and matched the capacitors also to within 0.1% by switching them into a 555 oscillator circuit and measuring the frequency. Unlike many polyphase networks which have same-value resistors, or capacitors (and vary the other), I vary both resistor and capacitor values from one column to the next in accordance with a 1995 QEX article. This eliminates losses in the polyphase network which can otherwise be troublesome. I measured it and it really is lossless it's not just theory.

This receiver is very impressive. I am unable to measure the opposite sideband with my existing primitive measuring equipment, which can only go down to -40dB. I have not yet made any balance adjustments to the polyphase network. Because it is direct conversion I don't get any birdies or image rejection problems.

I recently had my first ever QSO using this receiver and my one-valve 80m transmitter (http://www.hanssummers.com/radio/cwtx/index.htm), homebrew ATU (http://www.hanssummers.com/radio/atu/atu.htm) and frequency counter (http://www.hanssummers.com/electronics/equipment/radiofreqcounter/intro.htm). I have now had 12 contacts with it on 80m, most within the UK but also an SM, F and PA.

Hans Summers
http://www.HansSummers.Com

"Bozidar Pasaric" <bpasaric@mac.com> wrote in message
news:1fh2nc4.v96a5213if6fcN%bpasaric@mac.com...
> In the QEX for July-August there are two interesting articles about the
> Tayloe receiver. The first one is "Dirodyne: A New Radio Architecture?"
> written by Rod Green, VK6KRG. The second one is "Software-Defined Radio
> for Masses" Part 1 - written by Gerald Youngblood, AC5OG.
>
> In fact the Tayloe detector is a bi-directional device: if you go from
> left to the right, you will get an SSB receiver; if you go from right to
> the left, you will get an SSB exciter. In order to avoid the audio
> phaseshift network (APN) Rod Green connects the two Tayloe detectors
> back-to back and in the output he gets an IF SSB signal at the standard
> 453 kHz IF, which then goes to the third mixer. The performance numbers
> he has achieved are quite impressive, although there is some more noise
> - probably because of the three mixers in a chain.
>

> The second article is going to describe a complete transciever (for
> masses!) using a PC sound card and some software - used instead of the
> APN (there will be three more articles).
>
> It seems to me that the main idea in both the articles was how to avoid
> the APN which consists of 24 1% resistors and 24 5% capacitors. I made a
> Tayloe receiver myself a few months ago, and making a good APN was no
> problem. After all, they could be factory-made and brought to the market
> with even higher quality. The greatest problem I had was soldering the
> demultiplexer 3253 to the PCB, because they are all of the SMD type,
> which exhausted my nerves - although I was working with a magnifying
> glass and a micro soldering iron (I'm 70 now). Also, it was not easy to
> find those chips and get them. Besides that, in my opinion even a
> beginner could make the Tayloe receiver if he had a ready made PCB with
> a 3253 on it, or a kit with a ready APN.
>
> I would also like to draw your attention to an article published in the
> British SPRAT No. 101. That is Jan Verduyn's "An Experimantal DC
> Receiver". He successfully uses a VFO with two times the input frequency
> (insted of four times) which is a great simplification and help for
> homebrewers.
>
> Anyhow, Tayloe has hiven a lot if stimulation for new ideas and
> experiments which are revealing and enlightening. No doubt, Tayloe is
> my choice.
>
> Any experience so far, or comments?
> Bozidar, 9A2HL
>
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>

1680. Re: Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-19 16:18:55 UTC
From: n7ws_at_yahoo.com
Message-ID: <3d61150a.2233514@news.triconet.org>
Source record: 42143

On Sun, 18 Aug 2002 23:08:03 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

| It took four different wrench sizes to adjust the belt
|> tension on one of my trucks.
|==========================
|
|Yeah, international standardisation of measurements, currencies, company
|accounts, languages, is a matter of economics, saving of labour and a
|reduction of friction.

For example, we both speak English but haven't standardized on how to
spell standardise <G>.

There is one de facto monetary standard however, the US greenback.
Regardless of how a people might hate the US, they still love our
money. Funny how that works. I think that's the "reduction of
friction" Reg speaks of.

Wes

1681. Re: RFI- Monitor Shielding ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-19 17:24:36 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <V4a89.3100$_q2.17813@newsfep3-gui.server.ntli.net>
Source record: 42144

Hi all,

We make TFT monitors at work, and I can tell you that they can potentially produce more RFI than CRT units. In common with most digital systems this RFI is broadband.

That said, here in Europe we have pretty tough EMI lgislation, all electronic devices sold for use in the EEC must conform to these directives and be marked (CE), so steps are taken to reduce EMI to acceptable levels.

The video cable is still the biggest source of RFI. Many units come with a cheap nasty cable. Buy a good VGA cable and replace the one that shipped with your unit. Check that good earth contact is made throughout the computer unit's case.

Alec Wood M1BNK
Teesside UK

"MS Bob" <msbob@hotmail.com-edy> wrote in message
news:4avvluslf5ts5vdr2ct49eeaegffsdcvqi@4ax.com...
> On Sun, 18 Aug 2002 10:15:26 -0500, John O'Flaherty
> <wewelcomespam@blackhole.net> wrote:
>
> >On Thu, 15 Aug 2002 09:46:12 -0500, "newsguy" <harpoon32@yahoo.com>
> >wrote:
> >
> >>Everything I have seen involved elaborately made metal boxes in the $700
> >>range. Yikes!
> >>Given how many people use a computer these days with thier radio, there
has
> >>to be a cheaper way? But I havent come across anything yet.
> >
> >$700? Can't you get an lcd monitor for less than that? I would think
> >those would have much less rfi.
>
> According to "Soft Tempest: Hidden Data Transmission Using
> Electromagnetic" <http://www.cl.cam.ac.uk/~mgk25/ih98-tempest.pdf> by
> Kahn and Anderson, I wouldn't bet on it. The LCD in a laptop generated
> a easier to read signal than a traditional CRT monitors. I interpreat
> the clearer reception as meaning a stronger signal.
>

1682. SWL antenna help sought. Please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-19 18:56:23 UTC
From: secret_studio@charter.net
Message-ID: <3d613d3d.10339277@news.charter.net>
Source record: 42145

I am a blind SWL who faces some pretty tough reception challenges:

1. My home QTH is a one-story bungalow, located on the north side of a high hill. The small lot is surrounded on all four sides by A.C. power lines, in addition to a line underground. The house also sits in the lobe of our local A.M. broadcast station (5kW at 920 kHz).
2. Being blind, I'm uncomfortable with trying to erect an outdoor antenna. Furthermore, my last two random-wire antennas were vandalized by neighbors (who ignorantly blamed the longwire for causing interference on their cable T.V. signals!) I do have a 30' (a bit less than 10 m) expanse of attic in which to erect a wire antenna, oriented N <-->S.
3. I'm using an aging IC-751A xceiver and an equally old Sangean '803, although I plan to replace the Icom (which needs service) with a recently-acquired NRD-525.

Any suggestions would be most welcome. Hey Elmer! Where are you/?

Please reply via e-mail to: studio@ll.net

73 ES TNX DE PAUL N0YPS QTH GRID EN34 FARIBAULT MN USA

"A no-code appliance user since 1993, an SWL since 1968, blind since forever"

1683. New Forum for MagLoops online

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-19 19:53:57 UTC
From: Carsten Hausdorf <c.hausdorf@hausdorf.org>
Message-ID: <3D614CD5.3669AF96@hausdorf.org>
Source record: 42146
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi there,

we set up a new Forum dealing with MagLoops. You will find Pics,
Reviews, Generel Diskussion and hints at

www.magnetic-loop.de

Please visit us.

The Forum is in English as well as in German language.

Don't hesitate to visit us.

TNX es vy 73 de DF2DD
--
You can contact me at: http://www.hausdorf.org
Unterstï¿½tzen Sie die Aktion "PLC - nein Danke" auf meiner Homepage
Groï¿½er Erfahrungsbericht ï¿½ber Loopantennen
NEU !!! Amateurfunk-Stilblï¿½ten als MP3 zum Download

1684. Measures (was: Is base10 an accurate way of measuring frequency?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-19 20:16:09 UTC
From: Dean Tiegs <dat200205@telusplanet.net>
Message-ID: <87y9b2zjsm.fsf_-_@telusplanet.net>
Source record: 42047

Roy Lewallen <w7el@eznec.com> writes:

> For the record, we also have 8 pints to a gallon. But our pints are 16
> ounces instead of 20. Our ounces are the same size as yours, so the
> net result is that our pints, quarts, and gallons are 4/5 the size of
> the imperial versions. Here, a "pint's a pound, the world around"
> (pint of water, that is). There, a "pint of water weighs a pound and a
> quarter".

The ounces are not the same either. The imperial fluid ounce is
slightly smaller than the U.S. one.

The U.S. gallon is defined as exactly 231 inï¿½, and the fluid ounce is
1/128 of that, which works out to 29.57 cmï¿½.

The imperial gallon was originally defined as the volume of 10 lb of
water at a certain temperature and atmospheric pressure, and more
recently it was redefined as exactly 4.546 09 dmï¿½. The fluid ounce is
1/160 of this, which works out to 28.41 cmï¿½.

So, the U.S. fluid ounce is 4% bigger than imperial; from gill to
gallon the U.S. version is 17% (not 20%) smaller than imperial.

--
Dean Tiegs, NEï¿½-20-52-25-W4
"Confortare et esto robustus"
http://telusplanet.net/public/dctiegs/

1685. MANUAL SALES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-19 22:36:12 UTC
From: joeee1621@aol.com
Message-ID: <20020819183612.25094.00001985@mb-md.aol.com>
Source record: 42048

NEW TITLES DAILY

http://hometown.aol.com/joeee1621/myhomepage/business.html

1686. Zener operating temp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 01:35:50 UTC
From: brokebob@aol.com
Message-ID: <20020819213550.07671.00001887@mb-ct.aol.com>
Source record: 42049

I just installed a one watt, 33 volt zener in a circuit that requires the bias to be 15 ma to handle the load variation. Thirty three volts at .015 amp computes to an RCH under 1/2 watt. So is it normal for a one watt component to run so hot that I cannot hold my finger on the thing? Seems to hold up for the several minutes that I have run it at one stretch.
brokebob@aol.com (broke=not working, retired=not working, retired=broke)

1687. Re: Voice capable transceiver kits?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 01:54:07 UTC
From: paton family <patons@attbi.com>
Message-ID: <3D61A1E5.E9E9C4F4@attbi.com>
Source record: 42050

Hi Rob:

Try Small Wonder Labs for QRP SSB kits and Ramsey Electronics for a kit
20M SSB and CW radio.

73
Art Paton
N9AEP

Rob wrote:

> Is anyone still making voice capable transceiver kits? 20 meter, 40
> meter?
>
> Thanks
> Robert

1688. Re: Help Identify this radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 02:23:05 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <dKh89.211709$uj.312281@rwcrnsc51.ops.asp.att.net>
Source record: 42051

Robert -

The photos are terrible, if you can't take a photos with an electronic
camera -
please don't bother posting them (very hard on my eyes)

The 4 crystals with 4.0 MHz compose the IF filter (common homebrew approach)

Small Wonder Labs and QST designs about 10 years ago liked to use 4.0 MHz
for an IF

Dave had a number of SSB and CW transceiver kits through the years
E-mail Dave, with a good photograph
http://www.smallwonderlabs.com/

Another possibility would be the classic '40-40' transceiver by the New
England QRP club. This design was subsequently published in the November '94
issue of QST and serves as a centerpiece for the ARRL's anthology, 'QRP
Power".

Greg
w9gb

"Rob" <tayl0rr@yahoo.com> wrote in message
news:F27DEF24F7A3CA02.49F52902ABEB90DE.AB903E6591D11DFD@lp.airnews.net...
> Please help me identify this radio. I believe it is a 40 meter
> transceiver home built. It has 4 xtals that all say 4.0 on them. It
> has 4 ic's, I believe the power regulator is a 2n3553-452. I looked
> at Kanga and I don't think it is one of theirs. I would like to know
> what it is, what voltage to power it with, and how to tune it. I have
> two pictures posted at, sorry they are not perfectly clear.
>
> http://www.greendot.net/radio1.JPG
> http://www.greendot.net/radio2.JPG
>
> Thanks
> Robert

1689. Single Board Superhet QRP Transceiver for 40 or 30 meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 02:37:24 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <EXh89.211820$uj.313260@rwcrnsc51.ops.asp.att.net>
Source record: 42052

Robert -

Well my eyes hurt bad enough that I went to my library and pulled down the
QRP Power reference that I mentioned earlier.

Yes, your blurry photo does appear to be the Single Board Superhet QRP
Transceiver for 40 or 30 meters (depending upon component values)

Dave Benson, NN1G (and owner of Small Wonder Labs) was the author of the
November 1994 QST article.
You can also find the article in the QRP Power book or the April 1994 Issue
of "72" the New England QRP Club newsletter.

Q6 is a 2N3553 final PA RF transistor (MRF-237 can be substituted)
Drive adjustment is set by R2
Power output 1 - 2 watts.

Your voltage regulator IC is U2, 78L08 (8 volts)

You can e-mail Dave Benson, NN1G at Small Wonder Labs for any specific
questions you may have.
Chapter 3 of QRP Power has the original QST article as well as follow-up
articles and customizations

73 de w9gb
Greg

"Rob" <tayl0rr@yahoo.com> wrote in message
news:F27DEF24F7A3CA02.49F52902ABEB90DE.AB903E6591D11DFD@lp.airnews.net...
> Please help me identify this radio. I believe it is a 40 meter
> transceiver home built. It has 4 xtals that all say 4.0 on them. It
> has 4 ic's, I believe the power regulator is a 2n3553-452. I looked
> at Kanga and I don't think it is one of theirs. I would like to know
> what it is, what voltage to power it with, and how to tune it. I have
> two pictures posted at, sorry they are not perfectly clear.
>
> http://www.greendot.net/radio1.JPG
> http://www.greendot.net/radio2.JPG
>
> Thanks
> Robert

1690. Re: Zener operating temp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 03:15:15 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3D61B52C.7F58458B@rica.net>
Source record: 42053

Brokebob wrote:
>
> I just installed a one watt, 33 volt zener in a circuit that requires the bias
> to be 15 ma to handle the load variation. Thirty three volts at .015 amp
> computes to an RCH under 1/2 watt. So is it normal for a one watt component to
> run so hot that I cannot hold my finger on the thing? Seems to hold up for the
> several minutes that I have run it at one stretch.
> brokebob@aol.com (broke=not working, retired=not working, retired=broke)

100 degrees C junction temperature should not cause it to fail very
quickly, but lower temperature is better. I have soldered little
brass shim stock wings on the elbows of the bent leads of hot diodes
to give them more surface area to get rid of heat. I think one watt
diodes only have that full rating if mounted very close to a circuit
board with very large solder pads (a square inch, each, or so) on both
sides of the board to act as heat sinks. The one watt spec usually
includes a lead temperature limit very close to the diode body. It is
really a pretty optimistic continuous rating for long life and
reliability.

--
John Popelish

1691. Re: Zener operating temp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 03:16:08 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3D61B477.C8044262@nettally.com>
Source record: 42054

What values are the current limiting resistor and the unregulated supply voltage?
You do have a current limiting resistor?

Brokebob wrote:

> I just installed a one watt, 33 volt zener in a circuit that requires the bias
> to be 15 ma to handle the load variation. Thirty three volts at .015 amp
> computes to an RCH under 1/2 watt. So is it normal for a one watt component to
> run so hot that I cannot hold my finger on the thing? Seems to hold up for the
> several minutes that I have run it at one stretch.
> brokebob@aol.com (broke=not working, retired=not working, retired=broke)

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

1692. any recommendations on books for beginner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 04:04:10 UTC
From: an101@cuic.ca
Message-ID: <978fb1e5.0208192004.3cd6b44b@posting.google.com>
Source record: 42055

Hi
I've come across the subject of rf scanning and ham radio, neither of which I know anything about. The key is that I do want to know more but don't know which books would be best to start me off. If anyone has any suggestions they would be very very very welcome.

thanks
-Ann

1693. Re: buffing the hm-102

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 04:11:36 UTC
From: Gary & Angela Belcaster <gbelcas@charter.net>
Message-ID: <gbelcas-8188F1.23113619082002@corp.supernews.com>
Source record: 42056

In article <3D601BBC.8050005@eznec.com>, Roy Lewallen <w7el@eznec.com>
wrote:

> I don't see any reason it couldn't be done with software. The whole
> scheme is very temperature sensitive, though, so you'd have to restrict
> operation to a fairly narrow temperature range or sense the temperature
> and compensate.
>
> As it is, the correction used in the QRP wattmeter, at least, isn't
> exact -- the DC correction only approximates the AC error. It does,
> however, correct well enough to give very good accuracy. But it would be
> possible in theory to do even better with software.
>
> You'll find useful equations in the original QST article in the February
> 1990 issue, but don't depend on them for determining temperature
> compensation. Temperature is explicitly shown in the equation relating
> diode voltage and current. But what isn't usually shown is that the
> saturation current Is is temperature dependent and that dependency
> usually dominates the overall temperature characteristics.
>
> If nothing else, the project should give you a good introduction to
> solid state physics if you're not already acquainted with it.
>
> Roy Lewallen, W7EL
>
> Gary & Angela Belcaster wrote:
> > I have been looking for another project for a bit and stumbled on a
> > construction project in the '99 Handbook. The article details an
> > accurate directional wattmeter and is on page 22.36. Both this circuit
> > and one in a Feb '90 QST article (A Simple and Accurate QRP Directional
> > Wattmeter) use a post-detector correction circuit to substantially
> > improve low power and swr accuracy. Ultimately, I'm wondering if I can
> > use the detector circuit in the venerable and nearly ubiquitous heathkit
> > hf swr/wattmeter (hm-102) as a core for an enhanced accuracy meter. Now
> > the first broad question - can this correction be done in software (got
> > a sleeve of 8051's to use up!). Is there a wattmeter guru out there who
> > can get me started ?? Thanks in advance.
> >
> > Gary
>

Roy,

Nice to have the author respond and thanks. Insertion loss on those
meters (hm-102) is quite low. If power levels are kept at/less than 500

W, do you think that local heating would be of a level likely to significantly alter diode Is. That is, if my meter is housebound and used at/below these power levels can I take the easy way out and ignore temp variation?? Thanks again.

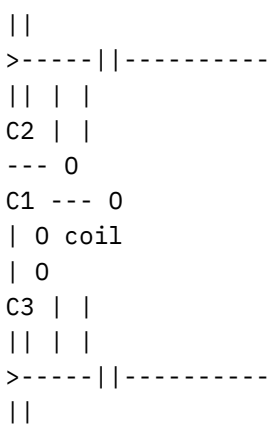
Gary

1694. NMR coil detunes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 11:19:23 UTC
From: Martin Kavec <martin.kavec@uku.fi>
Message-ID: <ajt8k2jau1@luotsi.uku.fi>
Source record: 42057
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.techniques.mag-resonance

Hello everybody,

I would like to ask you for explanation and possible solution for a p
roblem I face.
I made following brand new NMR coil:



This is a simple surface coil (loop of wire, since I post to a groups
where they might not be aware of this term) 3 cm diameter, made of round
copper wire (1.3mm diameter) and the capacitors are high quality nonma
gnetic trimmers made by Voltronics. The coil is powered by coaxial
cable (MIL-17/RG400) 50Ohm cable. The tune frequency is 200MHz. The coil
tunes fine and matches fine (though I don't know exactly on res
onance resistance).
The problem is that the coil detunes as soon as I move the coaxial cable.
Not a problem but a seek for information: I read that additional cap
acitor parallel to the coil wire, attached directly on the wire improves th
e coil homogeneity and the quality. How can I calculate the value of
such a capacitor.

Thank you and I appreciate any kind of help.

Martin Kavec

1695. Re: NMR coil detunes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 11:50:25 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D622D01.15824F26@ieee.org>
Source record: 42058

Martin Kavec wrote:
> I made following brand new NMR coil:

One word of advice, Martin. When you do an ASCII drawing, do it in
fixed font, e.g. Courier. There are many different proportional
fonts out there. Unless everyone is using the same one as you,
the drawings become unreadable.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

1696. Re: any recommendations on books for beginner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 11:56:56 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <ajtaq7$3c8$1@venus.btinternet.com>
Source record: 42059

"pandora" <an101@cuic.ca> wrote in message
news:978fb1e5.0208192004.3cd6b44b@posting.google.com...
> Hi
> I've come across the subject of rf scanning and ham radio, neither of
> which I know anything about. The key is that I do want to know more
> but don't know which books would be best to start me off. If anyone
> has any suggestions they would be very very very welcome.

The ARRL Handbook for Radio Amateurs has everything you need.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

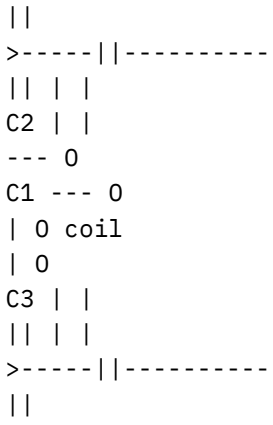
1697. Re: NMR coil detunes - corrected drawing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 13:25:37 UTC
From: Martin Kavec <martin.kavec@uku.fi>
Message-ID: <ajtg0o$c0m$1@luotsi.uku.fi>
Source record: 42060
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,sci.techniques.mag-resonance

CAM wrote:

> Martin Kavec wrote:
>> I made following brand new NMR coil:
>
> One word of advice, Martin. When you do an ASCII drawing, do it in
> fixed font, e.g. Courier. There are many different proportional
> fonts out there. Unless everyone is using the same one as you,
> the drawings become unreadable.

Thanks a lot Cecil. You are right, the drawing looked terrible. This is
updated version.



Martin

1698. Re: any recommendations on books for beginner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 13:25:47 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <4wr89.3178$qe2.114230@newsfep1-win.server.ntli.net>
Source record: 42061

"Leon Heller" <leon_heller@hotmail.com> wrote in message
news:ajtaq7$3c8$1@venus.btinternet.com...
>
> "pandora" <an101@cuic.ca> wrote in message
> news:978fb1e5.0208192004.3cd6b44b@posting.google.com...
> > Hi
> > I've come across the subject of rf scanning and ham radio, neither of
> > which I know anything about. The key is that I do want to know more
> > but don't know which books would be best to start me off. If anyone
> > has any suggestions they would be very very very welcome.
>
>
> The ARRL Handbook for Radio Amateurs has everything you need.
==========
For Ham Radio a very good book for starters is an ARRL (American Radio Relay
League) publication ;
'Now you are talking !' 445 pages , ISBN: 0-87259-597-8.
It is not only an excellent introduction to ham radio but also a course book
for the US Ham Radio
Technician License . I am sure you will be able to find it with the
assistance of a local Ham
through a local radio club ,or from a library in your country.

Good Luck and welcome on board

Frank gm0csz.kn6wh@ntlworld based in Scotland.

1699. Re: RFI from unknown device

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 13:55:18 UTC
From: "J. McLaughlin" <JCM@Power-Net.Net>
Message-ID: <um4igvdmr7l0f4@corp.supernews.com>
Source record: 42062

Many thanks for the ideas. I am putting together a battery powered
receiver to use as a sniffer.
I doubt that the signals are coming from a TV set as the signals are
much too stable in frequency.
I am in a rural area. Most close neighbor is about 300 meters away.
The signals have taken not to be on all of the time. That
complicates finding the source.
Thanks again for the ideas. I will let you know what I find. 73
Mac N8TT

--
J. Mc Laughlin - Michigan USA
Home: JCM@Power-Net.Net
>

1700. Re: Zener operating temp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 14:16:49 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0208200616.6339ec0d@posting.google.com>
Source record: 42063

Joe Leikhim <jleikhim@nettally.com> wrote in message
news:<3D61B477.C8044262@nettally.com>...
> What values are the current limiting resistor and the unregulated supply voltage?
> You do have a current limiting resistor?
>
> Brokebob wrote:
>
> > I just installed a one watt, 33 volt zener in a circuit that requires the bias
> > to be 15 ma to handle the load variation. Thirty three volts at .015 amp
> > computes to an RCH under 1/2 watt. So is it normal for a one watt component to
> > run so hot that I cannot hold my finger on the thing? Seems to hold up for the
> > several minutes that I have run it at one stretch.
> > brokebob@aol.com (broke=not working, retired=not working, retired=broke)

Basic rule of thumb is "If its too hot to touch, its too hot".....

1701. Re: NMR coil detunes - corrected drawing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 14:19:06 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3D624FD9.7030404@ay.com.au>
Source record: 42064

Martin,

Is the drive 'balanced', or does the other side of C3 go to the coax
braid? I would think you'd need to add a balun to stop 'antenna
current' flowing on the braid and making it part of the resonance problem.

If a tight coil of a few turns of the coax near the coil reduces the
detuning effect, that is probably the problem. You could go the sleve
bead choke way as well, but a real VHF balun seems more likely to work well.

You could try making the coil itself the balun.

--
Alan Yates
http://www.vk2zay.net/
The Moon is Waxing Gibbous (95% of Full)

Martin Kavec wrote:
> CAM wrote:
>
>
>>Martin Kavec wrote:
>>
>>> I made following brand new NMR coil:
>>
>>One word of advice, Martin. When you do an ASCII drawing, do it in
>>fixed font, e.g. Courier. There are many different proportional
>>fonts out there. Unless everyone is using the same one as you,
>>the drawings become unreadable.
>
>
> Thanks a lot Cecil. You are right, the drawing looked terrible. This is
> updated version.
>
>
> ||
> >-----||----------
> || | |
> C2 | |
> --- O
> C1 --- O
> | O coil
> | O
> C3 | |
> || | |
> >-----||----------

> ||
>
> Martin

1702. 2 Jennings Vacuum Variable Capacitors FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 15:23:07 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3D625EDB.2080909@charter.net>
Source record: 42065

CVCJ-1000-5S - 7-1000pf, 5KV. ceramic
UCSL-500-5D2639 - 9-500pf, 5KV glass
Both work fine.
100.00 each + shipping OBO

--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

1703. transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 15:56:18 UTC
From: Karl <haddadk@aol.com>
Message-ID: <CEt89.56$IE4.55965@dca1-nnrp2.news.algx.net>
Source record: 42066

I am looking for a wideband (2 MHz) transceiver chipset (in MHz or GHz).
Does anybody know where I can fine one ?

Regards

Karl

1704. FS: Heathkit C-3 Capacitance/resistance checker

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 16:07:24 UTC
From: msenecal1@juno.com
Message-ID: <62bf14a6.0208200807.282712f8@posting.google.com>
Source record: 42067
Cross-posted to: rec.radio.amateur.swap,rec.radio.swap,rec.radio.amateur.homebrew,rec.antiques.marketplace

I have a working Heathkit C-3 that I don't need, and want to sell. It is gray in color, in good shape with the usual use/storage wear, but a couple of the knobs have hairline cracks that could probably be fixed with cement (or just replaced). It is also missing the 1629 eye tube, although if an offer was good, I might be convinced to part with one of mine. I pulled a 1629 from another radio and tested it with the tube installed, and it correctly read all the capacitors and resistors I tested. I've also got a non-orignal manual (printed off of the BAMA) that goes with it.

I don't really know what this is worth, so I'll entertain all genuine offers. If interested, please e-mail me directly.

1705. Re: any recommendations on books for beginner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 16:36:55 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.000001b4.004b83dc@btinternet.com>
Source record: 42068

Hi,

Please excuse me if I've read you wrong but you mention scanners and ham radio together, so it may be that your tastes include public service and utility communications as well as ham radio. In which case, along with any ARRL publications that are recommended you may find such monthly publications as 'Monitoring Times' and 'Popular Communications' to your liking - at least at first.

ARRL's publications, aimed just at the beginner, as well as the 'Handbook' are listed on their site.

http://www.arrl.org/

http://www.monitoringtimes.com/

http://www.popular-communications.com/

73 de G3LLV - Joe

1706. Disagree about handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 17:37:24 UTC
From: newsguy <harpoon32@yahoo.com>
Message-ID: <ajtuov017iu@enews2.newsguy.com>
Source record: 42069

I am a beginner as well and I have to disagree with starting out with the handbook, and do highly recommend starting with Now Your Talking. The hand book is more expensive, and is complete overkill for someone who is merely exploring the possibilities. That said, if you decide to get a license, your next book is the Handbook, its the Bible of amateur radio.

"Leon Heller" <leon_heller@hotmail.com> wrote in message news:ajtaq7$3c8$1@venus.btinternet.com...
>
> "pandora" <an101@cuic.ca> wrote in message
> news:978fb1e5.0208192004.3cd6b44b@posting.google.com...
> > Hi
> > I've come across the subject of rf scanning and ham radio, neither of
> > which I know anything about. The key is that I do want to know more
> > but don't know which books would be best to start me off. If anyone
> > has any suggestions they would be very very very welcome.
>
>
> The ARRL Handbook for Radio Amateurs has everything you need.
>
> Leon
> --
> Leon Heller, G1HSM
> leon_heller@hotmail.com
> http://www.geocities.com/leon_heller
>
>

1707. Re: Disagree about handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 18:32:06 UTC
From: troglodite@aol.com
Message-ID: <20020820143206.25484.00002524@mb-fp.aol.com>
Source record: 42070

>I am a beginner as well and I have to disagree with starting out with the
>handbook, and do highly recommend starting with Now Your Talking. The hand
>book is more expensive, and is complete overkill for someone who is merely
>exploring the possibilities. That said, if you decide to get a license,
>your next book is the Handbook, its the Bible of amateur radio.

And you don't necessarily need a brand new one. The essential information you need has remained unchanged since the mid 80's or so. All that has changed is the gear, and a few new communications modes have been added. Old Handbooks may have unique value for other reasons - coverage of vacuum tube gear, or historical perspectives.

Doug Moore KB9TMY (Formerly K6HWY)

1708. Buying Mini-Circuits parts in the UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 22:55:18 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3D62C9A6.80289D70@alma.demon.co.uk>
Source record: 42071

I have recently become aware of the usefulness of the parts supplied by Mini-Circuits. At a recent radio rally I picked up a POS-900W VCO and TUF-5SM mixer for a tenner (about $15). I intend to use them for experimentation.

I've just finished construction of the (RSGB) simple spectrum analyser. The linearity of the VCO leaves a lot to be desired, but may be replacable with a Mini-Circuits VCO (the POS-300W, but is a bit expensive at 20 quid).

I am aware of JAB who sell some of the MAR/MAV series amplifiers and the SBL mixer. Does anyone know of any other suppliers in the UK, or even better of anyone selling off old or surplus parts. What about Birkett?

regards...

--Gary

1709. Re: buffing the hm-102

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-20 23:25:19 UTC
From: Mark Hall <mark.hall34@verizon.net>
Message-ID: <3D62FA09.2C30497C@verizon.net>
Source record: 42072

Okay.. here's an Idea.. I have a remote 5 position antenna switch on top of the tower.. how about remoting a SWR bridge up to the top of the tower (just before the switch) for a true SWR reading at the antenna.. un polluted by 150' of coax. Not good for tuning an amp, but should show the true antenna match. Any value with this? I have a HM-102 that has a remote head, but likely would have to amplify the head output before running it through 150' of wire.

'73 KI4Z

Gary & Angela Belcaster wrote:

> I have been looking for another project for a bit and stumbled on a
> construction project in the '99 Handbook. The article details an
> accurate directional wattmeter and is on page 22.36. Both this circuit
> and one in a Feb '90 QST article (A Simple and Accurate QRP Directional
> Wattmeter) use a post-detector correction circuit to substantially
> improve low power and swr accuracy. Ultimately, I'm wondering if I can
> use the detector circuit in the venerable and nearly ubiquitous heathkit
> hf swr/wattmeter (hm-102) as a core for an enhanced accuracy meter. Now
> the first broad question - can this correction be done in software (got
> a sleeve of 8051's to use up!). Is there a wattmeter guru out there who
> can get me started ?? Thanks in advance.
>
> Gary

1710. Wtd: Mica compression Trimmer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 00:10:06 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d62d93c.34532739@news.freeserve.net>
Source record: 42073

Hi Folks,
I'm looking for a 450pf mica compression trimmer also known as a
postage stamp trimmer I believe.
Anyone have one I could buy, or know of a source of them preferably in
UK.
many thanks
Mike W, G8NXD aka M3MSM qthr

1711. Re: Zener operating temp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 00:38:50 UTC
From: brokebob@aol.com
Message-ID: <20020820203850.07567.00001941@mb-ct.aol.com>
Source record: 42074

Problem solved. I had mounted three of these diodes in series on a terminal strip but did not solder them because I wanted to make sure that they would do the job. One of the responders reminded me that heat is disipated away from these via the leads. There was almost no thermal contact at the connection but the electrical connections were fine. Once soldered with a tad of extra solder there is no detectable temp rise now. Thanks to all.

brokebob@aol.com (broke=not working, retired=not working, retired=broke)

1712. Re: Zener operating temp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 02:50:35 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3D62FFFB.E63AF0E1@nettally.com>
Source record: 42075

Good lesson to all of us who breadboard or otherwise lash stuff together to experiment.

Brokebob wrote:

> Problem solved. I had mounted three of these diodes in series on a terminal
> strip but did not solder them because I wanted to make sure that they would do
> the job. One of the responders reminded me that heat is disipated away from
> these via the leads. There was almost no thermal contact at the connection but
> the electrical connections were fine. Once soldered with a tad of extra solder
> there is no detectable temp rise now. Thanks to all.
>
> brokebob@aol.com (broke=not working, retired=not working, retired=broke)

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

1713. Re: NMR coil detunes - corrected drawing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 05:45:52 UTC
From: Martin Kavec <martin.kavec@uku.fi>
Message-ID: <ajv9em$cl6$1@luotsi.uku.fi>
Source record: 42076

Alan Yates wrote:

> Martin,
>
> Is the drive 'balanced', or does the other side of C3 go to the coax
> braid? I would think you'd need to add a balun to stop 'antenna
> current' flowing on the braid and making it part of the resonance problem.
>
> If a tight coil of a few turns of the coax near the coil reduces the
> detuning effect, that is probably the problem. You could go the sleve
> bead choke way as well, but a real VHF balun seems more likely to work
> well.
>
> You could try making the coil itself the balun.
>
Alan,

thank you a lot for the response. Yes, the C3 goes to coax braid. Do you think that carefull adjustment of matching trimmers for the same values would help? I have a similar coil (not made by me) and a guy who made it discouraged us to readjust the matching capacitors. Do you think that this could be a reason why that coil tune is stable and my is not.

Martin

1714. Re: Buying Mini-Circuits parts in the UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 06:50:23 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <vImxdKEvgzY9EAIr@ifwtech.co.uk>
Source record: 42077

Gary Morton wrote:
>I have recently become aware of the usefulness of the parts supplied by
>Mini-Circuits. At a recent radio rally I picked up a POS-900W VCO and
>TUF-5SM mixer for a tenner (about $15). I intend to use them for
>experimentation.
>
>I've just finished construction of the (RSGB) simple spectrum analyser.
>The linearity of the VCO leaves a lot to be desired, but may be
>replacable with a Mini-Circuits VCO (the POS-300W, but is a bit
>expensive at 20 quid).
>
>I am aware of JAB who sell some of the MAR/MAV series amplifiers and the
>SBL mixer. Does anyone know of any other suppliers in the UK, or even
>better of anyone selling off old or surplus parts. What about Birkett?
>

As far as I'm aware, the only place in the UK where you can order the
full Mini-Circuits product line is from Mini-Circuits Europe on 01252
832600. Prices may not be good, though... expect about ï¿½1 = $1.

As you've found, other dealers may have a few selected items. The RSGB
Microwave Component Service sell mostly modamps, Hands Electronics sell
some parts and so do GH Engineering. You can find all of these by a web
search.

Forget about Birkett - he's a surplus dealer so his stock is whatever he
happens to have right now. If you want what he has, then his prices are
very good; but if you want something specific, you need to go to a
regular component supplier, and expect to pay more.

Pity about the 'Simple Spectrum Analyser'. The person who designed it
more than 10 years ago is desperately trying to make RSGB stop
re-re-re-publishing it, because he knows it's out of date. The W7ZOI
design is a much better homebrew project (search for his web site).

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

1715. Re: buffing the hm-102

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 08:46:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D63535F.1010509@eznec.com>
Source record: 42078

I don't know the answer to this question. It's been a long time since I went through the calculations. The amount of local heating you'd get at the 500 watt level could be fairly large, depending on how you choose to pick off the voltage and current samples, and where the diodes are placed relative to the heat producing components.

I'd do some experimenting. If temperature is a problem, you might consider putting in a third diode with a very stable voltage across it, sensing the diode current, and using that to determine the correction you'd need.

Roy Lewallen, W7EL

Gary & Angela Belcaster wrote:
>
> Nice to have the author respond and thanks. Insertion loss on those
> meters (hm-102) is quite low. If power levels are kept at/less than 500
> W, do you think that local heating would be of a level likely to
> significantly alter diode Is. That is, if my meter is housebound and
> used at/below these power levels can I take the easy way out and ignore
> temp variation?? Thanks again.
>
> Gary

1716. SL-623,SL-621 and SL612C I need!!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 10:31:17 UTC
From: Bruno IK1VHX <bruno.lusu@tin.it>
Message-ID: <VZJ89.8288$xi1.398887@news2.tin.it>
Source record: 42079

73 to all!
I'm Bruno IK1VHX from Genoa North ITALY.
I'm looking for old PLESSEY SL-621 , SL-623 and
SL-612 C (1 SL-621- 1 SL-623 - 3 SL-612C) to homebrew
a HF receiver with high level mixer FST3125.
Can anyone help me?
Here in Italy it is impossible to find they.
On web I found 2 address in Spain but without results.
Thank you very much
bruno.lusu@tin.it

1717. Re: Buying Mini-Circuits parts in the UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 11:20:04 UTC
From: c.a.m@nospammam.blueyonder.co.uk
Message-ID: <3qt6muklf4di8k5pco3rg82ij6fikggfl0@4ax.com>
Source record: 42080

Call minicircuits in the UK, they havea UK base too, I've ordered from them no problem.

Clive

1718. Re: NMR coil detunes - corrected drawing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 12:02:48 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3D638167.8000002@ay.com.au>
Source record: 42081

Martin Kavec wrote:

> thank you a lot for the response. Yes, the C3 goes to coax braid. Do you
> think that carefull adjustment of matching trimmers for the same values
> would help? I have a similar coil (not made by me) and a guy who made it
> discouraged us to readjust the matching capacitors. Do you think that this
> could be a reason why that coil tune is stable and my is not.

So there is a mechanically/electrically identical coil that doesn't
suffer the same problem? That's weird. The coax feeding the other one
isn't a 'magic' length is it, say n/4 wavelength?

Are the trimmers set to largely different values (wrt each other) on the
stable coil? They may be tuning the line and breaking the shield
current (parallel resonance). Which sounds pretty unlikely to be stable
itself.

I guess you can't just wack ferrites over the coax near the coil in a NMR
application?

If you've got something that can measure RF current by induction (ie a
coil and CRO, or a diode probe) you could try tuning the matching caps
for minimal braid current a metre or so up the line from the coil.
Working on the theory that it is stray RF on the braid that is the
problem, not mechanical deformation of the coil when you move the coax
or its bulk properties changing the near field of the coil.

--
Alan Yates
http://www.vk2zay.net/
The Moon is Waxing Gibbous (98% of Full)

1719. Re: SL-623,SL-621 and SL612C I need!!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 12:14:22 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <ak006p$ee3$2@helle.btinternet.com>
Source record: 42082

"Bruno IK1VHX" <bruno.lusu@tin.it> wrote in message
news:VZJ89.8288$xi1.398887@news2.tin.it...
> 73 to all!
> I'm Bruno IK1VHX from Genoa North ITALY.
> I'm looking for old PLESSEY SL-621 , SL-623 and
> SL-612 C (1 SL-621- 1 SL-623 - 3 SL-612C) to homebrew
> a HF receiver with high level mixer FST3125.
> Can anyone help me?
> Here in Italy it is impossible to find they.
> On web I found 2 address in Spain but without results.

They haven't been made for several years. Cricklewood Electronics in London
might have some of them. They will be *very* expensive! You will find it
much easier and cheaper to use more recent devices.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

1720. Simpel 20 m Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 12:29:56 UTC
From: Andreas Weller <weller@andreas-weller.de>
Message-ID: <ak013v$m3f$05$1@news.t-online.com>
Source record: 42083
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

Hallo!

I'm looking for schematics for an easy to build simple Transmitter for 20 m.
I want to take it on holiday for PSK31. So it can be on the fixed frequency
14.070 MHz.
I know that there are schematics for such a device out there - but I didn't
find it.

Thank you very much!

73 de DF1PAW, Andreas Weller

1721. Re: Buying Mini-Circuits parts in the UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 12:41:49 UTC
From: Godric Goodrich <godric.goodrich@goodrichconsulting.co.uk>
Message-ID: <ak01qc$1k0$1@venus.btinternet.com>
Source record: 42084

Here is the address I found for the UK distributor gleaned from the
mini-circuits web site -

Distribution Center/Local Rep. Mini-Circuits Europe Dale House, Wharf Road
Frimley Green, Camberley, Surrey GU16 6LF, England Phone: 44 1252-832600
Fax: 44 1252-837010
postmaster@uk.minicircuits.com

Regards

Gee
G4NLA

"Gary Morton" <gary@alma.demon.co.uk> wrote in message
news:3D62C9A6.80289D70@alma.demon.co.uk...
> I have recently become aware of the usefulness of the parts supplied by
> Mini-Circuits. At a recent radio rally I picked up a POS-900W VCO and
> TUF-5SM mixer for a tenner (about $15). I intend to use them for
> experimentation.
>
> I've just finished construction of the (RSGB) simple spectrum analyser.
> The linearity of the VCO leaves a lot to be desired, but may be
> replacable with a Mini-Circuits VCO (the POS-300W, but is a bit
> expensive at 20 quid).
>
> I am aware of JAB who sell some of the MAR/MAV series amplifiers and the
> SBL mixer. Does anyone know of any other suppliers in the UK, or even
> better of anyone selling off old or surplus parts. What about Birkett?
>
> regards...
>
> --Gary

1722. Plans for Dual band Mobile Antenna?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 13:08:50 UTC
From: William DeVore <BDeVore@fuse.net>
Message-ID: <um74c3n1rnqs07@corp.supernews.com>
Source record: 42085

Need a nifty plan for a dual band 2meter/440 portable antenna i can use
while I am camping. Anyone know of a good webpage or where I can find one?
Thanks,
Bill
Bdevore@fuse.net

1723. Getting ready for Shelby

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 14:18:04 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3D63A11C.8000600@charter.net>
Source record: 42086

Collins 300G plate transformer
part # 672-1360-00
Pr) 0-105-110-115-120-125 vac 60 hz 1 ph
S1)1200 vct @ 0.283 ccs
DM) Ht= 7.000 Wt = 7.500 Dt = 6.500
weight aprox 45 lbs
checks out fine
75.00+ shipping

This is a nice big plate transformer 14" tall x 11 3/4" wide x 7 1/2"
deep
120/220 primaries 3000v @ 3 to 4 amps center tapped
this baby is pretty heavy i'd say about 100 lbs or close to it.
100.00 + shipping

2 Jennings Vacuum Variable Capacitor

CVCJ-1000-5S - 7-1000pf, 5KV. ceramic
UCSL-500-5D2639 - 9-500pf, 5KV glass
Both work fine.
75.00 each + shipping

I have a nice KDK FM-6033 Six meter rig has tones, Memories 10 i
think It scans -/+ off sets,VFO, call channel.
5/25 watts works perfect looks good. Have mic, power cord and mounting
bracket for it.
125.00+shipping

Oil Caps

1-10mf@1500vdc
1- 2mf@5000vdc
4-1mf@2000vdc
2-1mf@3600vdc
2-1mf@600vdc
4- 250mf@450vdc screw in caps computer grade
make me an offer on these

I have a mobile amp Pride 100 Bi Linear amplifier says 10-80 meters on
the front
has ssb/am preamp
75.00 + shipping

Also Have a 10 METER 2 pill amp About 60-75 watts output with a 10 amp
13.8 vdc power supply built in so you could run a mobile in the house on it.
100.00 + shipping

H card and rca receiver
RCA DRD222RD
with a "H" card. It is a subscription card never been hacked. Org.
owners had cablevision ran and put it away in the closet. been there
since 97
Have remote. Also have a dish if you need it .
would like 125.00 + shipping

Dentron Clipperton L
This amp is a 10!
new caps (8) 470@450v
New board for caps
New full wave HV-8 high voltage rectifiers (2)
New Plate Choke
New Plate cap resistors
New Doorknobs
New Band switch
New Omega electronics Tuned input board
New Powercoat on the cabinet
New Choke
New EQ Resistors
4 full output Taylor 572-B tubes
Have manual and paper work from omega for tuned input board.
This amp is better than new.
650.00 + shipping
thanks for reading
chris NI4L

--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

1724. Re: Zener operating temp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 15:58:08 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3D63B979.F4139050@rica.net>
Source record: 42087

Brokebob wrote:
>
> Problem solved. I had mounted three of these diodes in series on a terminal
> strip but did not solder them because I wanted to make sure that they would do
> the job. One of the responders reminded me that heat is disipated away from
> these via the leads. There was almost no thermal contact at the connection but
> the electrical connections were fine. Once soldered with a tad of extra solder
> there is no detectable temp rise now. Thanks to all.
>
> brokebob@aol.com (broke=not working, retired=not working, retired=broke)

The lesson here is that when it comes to max. power, the manufacturer
will always take every advantage to arrive at the highest value, and
normal practice may have little resemblance to the test setup used for
the max. power spec. Either you study the data sheet closely and find
out exactly what is needed to achieve full power rating, derate
generously, or both.

--
John Popelish

1725. FS: 10 meter amateur radio transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 17:53:16 UTC
From: electricguy <electricguy30@nospamhotmail.com>
Message-ID: <ak0k28$5g2$1@nntp9.atl.mindspring.net>
Source record: 42088
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

Please go to http://www.mindspring.com/~elecman/ar3500.html for details.

Remove nospam when replying

1726. Ham flavored Linux ? :)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 18:11:34 UTC
From: newsguy <harpoon32@yahoo.com>
Message-ID: <ak0l5201d60@enews2.newsguy.com>
Source record: 42092

Just wanting to know if one Linux distro is favored over others in regard to Amatuer radio and electronics usefulness ? So far I am liking Debian, just looking for others ideas please.
Thanks!

1727. Re: Mica compression Trimmer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 18:13:00 UTC
From: geoffrey brown <geoff@spontaflex.freeserve.co.uk>
Message-ID: <ak0l5uoln1@news5.svr.pol.co.uk>
Source record: 42089

http://www.bowood-electronics.co.uk/index.php

£1 each

Cheers Geoff
http://www.spontaflex.freeserve.co.uk/

1728. FS RF Filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 18:34:56 UTC
From: Mike Kulyk <mkulyk@optonline.net>
Message-ID: <y_Q89.102203$EJ4.2997961@news4.srv.hcvlny.cv.net>
Source record: 42090
Cross-posted to: misc.industry.electronics.marketplace,rec.radio.swap,rec.radio.amateur.homebrew

I have 5 filters they are 1 pole bandpass. The notch is about 52 mhz. They have adjustments on the bottom of the filter and with SMA connectors for the input and output. I have sweeps for all 5 filters..

Asking $20 each.

all 5 for $90 shipped free in the CONUS

1729. FS MiniCircuits Splitters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 18:38:33 UTC
From: Mike Kulyk <mkulyk@optonline.net>
Message-ID: <W1R89.102206$EJ4.2999366@news4.srv.hcvlny.cv.net>
Source record: 42091
Cross-posted to: misc.industry.electronics.marketplace,rec.radio.swap,rec.radio.amateur.homebrew,alt.ham-radio.uwave

3 pcs Minicircuits Model ZFSC-2-10G

Price new $70 each.

All 3 for $100 shipped free in the CONUS.

or $45 each plus shipping

1730. Re: Ham flavored Linux ? :)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 20:16:09 UTC
From: Gordon Pritchard <gordon.pritchard@shaw.ca>
Message-ID: <m33ct8c6ie.fsf@oilslick.shaw.ca>
Source record: 42094

>>>>> "harpoon32" == newsguy <harpoon32@yahoo.com> writes:

harpoon32> Just wanting to know if one Linux distro is
harpoon32> favored over others in regard to Amatuer radio and
harpoon32> electronics usefulness ? So far I am liking
harpoon32> Debian, just looking for others ideas please.

I've used Slackware, SuSE 7.2, RedHat 7.2, and a smattering
of Mandrake in there somewhere. If you're running with Debian
now, you'll be fine.

My personal choice is RedHat, because I administer a bunch
of these at work, and it's easier not to shift gears. RedHat is
well-supported (meaning that .rpm's come out pretty quickly,
How-To's refer to init and file-locations that generally match
RedHat, etc).

But the folks that have chosen Debian (and Slackware!) are
usually _very_ strong supporters of those distributions. There
must be a reason...

-Gord

--
Gordon Pritchard, P.Eng. VA7GP VA7SFU
White Rock, B.C. Canada
mailto:gordon.pritchard@shaw.ca

1731. Re: Ham flavored Linux ? :)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 20:25:41 UTC
From: Mike Tatum <miket@cybatek.fsnet.co.uk>
Message-ID: <pan.2002.08.21.20.25.41.67267.19091@cybatek.fsnet.co.uk>
Source record: 42093

On Wed, 21 Aug 2002 18:11:34 +0000, newsguy wrote:

> Just wanting to know if one Linux distro is favored over others in
> regard to Amatuer radio and electronics usefulness ? So far I am liking
> Debian, just looking for others ideas please. Thanks!

Hi,

SUSE is quite good ... depends what in the HAM field you are looking for
??

MikeT ...
SUSE Linux 7.3 Pro

1732. Re: Mica compression Trimmer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 20:29:03 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d63f7d6.707930@news.freeserve.net>
Source record: 42095

On Wed, 21 Aug 2002 19:13:00 +0100, "geoffrey brown"
<geoff@spontaflex.freeserve.co.uk> wrote:

>http://www.bowood-electronics.co.uk/index.php
>
>&#65533;1 each
>
>Cheers Geoff
>http://www.spontaflex.freeserve.co.uk/
>
>
On my way to look, thanks Geoff
--

1733. Re: Mica compression Trimmer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 20:31:41 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d63f87e.876674@news.freeserve.net>
Source record: 42096

On Wed, 21 Aug 2002 19:13:00 +0100, "geoffrey brown"
<geoff@spontaflex.freeserve.co.uk> wrote:

>http://www.bowood-electronics.co.uk/index.php
>
>&#65533;1 each
>
>Cheers Geoff
>http://www.spontaflex.freeserve.co.uk/
>
>
where ?. all I see is overpriced ceramics

1734. Re: Mica compression Trimmer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 20:52:23 UTC
From: geoffrey brown <geoff@spontaflex.freeserve.co.uk>
Message-ID: <ak0ugmrbf1@newsg1.svr.pol.co.uk>
Source record: 41997

Search for trim on the homepage

Here are the results

Search Results

CODE PRODUCT NAME PRICE BUY NOW
SOP062 1 500pF Postage Stamp Trimmer ?1.20 ?1.00

Displaying 1 to 1 (of 1 products) Result Pages

1735. Re: Ham flavored Linux ? :)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 22:23:36 UTC
From: Alex V Flinsch <avflinsch@att.net>
Message-ID: <IpU89.4843$NZ.257717@bgtnsc05-news.ops.worldnet.att.net>
Source record: 41998

On or about Wed, 21 Aug 2002 14:11:34 -0400, "newsguy"
<harpoon32@yahoo.com> wrote about the following in article
<ak0l5201d60@enews2.newsguy.com>:

> Just wanting to know if one Linux distro is favored over others in
> regard to Amatuer radio and electronics usefulness ? So far I am liking
> Debian, just looking for others ideas please. Thanks!

Use whatever distro that you are comfortable with, and just add the extra
apps that you want.

Personally I use Mandrake.

Since you are currently using some sort of MS product (you uset Outlook
to post) yu might want to use one of the easier to install mainstream distros
like Mandrake, Redhat or Suse.

--
Alex / KC2IVL
ft100 software for Linux http://www.qsl.net/kc2ivl
"Good judgment comes from experience,
and a lot of that comes from bad judgment"

1736. Re: Help Identify this radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 23:19:23 UTC
From: Mike Burch <mburch46@mchsi.com>
Message-ID: <3D63F329.DA316421@mchsi.com>
Source record: 41999

> Yep,

Hammerlund HQ 110 no doubt about it. Well not much anyway. :-)

I'm just kidding around.

Mike Burch K8MB

1737. Re: Buying Mini-Circuits parts in the UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-21 23:25:56 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3D642255.5D5415D5@alma.demon.co.uk>
Source record: 42000

"Ian White, G3SEK" wrote:
>
> Gary Morton wrote:
> >I have recently become aware of the usefulness of the parts supplied by
> >Mini-Circuits. At a recent radio rally I picked up a POS-900W VCO and
> >TUF-5SM mixer for a tenner (about $15). I intend to use them for
> >experimentation.
> >
> >I've just finished construction of the (RSGB) simple spectrum analyser.
> >The linearity of the VCO leaves a lot to be desired, but may be
> >replacable with a Mini-Circuits VCO (the POS-300W, but is a bit
> >expensive at 20 quid).
> >
> >I am aware of JAB who sell some of the MAR/MAV series amplifiers and the
> >SBL mixer. Does anyone know of any other suppliers in the UK, or even
> >better of anyone selling off old or surplus parts. What about Birkett?
> >
>
> As far as I'm aware, the only place in the UK where you can order the
> full Mini-Circuits product line is from Mini-Circuits Europe on 01252
> 832600. Prices may not be good, though... expect about ï¿½1 = $1.

Thanks. I gave them a call. Using the POS-200 as an example the
conversion rate was as you said to expect.

> As you've found, other dealers may have a few selected items. The RSGB
> Microwave Component Service sell mostly modamps, Hands Electronics sell
> some parts and so do GH Engineering. You can find all of these by a web
> search.
>
> Forget about Birkett - he's a surplus dealer so his stock is whatever he
> happens to have right now. If you want what he has, then his prices are
> very good; but if you want something specific, you need to go to a
> regular component supplier, and expect to pay more.

Sure, but you never know what might turn up. It's interesting that every
advertisement is different. I'm trying to collect a full set ;-).

> Pity about the 'Simple Spectrum Analyser'. The person who designed it
> more than 10 years ago is desperately trying to make RSGB stop
> re-re-re-publishing it, because he knows it's out of date. The W7ZOI
> design is a much better homebrew project (search for his web site).

I'm aware of this newer design, but from my point of view there are
several drawbacks
o more expensive since it uses Mini Circuits mixers and VCO's.

(although this will give big advantages)
o only works from 0 to 70MHz.
(I want to make a 6m transmitter so I am interested in seeing
the 2nd harmonic just over 100MHz which the RSGB design can just
about do)
o the filters look more difficult to build.
o need to order the PCBs from the USA.

Is there any change someone clever person in the RSGB might design a
newer version with components easily obtainable in the UK, perhaps with
a wider frequency range?

Tonight I built the sweep generator and checked the calibration.
Seems accurate from -20dBm to -55dBm.
Over -20dBm there appears to be overload.
My signal generator only goes as low as -55dBm.

> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek

thanks for replying...

--Gary

1738. Re: FS: 10 meter amateur radio transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 01:05:39 UTC
From: "Arthur R. Howard" <whtmtnman@citlink.net>
Message-ID: <3D6438E3.C926593A@citlink.net>
Source record: 42001
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

The 3500 is a cool radio...it can be tricked out rom the front panel to go
as low as 80M

electricguy wrote:

> Please go to http://www.mindspring.com/~elecman/ar3500.html for details.
>
> Remove nospam when replying

1739. Voltage inserter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 01:39:15 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <ak1fc3$7gl$0@206.102.192.60>
Source record: 42002

I'd like to feed +12VDC from the shack through the coax to a mast mounted preamp operating in the 223 MHz range. Does anyone have pointers regarding accomplishing this project?

73 de Jack

1740. Re: FS: 10 meter amateur radio transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 02:12:49 UTC
From: VE3TMT <ve3tmt@rac.ca>
Message-ID: <2MX89.25149$Px3.1093026@news20.bellglobal.com>
Source record: 42003
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

"Arthur R. Howard" <whtmtnman@citlink.net> wrote in message
news:3D6438E3.C926593A@citlink.net...
> The 3500 is a cool radio...it can be tricked out rom the front panel to go
> as low as 80M

On the display only!

1741. Re: Voltage inserter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 02:33:21 UTC
From: Fulano de Tal <therealexray@netscape.net>
Message-ID: <3D644D71.54D50E83@netscape.net>
Source record: 42004

Jack Taylor wrote:
>
> I'd like to feed +12VDC from the shack through the coax to a mast mounted
> preamp operating in the 223 MHz range. Does anyone have pointers regarding
> accomplishing this project?
>
> 73 de Jack

A few caps and chokes. Scrapping an old TV preamp supply would provide
all the parts. Better yet, just use a TV preamp PS and tailor the
voltage accordingly!

-F. d T.

1742. Re: any recommendations on books for beginner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 05:15:14 UTC
From: an101@cuic.ca
Message-ID: <978fb1e5.0208212115.737ca9bb@posting.google.com>
Source record: 42005

Thanks everyone for your help

maybe not now maybe not tomorrow but someday I will give back to the
radio community LoL (right now dont have the know-how) :)

Love
-Ann (Pandora)

1743. Re: Buying Mini-Circuits parts in the UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 07:13:21 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <GT4L7dHR8IZ9EA0f@ifwtech.co.uk>
Source record: 42006

Gary Morton wrote:

>> Forget about Birkett - he's a surplus dealer so his stock is whatever he
>> happens to have right now. If you want what he has, then his prices are
>> very good; but if you want something specific, you need to go to a
>> regular component supplier, and expect to pay more.
>
>Sure, but you never know what might turn up.

My junk-box contains 40 years of things bought from surplus dealers because they looked useful - but they hardly ever are. Occasionally you get lucky, and drop on just the weird part you wanted... but it's usually about ten years too late.

>> The W7ZOI
>> design is a much better homebrew project (search for his web site).
>
>I'm aware of this newer design, but from my point of view there are
>several drawbacks
> o more expensive since it uses Mini Circuits mixers and VCO's.
> (although this will give big advantages)
> o only works from 0 to 70MHz.
> (I want to make a 6m transmitter so I am interested in seeing
> the 2nd harmonic just over 100MHz which the RSGB design can just
>about do)

Or more likely, not quite do in the standard configuration - every MHz above 90MHz is a struggle. However, since the VCO in the G4PMK design is built from discrete parts, for a special job you can always tweak the whole coverage upwards, say from 20-110MHz.

> o the filters look more difficult to build.
> o need to order the PCBs from the USA.
>
Ordering the PCBs from the USA is no big deal, these days.

The same applies to ordering Mini-Circuits parts, except that M-C USA probably won't accept orders from a UK address - they'll insist that you order from M-C UK. The answer is to find a friend who will order them from a US address, and then send them to you as a private 'small packet'. M-C may not like it, but it is totally legal.

The bonus is that for a reasonably small declared value (maybe up to about ï¿½60/$100), UK Customs are much more likely to waive charging VAT and import duty on a private parcel than one from a commercial company - even when the green Customs label is the same. Occasionally you will get

hit, and then it feels horrible... but it's still probably less than
you'd have paid M-C UK.

Returning to technical issues... apart from the more limited frequency
coverage, the W7ZOI analyser design has one overwhelming advantage over
the G4PMK design - it works better!

Of the G4PMK design, you say:
> Over -20dBm there appears to be overload.
That is a serious problem when you're trying to measure harmonic levels.
The better the harmonic suppression in the TX, the more likely it is
that the measured harmonics will be generated in the front-end of the
analyser.

>Is there any change someone clever person in the RSGB might design a
>newer version with components easily obtainable in the UK, perhaps with
>a wider frequency range?
>
Sure - his name's Gary Morton!

Unlike the ARRL, the RSGB isn't big enough to have its own lab or
technical staff - but even in QST you'll notice that the vast majority
of designs and projects come from individual amateurs... like W7ZOI.
With RSGB it's even more so.

Quite seriously, I think that if you set about designing a "born in the
UK" HB spectrum analyser, you'd end up very close to duplicating what
W7ZOI has done. The better a designer you become, the more likely you
are to arrive at the same conclusions as W7ZOI about the optimum system
architecture. Likewise, you'd probably end up using Mini-Circuits,
because nobody else on the planet makes a comparable range of reasonably
low-cost components.

Technically they aren't the very best, but in most cases they're better
than anything you could build without extensive test equipment. You can
drop them in and know that at least those parts of your circuit perform
as specified.

Equally important, they are *available* - easily in the USA, and in the
UK they are probably still the least difficult option.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

1744. NEEDED Kenwood TM-201A Subtone unit TU-3

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 08:12:26 UTC
From: kari.palvo@luukku.com
Message-ID: <671e3689.0208220012.396568ef@posting.google.com>
Source record: 42007

Hello

I Need my old 2 meter mobile rig the subtone units, only schematics diagram
is OK. Rig is Kenwood TM-201A Europe model. and unit is TU-3.

Please send someone for schematic for me by EMail.

oh2bne@hotmail.com

kari.palvo@luukku.com

73ï¿½s de Kari OH2BNE

1745. 603 beam and tower 4sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 10:43:59 UTC
From: Jeff <j.dauphinais@worldnet.att.net>
Message-ID: <Pf399.5862$NZ.325423@bgtnsc05-news.ops.worldnet.att.net>
Source record: 42008
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I have for sale 1 full size "HY-Gain" beam 10 meters. fully assembled for your inspection. 13' Boom and longest element is 22' $100.00 I also have a steel tower totaling 25'. this is in 3 sections 1 10 foot st8 and 1 5foot st8 and 1 10 foot top section. I don't not have a rotator. $50.00. pickup only from Nashua,NewHampshire. I am selling these because they are to big for my new QTH. This beam has spent a large portion of its life in storage. 73's Jeff AA1GR

1746. Re: Voltage inserter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 11:55:50 UTC
From: brokebob@aol.com
Message-ID: <20020822075550.08332.00002353@mb-mj.aol.com>
Source record: 42009

I am sending you a diagram to do the job via e-mail.
brokebob@aol.com (broke=not working, retired=not working, retired=broke)

1747. Re: Voltage inserter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 13:59:46 UTC
From: Bruce Lane <feedspammerstosharks.4.spamvac@spamgourmet.com>
Message-ID: <MPG.17ce8e28cc143f5d989995@news.drizzle.com>
Source record: 42010

In article <ak1fc3$7gl$0@206.102.192.60>, n7oo@theriver.com says...

> I'd like to feed +12VDC from the shack through the coax to a mast mounted
> preamp operating in the 223 MHz range. Does anyone have pointers regarding
> accomplishing this project?

If you don't mind buying vs. building, this wonderful little
widget...

http://www.advancedreceiver.com/page26.html

...will do the job nicely. I'm using one here to feed DC to a high-
end active GPS receiving antenna in my mobile. It works exceptionally
well, no performance problems at all, and it's good to at least 1.5GHz.

Keep the peace(es).

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

1748. New Website for Magnetic Loop Antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 14:41:11 UTC
From: Andre Vaupel <avaupel@web.de>
Message-ID: <bK699.3679891$Bm3.624528@news.easynews.com>
Source record: 42011

Hi there!

we build up a new website wich is NON COMMERCIAL and without any ads.
The site contains information about Magnetic Loop Antennas for shortwave.
We would be happy if we can find some postings and exchange of experience
inside the webboard. We would be happy if you take a look and leave some
interesting question or infos on the board.

http://www.magnetic-loop.de

Thanks a lot!

Andre

1749. Re: Buying Mini-Circuits parts in the UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 14:48:31 UTC
From: Mike <m.j.willis@rl.ac.uk>
Message-ID: <ak2tkg$1dba@newton.cc.rl.ac.uk>
Source record: 42014

How much are you prepared to spend and what do you need? Do you really want to build it? IF so, great. Otherwise get a surplus HP for a few £100 or use a commercial scanner.

For example, the ICOM PCR1000 wideband receiver can be used as a basic spectrum analyser with the right software (from the web). You need to add a front end switched attenuator, especially if you want to make amplitude measurements and you will need to calibrate the amplitude response, but otherwise that is it for a 100kHz-1.3 GHz synthesised analyser.

1750. Re: Is base10 an accurate way of measuring frequency?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 14:53:13 UTC
From: crabtreejr@aol.com
Message-ID: <20020822105313.15060.00001671@mb-cq.aol.com>
Source record: 42012

Roy Lewallen w7el@eznec.com. on 8/18/02 posted:

>For the record, we also have 8 pints to a gallon. But our pints
>are 16 unces instead of 20. Our ounces are the same size as
>yours,

Oh that it were that simple....
The US gallon is defined as 231 cubic inches, which means that
a US fluid ounce is 29.5735 cubic centimeters
The imperial gallon is defined as the volume occupied by 10 lbs
(weight) of water at 62 deg, which means that an imperial fluid
ounce is 28.4131 cubic centimeters

>so the net result is that our pints, quarts, and gallons are 4/5
>the size of the imperial versions.

From the above, the US pints, quarts and gallons are very close to
5/6 of the imperial measures.
To be more exact, the imperial gallon = 1.20095 US gallons

> Here, a "pint's a pound, the world around" (pint of water, that is).

I do not follow this. The US pint is a measure of volume.
Presumably this works at some specific temperature.

>There (imperial), a "pint of water weighs a pound and a quarter".

yes, but only at 62 degF, as per the definition.

>Once again, my hat's off to our neigbors to the north. Canada
>did the conversion to metric, and did it right.
>
>Roy Lewallen, W7EL
>
>John Fletcher wrote:
>>
>> The metric system and the decimal system are two different
>> things. The metric system is a decimal system, yes, but
>> decimal is used in parts of the imperial system
>> (tenths/hundredths/thousandths of an inch, and I think there
>> are ten US pints in a gallon - in the UK we have eight
>> pints) . . .

73 John Crabtree KC0GGH

1751. Radio Shack.com- Vectronics Kits on sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 15:26:42 UTC
From: newsguy <harpoon32@yahoo.com>
Message-ID: <ak2vrt0ti0@enews2.newsguy.com>
Source record: 42013

For those that are interested. Some good prices.

1752. Re: Radio Shack.com- Vectronics Kits on sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 17:13:04 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnama6t0.kva.QSB@animas.frontier.net>
Source record: 42015

On Thu, 22 Aug 2002 10:26:42 -0500, newsguy scribbled:

> For those that are interested. Some good prices.

Maybe -- but it's too well hidden.

1753. Re: Voltage inserter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 17:17:05 UTC
From: k7itm@aol.com
Message-ID: <3200347.0208220917.2d5e2f98@posting.google.com>
Source record: 42016

"Jack Taylor" <n7oo@theriver.com> wrote in message news:<ak1fc3$7gl$0@206.102.192.60>...
> I'd like to feed +12VDC from the shack through the coax to a mast mounted
> preamp operating in the 223 MHz range. Does anyone have pointers regarding
> accomplishing this project?

F. d T. posted the basics: just feed the DC in one end through an
appropriate choke, and get the RF back through an appropriate
capacitor, and do about the same thing at the other end to feed RF
(through a cap) and receive the DC (through a choke). At 200MHz, you
should do fine with something like 220pF to 1000pF caps, and chokes in
the 220nH to 1uH range. (Beware of chokes with self-resonant
frequencies lower than your operating frequency.)

You can just feed a voltage in, and that may be fine, but there are a
couple potential problems: first, if you happen to disconnect the
coax and for some reason it gets shorted (e.g., center conductor
touches ground), you can draw quite a bit of current. Some protection
is nice. Second, depending on the current you're drawing in normal
operation and the length of the run and the condition of the
connectors, you may have more voltage drop than you really want. One
way to get around both these potential problems is to feed in a
current source instead of a voltage source (still using the chokes and
caps to separate the DC and RF), and have a shunt regulator at the
preamp end (perhaps just a zener diode). If the current source
doesn't mind being shorted to ground, that solves the first problem,
and if the current source can't put out enough voltage to actually
damage the preamp even if the regulator at the preamp end were to
open, then things are fairly well protected (though not against
external things like lightening, of course!) Another thing you can do
using this method is to feed a variable current, which results in a
variable current in the shunt regulator, which can be used to set a
tuning voltage or control a relay. I've done this for a VLF preamp,
and it worked very well...excellent stability, and you only need the
coax between the preamp and the power supply/tuning control/receiver.
The complexity is obviously greater than just two caps and two chokes,
but the results were definitely worth the effort in that case.

Cheers,
Tom

1754. Re: Help Identify this radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 18:11:25 UTC
From: WA6LZH <tangeram@lucent.com>
Message-ID: <3D65294D.9050403@lucent.com>
Source record: 42017

Looks like my Small Wonder 40 meter qrp cw but it's been a while since I looked at the board. I think if you go to their web site you'll find pictures. The small IC's are ne602 if I remember with a crystal filter and varicap tuned vfo. I think you may have gotten too close with your camera.

Tony

1755. Wee Willy DSB transceiver schematics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 18:52:13 UTC
From: vdberghak@zonnet.nl
Message-ID: <a62e44f4.0208221052.b0eceb1@posting.google.com>
Source record: 42018

Hi all,
a few months ago I found on the web schematics of a DSB transceiver
called Wee Willy.
I was interrested but now (when I am likely to build such a set up),
the page is no longer available on the web. (I tried but I get always
a 404 error :-( ).
Did anyone copy the page to his (or her) hard disc? I appreciate if it
is possible get it posted to me.
Thanks in advance.
By the way, other nice SSB or DSB QRP schematics are also welcome.
Thanks in advance,
Chris, PA3CRX

1756. Re: Wee Willy DSB transceiver schematics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 19:20:21 UTC
From: North <non@telia.com>
Message-ID: <VPa99.2738$e5.465926@newsb.telia.net>
Source record: 42019

"Chris" <vdberghak@zonnet.nl> skrev i meddelandet
news:a62e44f4.0208221052.b0eceb1@posting.google.com...
> Hi all,
> a few months ago I found on the web schematics of a DSB transceiver
> called Wee Willy.
> I was interrested but now (when I am likely to build such a set up),
> the page is no longer available on the web. (I tried but I get always
> a 404 error :-( ).
> Did anyone copy the page to his (or her) hard disc? I appreciate if it
> is possible get it posted to me.
> Thanks in advance.
> By the way, other nice SSB or DSB QRP schematics are also welcome.
> Thanks in advance,
> Chris, PA3CRX

You can look at this adresses:
http://home4.swipnet.se/~w-41522/qrproot.html
http://www.redhotradio.com/SMK_1.html

73 de Ak

1757. Looking for Motorola and RCA Books

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 19:26:19 UTC
From: ghldbrd@ccp.com
Message-ID: <598dc4be.0208221126.29e48daf@posting.google.com>
Source record: 42020

Looking for service manuals for the following:

Motorola C71GJB-3100 Low Band Compastation

This is the old all-tube design, with solid state Extender
G rx strip, J tx with pr of 6146's and ps has 3B28's

Motorola C71LHB-3403AM Low Band Motrac Compastation

This is all solid state except 5894 final

RCA TAC300 LB mobile #MFAB5
Under dash mobile that looks like a CB radio

Prefer original books but would settle for good copies.

Gary Hildebrand WA7KKP
St. Joseph, MO

1758. Re: NMR coil detunes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 20:26:03 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2208021626450001@c-66-176-144-254.se.client2.attbi.com>
Source record: 42021

In article <ajt8k2jau1@luotsi.uku.fi>, martin.kavec@uku.fi wrote:

> Hello everybody,
>
> I would like to ask you for explanation and possible solution for a p
> roblem I face.
> I made following brand new NMR coil:
>
>
> ||
> >-----||----------
> || | |
> C2 | |
> --- O
> C1 --- O
> | O coil
> | O
> C3 | |
> || | |
> >-----||----------
> ||
>
> This is a simple surface coil (loop of wire, since I post to a groups
> where they might not be aware of this term) 3 cm diameter, made of round
> copper wire (1.3mm diameter) and the capacitors are high quality nonma
> gnetic trimmers made by Voltronics. The coil is powered by coaxial
> cable (MIL-17/RG400) 50Ohm cable. The tune frequency is 200MHz. The coil
> tunes fine and matches fine (though I don't know exactly on res
> onance resistance).
> The problem is that the coil detunes as soon as I move the
coaxial cable.
> Not a problem but a seek for information: I read that additional cap
> acitor parallel to the coil wire, attached directly on the wire improves th
> e coil homogeneity and the quality. How can I calculate the value of
> such a capacitor.
>
> Thank you and I appreciate any kind of help.
>
> Martin Kavec

You have a filter here if I'm understanding your diagram. At these freq's
it is very easy to detune a filter by messing with the grounds in any
way. The technical term is non monotonic behaviour, but it means that the
filter is not very theoretical in response. The only thing I could advise
by remote observation, is to make sure that you have lots of ground

everywhere and then double it. A shield between in and out would also help (maybe). Remember, RF is a big pain and it is directly proportional to the frequency.

Steve WB4CZR

1759. Variac FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 20:28:29 UTC
From: ghldbrd@ccp.com
Message-ID: <598dc4be.0208221228.4c9e4302@posting.google.com>
Source record: 42022

I have two each:

Superior Powerstat Q116U

0-140V AC 9A max

Mounted on 1/8" steel rack panel

These were removed from RCA TP66 film projectors.

$50 each + s&h approx weight is 30 lbs

Gary Hildebrand WA7KKP
St. Joseph, MO

1760. Re: Simpel 20 m Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 20:36:32 UTC
From: ghldbrd@ccp.com
Message-ID: <598dc4be.0208221236.2c16fcd3@posting.google.com>
Source record: 42023
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

"Andreas Weller" <weller@andreas-weller.de> wrote in message
news:<ak013v$m3f$05$1@news.t-online.com>...
> Hallo!
>
> I'm looking for schematics for an easy to build simple Transmitter for 20 m.
> I want to take it on holiday for PSK31. So it can be on the fixed frequency
> 14.070 MHz.
> I know that there are schematics for such a device out there - but I didn't
> find it.
>
> Thank you very much!
>
> 73 de DF1PAW, Andreas Weller

You'll need a SSB transmitter of some sort and that rules out the simple part.

Gary Hildebrand WA7KKP

1761. need article

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 22:25:34 UTC
From: Gary & Angela Belcaster <gbelcas@charter.net>
Message-ID: <gbelcas-12F3BB.17253422082002@corp.supernews.com>
Source record: 42024

Can anyone help with a photocopy of an article. Need John Grebenkemper's "Tandem Match" article from the Jan '87 QST (need a copy of the original article not the handbook's condensed version). Will pay copying and mailing charges of course. Thanks very much in advance.

Gary

1762. Re: Simpel 20 m Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 22:28:51 UTC
From: "John S. MacKay" <k35454@direct.ca>
Message-ID: <umarcnfdmm62de@corp.supernews.com>
Source record: 42026
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

Gary hildebrand <ghldbrd@ccp.com> wrote in message
news:598dc4be.0208221236.2c16fcd3@posting.google.com...
> "Andreas Weller" <weller@andreas-weller.de> wrote in message
news:<ak013v$m3f$05$1@news.t-online.com>...
> > Hallo!
> >
> > I'm looking for schematics for an easy to build simple Transmitter for
20 m.
> > I want to take it on holiday for PSK31. So it can be on the fixed
frequency
> > 14.070 MHz.
> > I know that there are schematics for such a device out there - but I
didn't
> > find it.
> >
> > Thank you very much!
> >
> > 73 de DF1PAW, Andreas Weller
>
> You'll need a SSB transmitter of some sort and that rules out the simple
part.
>
> Gary Hildebrand WA7KKP

Is there SSB on 14.070 ?

1763. Re: Help Identify this radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 22:40:36 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3D656871.BE6BCB7F@cox.net>
Source record: 42025

It helps with pictures such as this to take it outside and place it in the shade. Outside provides the high light level that digital cameras like to have, and the shade provides diffuse light that minimizes "shiny spots" from the components.

Up close is bad since the center components will be in focus and the outer components will not. I have found it is better to back off about 2 feet and zoom into the circuit so that focus is uniform across the picture.

That said, the layout looks a lot like a 4040 rig as someone has already mentioned. This is a pretty standard set up. Ne602 front end, crystal filter IF, NE602 IF detector, LM386 AF amp. A second NE602 is used for TX mixing, so there are three total. In this rig, the volume control was connected to the RF input and attenuated the RF in order to set the audio level output.

There appears to be no MC1350 IF amp, so it is not something like a Norcal Serria.

- Dan Tayloe, N7VE; Phoenix, Az; Az ScQRPions

WA6LZH wrote:
>
> Looks like my Small Wonder 40 meter qrp cw but it's been a while since I
> looked at the board. I think if you go to their web site you'll find
> pictures. The small IC's are ne602 if I remember with a crystal filter
> and varicap tuned vfo. I think you may have gotten too close with your
> camera.
>
> Tony

1764. Re: Simpel 20 m Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-22 23:41:27 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <uitamugnmjpminlk9mnrvdt5ospunt2d6f@4ax.com>
Source record: 42027
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

On Thu, 22 Aug 2002 15:28:51 -0700, "John S. MacKay" <k35454@direct.ca> wrote:
>Gary hildebrand <ghldbrd@ccp.com> wrote in message
>news:598dc4be.0208221236.2c16fcd3@posting.google.com...
>> "Andreas Weller" <weller@andreas-weller.de> wrote in message
>news:<ak013v$m3f$05$1@news.t-online.com>...
>> > Hallo!
>> >
>> > I'm looking for schematics for an easy to build simple Transmitter for
>20 m.
>> > I want to take it on holiday for PSK31. So it can be on the fixed
>frequency
>> > 14.070 MHz.
>> > I know that there are schematics for such a device out there - but I
>didn't
>> > find it.
>> >
>> > Thank you very much!
>> >
>> > 73 de DF1PAW, Andreas Weller
>>
>> You'll need a SSB transmitter of some sort and that rules out the simple
>part.
>>
>> Gary Hildebrand WA7KKP
>
> Is there SSB on 14.070 ?

PSK31 is transmitted using audio tones modulating a SSB transmitter.

Gary

1765. Re: Buying Mini-Circuits parts in the UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 00:03:43 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3D657CB1.6DE941D@alma.demon.co.uk>
Source record: 42028

Mike wrote:
>
> How much are you prepared to spend and what do you need? Do you really want
> to build it? IF so, great. Otherwise get a surplus HP for a few ï¿½100 or use
> a commercial scanner.
>
> For example, the ICOM PCR1000 wideband receiver can be used as a basic
> spectrum analyser with the right software (from the web). You need to add a
> front end switched attenuator, especially if you want to make amplitude
> measurements and you will need to calibrate the amplitude response, but
> otherwise that is it for a 100kHz-1.3 GHz synthesised analyser.

Hi Mike,

I've been checking out Ebay for spectrum analysers and they go for
several hundred pounds. From second hand equipment suppliers they don't
appear to be had for under 1000 quid. My interest is really in the
building and learning as I'm new to RF.

regards...

--Gary

1766. Re: Simpel 20 m Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 00:23:57 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <tav3ka.0k9.ln@mylinuxbox.net>
Source record: 42029
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

In article <598dc4be.0208221236.2c16fcd3@posting.google.com>, Gary hildebrand wrote:

> You'll need a SSB transmitter of some sort and that rules out the simple part.

Not necessarily. Because he only needs to cover a few KHz of
the 20M band, he could generate the carrier at signal
frequency and remove the opposite sideband with a simple
crystal ladder filter. The good news is that it is
very simple, the bad news is that he will have to buy
several 14.070MHz crystals.

This is quite easy to do on 80M because the PSK31
calling frequency is very close to 3.579MHz. You
can use cheap colour (or should that be color for
NTSC) TV crystals.

73, Ed. EI9GQ.

--
Remove 'X' to reply via e-mail.
http://homepage.eircom.net/~ei9gq
Linux 2.4.19

1767. Re: Voltage inserter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 03:44:34 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <ak4b32$8gi$0@206.102.192.54>
Source record: 42030

Guys,

I really appreciate all of your responses! Shows there's still some technical expertise within
our ranks. I pawed through my ARRL stuff and didn't see this technique addressed, even
tho it's been standard TV practice for many years.

Since the preamp is using F fittings, I ended up following your suggestions by scrapping an
old 2-port TV splitter. Fed a 12 VDC Wall Wart to one of the F fittings and used the existing
inductance on that port to block the 223 MHz RF. Also used an existing 6 pF cap for
coupling and DC blocking. These values may not be optimum but I only measure a barely
perceptible difference in signal output, using either direct DC feed or the voltage inserter.

Thanks again guys, you got me up and running!

73 de Jack

Jack Taylor <n7oo@theriver.com> wrote in message
news:ak1fc3$7gl$0@206.102.192.60...
> I'd like to feed +12VDC from the shack through the coax to a mast mounted
> preamp operating in the 223 MHz range. Does anyone have pointers regarding
> accomplishing this project?
>
> 73 de Jack
>
>
>

1768. Re: Simpel 20 m Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 04:36:59 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3D65BBF9.35CECA80@cox.net>
Source record: 42031
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

I think Small Wonders Labs has a 20m 5w QRP PSK31 rig.

http://www.smallwonderlabs.com/

Look at the PSK page.

- Dan Tayloe, N7VE; Phoenix, Az; Az ScQRPions

Eamon Skelton wrote:
>
> In article <598dc4be.0208221236.2c16fcd3@posting.google.com>, Gary hildebrand wrote:
>
> > You'll need a SSB transmitter of some sort and that rules out the simple part.
>
> Not necessarily. Because he only needs to cover a few KHz of
> the 20M band, he could generate the carrier at signal
> frequency and remove the opposite sideband with a simple
> crystal ladder filter. The good news is that it is
> very simple, the bad news is that he will have to buy
> several 14.070MHz crystals.
>
> This is quite easy to do on 80M because the PSK31
> calling frequency is very close to 3.579MHz. You
> can use cheap colour (or should that be color for
> NTSC) TV crystals.
>
> 73, Ed. EI9GQ.
>
> --
> Remove 'X' to reply via e-mail.
> http://homepage.eircom.net/~ei9gq
> Linux 2.4.19

1769. Re: Simpel 20 m Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 05:44:08 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <uogbmu8j7bfqtfhh515ig644i17a48he8m@4ax.com>
Source record: 42032
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

On 22 Aug 2002 13:36:32 -0700, ghldbrd@ccp.com (Gary hildebrand)
wrote:

>"Andreas Weller" <weller@andreas-weller.de> wrote in message
news:<ak013v$m3f$05$1@news.t-online.com>...
>> Hallo!
>>
>> I'm looking for schematics for an easy to build simple Transmitter for 20 m.
>> I want to take it on holiday for PSK31. So it can be on the fixed frequency
>> 14.070 MHz.

>You'll need a SSB transmitter of some sort and that rules out the simple part.

What so special about PSK31 ?

Various forms of PSK are usually generated by I/Q modulators,
essentially a phasing transmitter.

Shouldn't it be possible to have

* a RF signal source (in this case a crystal oscillator or VXO),
* an RF phase shifting network to generate the quadrature carrier
(simple in this case due to the fixed frequency),
* two modulators (NE602, SBL-1 etc.),
* baseband filters for premodulaton shaping
* a linear power amplifier (due to premodulation shaping)
* a digital signal source (PIC, PDA, PC etc.)

to generate various sorts of PSK signals, not just PSK31 ?

Paul OH3LWR

1770. Zener diode as noise generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 07:21:26 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <Wnl99.12986$sR2.242960@news4.ulv.nextra.no>
Source record: 42033

Zener diodes are sometimes used for generating wideband noise (audio to 30 MHz), see e.g. http://home.earthlink.net/~n0ss/noise_source.pdf using a 6.8 Volt, 1 Watt zener diode.

The noise is probably seomething the manufactureres try to avoid from a zener diode, but what determines the maximum noise? Is there an optimum zener voltage, power dissipation spec, or an optimal operating current, ...?

If I remember right there is a voltage where the temperature dependence of the voltage is almost 0 (is it 6.2 Volts?) Is there any correlation between noise and temperature coefficient?

--
73, Sverre,
Sverre Holm LA3ZA
---
www.qsl.net/la3za

1771. Re: Zener diode as noise generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 07:25:16 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3D65E446.F7E5FC47@rica.net>
Source record: 42034

"Sverre Holm (LA3ZA)" wrote:
>
> Zener diodes are sometimes used for generating wideband noise (audio to 30
> MHz), see e.g. http://home.earthlink.net/~n0ss/noise_source.pdf using a 6.8
> Volt, 1 Watt zener diode.
>
> The noise is probably seomething the manufactureres try to avoid from a
> zener diode, but what determines the maximum noise? Is there an optimum
> zener voltage, power dissipation spec, or an optimal operating current,
> ....?
>
> If I remember right there is a voltage where the temperature dependence of
> the voltage is almost 0 (is it 6.2 Volts?) Is there any correlation between
> noise and temperature coefficient?

I don't have hard rules, but I think I remember that higher voltage
zeners are noisier, and running them at very low currents also
increases the noise output. They are pretty high impedance sources at
low currents, so you should buffer them if you want to maximize the
energy at high frequencies.

--
John Popelish

1772. Re: Tayloe detector again

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 08:53:06 UTC
From: John Smith <someone@micro$oft.com>
Message-ID: <ak4spchon1@newstoo.ericsson.se>
Source record: 42035

> I have become a big supporter of the Tayloe method, see my receiver here:
> http://www.hanssummers.com/radio/polyphase/index.htm, but no time yet
> for drawing circuit diagrams I'm afraid.

I know that if you get it right, then it can be a very nice and clean system. I have seen several versions where the Tayloe method has been decried, but usually due to poor construction and lack of attention to details (and ballance).

Like the pix, looking forward to the circuit. Where did you get the dial?

BR Harry
harryvponospam@nospamhotmail.com

1773. Re: Measures (was: Is base10 an accurate way of measuring frequency?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 08:54:20 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D65F83C.1060001@eznec.com>
Source record: 42036

Thanks, gentlemen, for the correction. I had spent my life until now believing that the Imperial gallon was equal in size to five of our quarts. And somewhere along the line I got a wrong definition of an Imperial ounce, solidifying the misinformation. As you point out, it's more like 1-1/5 of our gallons (very close in fact).

By way of an excuse, the only time I encountered Imperial liquid measure is on a few trips through Canada long ago before they metricized.

I'm glad you spoke up. It hopefully prevented the misinformation I posted from circulating farther, and I certainly learned from it.

Let's just all go metric and forget about it. In my last trip to the U.K. a couple of years ago, it looked like the liquid measure (at least petrol) has gone metric, although the roads and vehicles were still marked in miles (inexplicably abbreviated 'm') and miles/hour. Keep at it.

Roy Lewallen, W7EL

1774. Re: Zener diode as noise generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 08:58:44 UTC
From: samsvl@nlr.nl
Message-ID: <Xns92736FAEFD6ABsamsvlnlrnl@137.17.96.14>
Source record: 42037

"Sverre Holm \(LA3ZA\)" <la3za@qsl.net> wrote in
news:Wnl99.12986$sR2.242960@news4.ulv.nextra.no:

> Zener diodes are sometimes used for generating wideband noise (audio to
> 30 MHz), see e.g. http://home.earthlink.net/~n0ss/noise_source.pdf
> using a 6.8 Volt, 1 Watt zener diode.
>
> The noise is probably seomething the manufactureres try to avoid from a
> zener diode, but what determines the maximum noise? Is there an
> optimum zener voltage, power dissipation spec, or an optimal operating
> current, ...?
>
> If I remember right there is a voltage where the temperature dependence
> of the voltage is almost 0 (is it 6.2 Volts?) Is there any correlation
> between noise and temperature coefficient?
>
> --
> 73, Sverre,
> Sverre Holm LA3ZA
> ---------------------------------
> www.qsl.net/la3za
>
See also www.noisecom.com

Sam

1775. Re: Simpel 20 m Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 09:30:16 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <ejubmucav8kh15a209nom6bvvole7tlckb@4ax.com>
Source record: 42038
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

On Fri, 23 Aug 2002 08:44:08 +0300, Paul Keinanen <keinanen@sci.fi> wrote:
>On 22 Aug 2002 13:36:32 -0700, ghldbrd@ccp.com (Gary hildebrand)
>wrote:
>>You'll need a SSB transmitter of some sort and that rules out the simple part.
>
>What so special about PSK31 ?
>
>Various forms of PSK are usually generated by I/Q modulators,
>essentially a phasing transmitter.
>
>Shouldn't it be possible to have
>
>* a RF signal source (in this case a crystal oscillator or VXO),
>* an RF phase shifting network to generate the quadrature carrier
> (simple in this case due to the fixed frequency),
>* two modulators (NE602, SBL-1 etc.),
>* baseband filters for premodulaton shaping
>* a linear power amplifier (due to premodulation shaping)
>* a digital signal source (PIC, PDA, PC etc.)
>
>to generate various sorts of PSK signals, not just PSK31 ?

Yeah, but a very simple fixed tuned SSB transceiver like the
PSK20 ($95 kit, $140 with custom cabinet, size of a modem,
requires 2A at 12V from a wall wart or battery, makes 5 W PEP)
works with a PC with sound card.

With software like Digipan you can "tune" anywhere in the
audio passband (think of it as a tunable IF with digital filtering
and software demodulation), which covers the entire area of
interest between14.070 and 14.073. The PSK is generated
and decoded in software on the sound card equipped PC.

With software like WinPSK, you can even monitor several
different transmissions at the same time, and reply to any
one of them with just the click of the mouse on the waterfall
spectrum display. Very convenient.

If you want a different PSK modulation (or even a non-PSK
modulation), there is software available to do that too using
this same hardware system. All you do is load a different
program. Write your own if you like.

I carry my PSK20 in my laptop bag when I travel. I can be
setup to operate a couple minutes after I rig an antenna.

(I usually use a simple wire dipole and a tiny MFJ tuner.)

This is pretty much a software defined radio. Many of the functions normally done in hardware are done in software at "IF" by the sound card equipped PC.

Gary

1776. New Dedicated Radio Ham NewsGroup, FTP and WebSite

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 10:45:09 UTC
From: "Dave Williams (NNTP)" <dave.williams@nomail.totalise.co.uk>
Message-ID: <1030099509.20766.0.nnrp-13.3e3112b1@news.demon.co.uk>
Source record: 42040

Just for your info, a new Radio Ham domain is available which includes a newsgroup and FTP server.

Web www.radio-ham.org
News news.radio-ham.org
FTP ftp.radio-ham.org

Hope its of interest.

Dave

1777. Re: Zener diode as noise generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 10:45:48 UTC
From: John Smith <someone@micro$oft.com>
Message-ID: <ak53cl$60p$1@newstoo.ericsson.se>
Source record: 42039

I think you will find it is a function of the voltage, temperature and junction surface area. Zener diodes (and LEDs) have a pretty big SA so they are good at generating a lot of noise. They also make good varicap diodes, although LEDs are not too much use as varicaps at VHF.

Try a Zener of decent power diode and warm it up with a few added volts. Use a 33v diode and give it 24 volts of "grunt". Makes a lovely generator of noise.

B.R. from Anony Mouse (Harry Lippitz, really, but I don't want to publish my name.)

"Sverre Holm (LA3ZA)" <la3za@qsl.net> wrote in message
news:Wnl99.12986$sR2.242960@news4.ulv.nextra.no...
> Zener diodes are sometimes used for generating wideband noise (audio to 30
> MHz), see e.g. http://home.earthlink.net/~n0ss/noise_source.pdf using a
6.8
> Volt, 1 Watt zener diode.
>
> The noise is probably seomething the manufactureres try to avoid from a
> zener diode, but what determines the maximum noise? Is there an optimum
> zener voltage, power dissipation spec, or an optimal operating current,
> ....?
>
> If I remember right there is a voltage where the temperature dependence of
> the voltage is almost 0 (is it 6.2 Volts?) Is there any correlation
between
> noise and temperature coefficient?
>
> --
> 73, Sverre,
> Sverre Holm LA3ZA
> --------------------------------
> www.qsl.net/la3za
>
>

1778. Re: Simpel 20 m Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 12:09:25 UTC
From: troglodite@aol.com
Message-ID: <20020823080925.07545.00002943@mb-ba.aol.com>
Source record: 42041

>
>I think Small Wonders Labs has a 20m 5w QRP PSK31 rig.
>

Yes they do. I bought one and built it and it works very well. Uses very high quality parts and has an excellent instruction manual. Very highly recommend.

Doug Moore KB9TMY

1779. Re: Zener diode as noise generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 12:20:08 UTC
From: troglodite@aol.com
Message-ID: <20020823082008.07545.00002950@mb-ba.aol.com>
Source record: 42042

>Zener diodes are sometimes used for generating wideband noise (audio to 30
>MHz), see e.g. http://home.earthlink.net/~n0ss/noise_source.pdf using a 6.8
>Volt, 1 Watt zener diode.
>
>The noise is probably seomething the manufactureres try to avoid from a
>zener diode, but what determines the maximum noise? Is there an optimum
>zener voltage, power dissipation spec, or an optimal operating current,
>....?

Ordinary junction transistors also make good noise sources. The base/emitter junction when reverse biased acts like a zener at approximately 7 volts for most common silicon transistors. It has the same noisy characteristic. There is considerable variation from device to device, so make a quick test setup and run through a handful of 2N3393's or something similar and pick out your favorite.

Don't run these noise tests too long or you may begin to hear voices buried in the noise. :-)

Doug Moore

1780. Re: Zener diode as noise generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 12:26:04 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <2o73FxBcniZ9EAx5@ifwtech.co.uk>
Source record: 42043

Sverre Holm (LA3ZA) wrote:
>Zener diodes are sometimes used for generating wideband noise (audio to 30
>MHz), see e.g. http://home.earthlink.net/~n0ss/noise_source.pdf using a 6.8
>Volt, 1 Watt zener diode.
>
>The noise is probably seomething the manufactureres try to avoid from a
>zener diode, but what determines the maximum noise? Is there an optimum
>zener voltage, power dissipation spec, or an optimal operating current,
>....?
>
There is an optimum current, typically a few milliamps or tens of
milliamps for small devices, where the noise output peaks. Right on this
peak is the most stable and repeatable place to operate the noise
source. At lower currents the noise reduces, and then starts to rise
again at very low currents. You can get lots more noise in the
low-current region, but there it is extremely dependent on the current.

>If I remember right there is a voltage where the temperature dependence of
>the voltage is almost 0 (is it 6.2 Volts?) Is there any correlation between
>noise and temperature coefficient?

Sorry, I don't know about any parameters other than current; and my
experience is only with HF upwards - I can't be sure about audio and VLF
noise.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

1781. Re: Ham flavored Linux ? :)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 15:08:47 UTC
From: Hector Peraza <peraza@mitac13.uia.ac.be>
Message-ID: <3d664fff@news.uia.ac.be>
Source record: 42044

Gordon Pritchard <gordon.pritchard@shaw.ca> wrote:
: My personal choice is RedHat, because I administer a bunch
: of these at work, and it's easier not to shift gears. RedHat is
: well-supported (meaning that .rpm's come out pretty quickly,
: How-To's refer to init and file-locations that generally match
: RedHat, etc).

: But the folks that have chosen Debian (and Slackware!) are
: usually _very_ strong supporters of those distributions. There
: must be a reason...

Security, mainly. If you're running Linux in your home computer with casual internet connection via modem, and running no services, RedHat might be OK. For servers with direct connection to internet I wouldn't recommend it.

RedHat used to include in their distributions outdated versions of network software with security holes. I used to run Slackware, not that easy to install, but no one ever broke into my machine (and they tried hard!). Installed RedHat into a new server, and it was hacked two days later, a quick search showed security holes in pop3, imap and the ftp daemon (the later was a version with a well-known security holes). Most of the included software (gcc, gdb, X apps...) were also outdated versions compared to the Slackware distribution ones.

Now I'm running SuSE (6.0), and it is pretty secure (no problems so far). I gave a try to RedHat again a year ago (version 7.0), and had again a negative experience: the machine was hacked again during christmas and the hacker did considerable damage (I should have expected it). I guess I won't be trying any RedHat again.

Hector.

1782. Re: Measures (was: Is base10 an accurate way of measuring frequency?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 15:55:08 UTC
From: n7ws@nowhere.com
Message-ID: <3d6651b9.88860416@news.triconet.org>
Source record: 42045

On Fri, 23 Aug 2002 01:54:20 -0700, Roy Lewallen <w7el@eznec.com> wrote:
from it.
|
|Let's just all go metric and forget about it. In my last trip to the
|U.K. a couple of years ago, it looked like the liquid measure (at least
|petrol) has gone metric, although the roads and vehicles were still
|marked in miles (inexplicably abbreviated 'm') and miles/hour. Keep at it.

I believe I've mention this before but in case it was missed.

We have a short "interstate" highway, I-19, that runs from Tucson to the Mexican border at Nogales, AZ.

In order to aid the Mexican illegal drug haulers and to make the illegal "immigrants" feel right at "home", the federal government has decreed that the road signs will be metric. Distances are posted in meters and kilometers, so we have "mileposts" that are really "kiloposts" and signs that tell us that it is 500 meters to the next exit.

But in a fit of bureaucratic schizophrenia, since this highway is still in Arizona and Arizona law sets speed limits in miles per hour, the speed limit signs are in mph. Is this a great country or what?

And as a further example of greatness, you U.S. taxpayers should be pleased to know that a massive multi-year expansion of this highway has just begun in order to speed the flow of unsafe Mexican trucks and drivers into the country. Safety checks of these trucks by local authorities will not be allowed because this might interfere with our "free trade" agreements with Mexico.

Wes

ps. One further attempt to metricize is that when an occasional load of illegal drugs is seized, the authorities give the weight in "kilos." It's a start.

1783. Re: Simpel 20 m Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 16:22:24 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0208230822.4472ce1c@posting.google.com>
Source record: 42046
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

Paul Keinanen <keinanen@sci.fi> wrote in message
news:<uogbmu8j7bfqtfhh515ig644i17a48he8m@4ax.com>...

> Shouldn't it be possible to have
>
> * a RF signal source (in this case a crystal oscillator or VXO),
> * an RF phase shifting network to generate the quadrature carrier
> (simple in this case due to the fixed frequency),
> * two modulators (NE602, SBL-1 etc.),
> * baseband filters for premodulaton shaping
> * a linear power amplifier (due to premodulation shaping)
> * a digital signal source (PIC, PDA, PC etc.)
>
> to generate various sorts of PSK signals, not just PSK31 ?

Of course. I plan to put such a system together this
winter - baseband I/Q out a PC sound card, then an
RF modulator and power amplifier. With such a setup
you can generate just about every form of modulation
hams use today.

This is incompatible with ricebox technology, so I
doubt anybody else will be interested in it.

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

1784. Re: NMR coil detunes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 16:51:18 UTC
From: Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <ak5p66lis3@woodrow.ucdavis.edu>
Source record: 41953

re: NMR probes, coils and circuits.

Hi Martin,

I design and use NMR Coils almost daily. If you Email me at the below address (don't reply to the email address in your page header or I'll never see your reply) with your application, I'll share some designs and information with you.

I have to ask you some specific questions for your application, then I can give you some help. If your willing to work with my crazy time schedule, I'll help you for free.

cheers
skipp

skipp@pilotNOSPAMPLEASE.ucdavis.edu

Take the NOSPAMPLEASE out of my Email address just above.

: In rec.radio.amateur.homebrew Martin Kavec <martin.kavec@uku.fi> wrote:
: Hello everybody,

: I would like to ask you for explanation and possible solution for a p
: roblem I face.
: I made following brand new NMR coil:

```
: ||
: >-----||----------
: || | |
: C2 | |
: --- O
: C1 --- O
: | O coil
: | O
: C3 | |
: || | |
: >-----||----------
: ||
```

: This is a simple surface coil (loop of wire, since I post to a groups
: where they might not be aware of this term) 3 cm diameter, made of round
: copper wire (1.3mm diameter) and the capacitors are high quality nonma
: gnetic trimmers made by Voltronics. The coil is powered by coaxial
: cable (MIL-17/RG400) 50Ohm cable. The tune frequency is 200MHz. The coil
: tunes fine and matches fine (though I don't know exactly on res
: onance resistance).

: The problem is that the coil detunes as soon as I move the coaxial cable.
: Not a problem but a seek for information: I read that additional cap
: acitor parallel to the coil wire, attached directly on the wire improves th
: e coil homogeneity and the quality. How can I calculate the value of
: such a capacitor.

: Thank you and I appreciate any kind of help.

: Martin Kavec

1785. Re: Simpel 20 m Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 18:40:24 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <mrvcmuknhtdri8i4d88m33gna3odlk2i1v@4ax.com>
Source record: 41947
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

On 23 Aug 2002 09:22:24 -0700, marsgal42@hotmail.com (Laura Halliday)
wrote:

>Paul Keinanen <keinanen@sci.fi> wrote in message
news:<uogbmu8j7bfqtfhh515ig644i17a48he8m@4ax.com>...
>
>> Shouldn't it be possible to have
>>
>> * a RF signal source (in this case a crystal oscillator or VXO),
>> * an RF phase shifting network to generate the quadrature carrier
>> (simple in this case due to the fixed frequency),
>> * two modulators (NE602, SBL-1 etc.),
>> * baseband filters for premodulaton shaping
>> * a linear power amplifier (due to premodulation shaping)
>> * a digital signal source (PIC, PDA, PC etc.)
>>
>> to generate various sorts of PSK signals, not just PSK31 ?
>
>Of course. I plan to put such a system together this
>winter - baseband I/Q out a PC sound card, then an
>RF modulator and power amplifier. With such a setup
>you can generate just about every form of modulation
>hams use today.

I hope you have a sound card that has a frequency response down to DC.
At least some CODECs have some kind of offset compensation (similar to
auto-zero in DVMs) at the analog input, thus, the analog input behaves
as if it contained a high pass filter around 3 Hz.

>This is incompatible with ricebox technology, so I
>doubt anybody else will be interested in it.

I have often wondered, why baseband I/Q (zero-IF) modulation and
demodulation has not been used more frequently in amateur digital
systems. Just look at the large number of I/Q chips available from
e.g. Maxim.

Paul OH3LWR

1786. Re: Zener diode as noise generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 20:45:57 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D669F05.3050904@eznec.com>
Source record: 41948

I should point out that breaking down the emitter-base junction can
cause a reduction in transistor beta, although it's a cumulative thing.
Don't know if a short test like that would degrade most transistors, but
you should consider it before going through your whole box of transistors.

Roy Lewallen, W7EL

Troglodite wrote:
>>Zener diodes are sometimes used for generating wideband noise (audio to 30
>>MHz), see e.g. http://home.earthlink.net/~n0ss/noise_source.pdf using a 6.8
>>Volt, 1 Watt zener diode.
>>
>>The noise is probably seomething the manufactureres try to avoid from a
>>zener diode, but what determines the maximum noise? Is there an optimum
>>zener voltage, power dissipation spec, or an optimal operating current,
>>....?
>
>
> Ordinary junction transistors also make good noise sources. The base/emitter
> junction when reverse biased acts like a zener at approximately 7 volts for
> most common silicon transistors. It has the same noisy characteristic. There is
> considerable variation from device to device, so make a quick test setup and
> run through a handful of 2N3393's or something similar and pick out your
> favorite.
>
> Don't run these noise tests too long or you may begin to hear voices buried in
> the noise. :-)
>
> Doug Moore
>

1787. FS: 10 meter Ham radios

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 22:28:29 UTC
From: electricguy <electricguy30@nospamhotmail.com>
Message-ID: <ak6cuv$q17$1@slb2.atl.mindspring.net>
Source record: 41949
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

Take a look!

http://www.mindspring.com/~elecman/ar3500.html

1788. FS: TUBES,at very low prices

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 23:00:15 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <38z99.5428$fl6.393943@news1.west.cox.net>
Source record: 41950
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

Please email w6krc@arrl.net for a detailed list of receiving, special purpose & TV tubes.

1789. Re: Measures (was: Is base10 an accurate way of measuring frequency?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-23 23:36:40 UTC
From: tdonaly@aol.com
Message-ID: <20020823193640.24361.00002361@mb-cc.aol.com>
Source record: 41951

>
>On Fri, 23 Aug 2002 01:54:20 -0700, Roy Lewallen <w7el@eznec.com> wrote:
> from it.
>|
>|Let's just all go metric and forget about it. In my last trip to the
>|U.K. a couple of years ago, it looked like the liquid measure (at least
>|petrol) has gone metric, although the roads and vehicles were still
>|marked in miles (inexplicably abbreviated 'm') and miles/hour. Keep at it.
>
>I believe I've mention this before but in case it was missed.
>
>We have a short "interstate" highway, I-19, that runs from Tucson to the
>Mexican
>border at Nogales, AZ.
>
>In order to aid the Mexican illegal drug haulers and to make the illegal
>"immigrants" feel right at "home", the federal government has decreed that
>the
>road signs will be metric. Distances are posted in meters and kilometers, so
>we
>have "mileposts" that are really "kiloposts" and signs that tell us that it
>is
>500 meters to the next exit.
>
>But in a fit of bureaucratic schizophrenia, since this highway is still in
>Arizona and Arizona law sets speed limits in miles per hour, the speed limit
>signs are in mph. Is this a great country or what?
>
>And as a further example of greatness, you U.S. taxpayers should be pleased
>to
>know that a massive multi-year expansion of this highway has just begun in
>order
>to speed the flow of unsafe Mexican trucks and drivers into the country.
>Safety
>checks of these trucks by local authorities will not be allowed because this
>might interfere with our "free trade" agreements with Mexico.
>
>Wes
>
>ps. One further attempt to metricize is that when an occasional load of
>illegal
>drugs is seized, the authorities give the weight in "kilos." It's a start.
>

Well, Wes, you can always move to California.
73,
Tom Donaly

1790. Direct conversion spectrum analyser

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-24 01:30:47 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3d66e02b$0$20680@echo-01.iinet.net.au>
Source record: 41952

Dear all
I am toying with the idea of a spectrum analyser based on our LO design for
1-2 GHz (yes it is still coming! - see http://www.qsl.net/ke5fx/index.html
for details)

The software/display would be PC based
Linux C++ for software
Sound card for filters/log det/monitor receiver

Front end would LO to diode mixer
First IF at 1000 MHz with roofing filter
Sweep would then be from 0 to 900 MHz or so

1000 MHz LO to mix down to audio (direct conversion)
It might be possible to use an I/Q setup with two mixers though I will need
a different audio setup for 2 inputs
?DSP board
Alternatively a conventional multiconversion to (say)
80-100 MHz/10.7 MHz/455 KHz though this would be rather more complicated.

I appreciate there will be "hole" at 0 Hz in the audio response with a DSB
direct conversion setup.
I presume this could be got around by dithering/stepping the LO frequency
and summing the resultant outputs
(the LO can be digitally set to better than 1 Hz resolution)
The PC itself may be the source of RF noise but I presume this can be calmed
with shielding techniques.
A limiting factor for fine resolution/sensitivity will be the LO phase noise
which is not as good as a commercial analyser but I would think it would be
possible to have useful measurements to a resolution of 500 Hz or so which
would be good enough for IMD tests etc.

Has anyone seen/had experience with such a setup and if so, are there any
fundamental problems?
I have seen the PC based amateur transceivers which cover a very wide range
and seem to function pretty well.

Thanks
Richard

1791. Re: Wee Willy DSB transceiver schematics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-24 09:34:09 UTC
From: vdberghak@zonnet.nl
Message-ID: <a62e44f4.0208240134.30251d9a@posting.google.com>
Source record: 41954

"North" <non@telia.com> wrote in message news:<VPa99.2738$e5.465926@newsb.telia.net>...
> "Chris" <vdberghak@zonnet.nl> skrev i meddelandet
> news:a62e44f4.0208221052.b0eceb1@posting.google.com...
> > Hi all,
> > a few months ago I found on the web schematics of a DSB transceiver
> > called Wee Willy.
> > I was interrested but now (when I am likely to build such a set up),
> > the page is no longer available on the web. (I tried but I get always
> > a 404 error :-( ).
> > Did anyone copy the page to his (or her) hard disc? I appreciate if it
> > is possible get it posted to me.
> > Thanks in advance.
> > By the way, other nice SSB or DSB QRP schematics are also welcome.
> > Thanks in advance,
> > Chris, PA3CRX
>
> You can look at this adresses:
> http://home4.swipnet.se/~w-41522/qrproot.html
> http://www.redhotradio.com/SMK_1.html

Thanks for the suggestion, however, I really want to have also the
schematic of the Wee Willy!
Do someone know a working link or can someone pass the schematic to
me?
Thanks in advance,
Chris.
>
> 73 de Ak

1792. FS: two 10 meter Ham radios

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-24 16:11:49 UTC
From: electricguy <electricguy30@nospamhotmail.com>
Message-ID: <ak8bfd$5ol$1@slb5.atl.mindspring.net>
Source record: 41955
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

AR3500 and RCI2970, $150 each

Go to http://www.mindspring.com/~elecman/ar3500.html

1793. FS- MORE stuff

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-24 17:08:26 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <e4P99.2331$p%3.161033@bgtnsc05-news.ops.worldnet.att.net>
Source record: 41956

Plans on how to make your own base and mobile antennas, from quarter waves
to beams, quads, and MORE.
Understanding coax, swr's, line loss, co-phasing, grounding and MORE.
CD also includes tuning and modifications on just about every cb as well as
most 10 meter radios and MORE
Mic wiring to all popular cbs, D104, Sedelata, Turner, standard and of
course MORE.
PLL convertions, adding talk-back, swing kits, roger beeps and MORE
Packed with pictures, how toos, parts and MORE.
email for more info, over 100 megs of info in easy to understand format,
carefully organized for EASY reference.

--
If first you don't succeed, do the same thing again...see what happens

1794. FS: Tube type power supply trainer unit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-24 20:02:46 UTC
From: WKW <worley45@aol.com>
Message-ID: <3D67E666.7C692AA0@aol.com>
Source record: 41957
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

I have several old Army surplus custom made tube- type training power supplies. These contain several useful parts (including the case) for making a 50 or 100 W RF amp or transmitter out of. Total size is 19" W x 15" D (counting the 3" handles on the front) and 8" H. The front has two nice large 4" x 4-1/2" rectangular Simpson panel meters, a 500 V and a 300 mA. Also has a 3-pos rotary sw and 3 pots, all with nice black knobs, and a fuse holder & rocker power switch. Inside is a big plate/filament transformer with the following spec: Stancor P-8352 with the following ratings: Pri 117 VAC, SEC: 290-0-290 (580 VCT) @ 240 mA DC, 5 V @ 3 A and 12.6 VCT @ 5.25 A. There are 4 tubes in the unit: 5V3 Full Wave rect, 6AS7G large octal power reg, 6136 mini 7-pin and a 5651 87V gas VR tube. Also has a 20 uF / 500 V dual section twist lock capacitor, and some power resistors and other parts. There is no top or bottom cover, but I can supply a piece of 1/16" aluminum to fit. I traced one of the units out before and drew some rough schematics, but never got around to drawing a good on out. Asking $30 plus UPS (36330 zip, total wt appr 28 lbs). Also have units missing tubes or other parts (several have broken meters) which I will knock $5 or $10 off. I can email you two photos. Email or call 334-347-5281 day/eve.

1795. Re: Simpel 20 m Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-24 22:14:00 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <jl0gmu8m99dhrcof9c1nrdie029d9u77ue@4ax.com>
Source record: 41958
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

On 23 Aug 2002 09:22:24 -0700, marsgal42@hotmail.com (Laura Halliday) wrote:
>Paul Keinanen <keinanen@sci.fi> wrote in message
news:<uogbmu8j7bfqtfhh515ig644i17a48he8m@4ax.com>...
>
>> Shouldn't it be possible to have
>>
>> * a RF signal source (in this case a crystal oscillator or VXO),
>> * an RF phase shifting network to generate the quadrature carrier
>> (simple in this case due to the fixed frequency),
>> * two modulators (NE602, SBL-1 etc.),
>> * baseband filters for premodulaton shaping
>> * a linear power amplifier (due to premodulation shaping)
>> * a digital signal source (PIC, PDA, PC etc.)
>>
>> to generate various sorts of PSK signals, not just PSK31 ?
>
>Of course. I plan to put such a system together this
>winter - baseband I/Q out a PC sound card, then an
>RF modulator and power amplifier. With such a setup
>you can generate just about every form of modulation
>hams use today.

Good luck. I tried changing my I/Q system to use
a sound card and PC to replace the DSP evaluation
module. I never could get phase synchronization
between the I and Q samples. (The sound card
operates sequentially for left and right, and you
can't precisely control the timing.)

That's why I gave up on that approach and simply
do the modulation of the carrier while still in the digital
domain. Then one channel of the sound card is used
simply as a D/A to output the modulated signal at an
audio IF. That goes to a conventional SSB transmitter
for up conversion. That gets rid of all the uncontrollable
timing problems.

Gary

1796. Re: Again - how do you clean old variable capacitors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-24 23:49:28 UTC
From: Brian Short <bshort4@cox.net>
Message-ID: <MPG.17d0ff8877a41e2b989683@news.west.cox.net>
Source record: 41959

While the XYL was away, I once washed a rather large one
in the dishwasher and it came out very nicely.

> "Douglas Snowden" <snowden@peoplepc.com> wrote in message
> news:ujp3am44625a1b@corp.supernews.com...
> > I've seen this before but forgot what was said. I think people
> > boil the variables in some mixture of lemon juice or vinegar?
> > I have some cruddy ones.

1797. Re: Simpel 20 m Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-25 01:18:23 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <umgc4v4rbfsae8@corp.supernews.com>
Source record: 41960
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

There have been a number of articles in the QRP Homebrewer and QQ, if I recall, on simple PSK rigs. You might check the NJQRP site, http://www.njqrp.org, most probably there are schematics of an 80 meter PSK rig that could give you ideas.

Also, you might check the DL-QRP club at http://www.werdau.net/dl-qrp-ag/. The transmitter circuit from their Black Forest rig might be pressed into service. I'm not a German speaker but it appears there is more on their German language pages than their English pages so there may be something else there useful, as well.

You might also try emailing Peter, DL2FI, who is the engine behind DL-QRP. He is one heck of a fun guy and a bundle of ideas. (Also a recent inductee to the QRP Hall of Fame).

..

"Andreas Weller" <weller@andreas-weller.de> wrote in message news:ak013v$m3f$05$1@news.t-online.com...
> Hallo!
>
> I'm looking for schematics for an easy to build simple Transmitter for 20 m.
> I want to take it on holiday for PSK31. So it can be on the fixed frequency
> 14.070 MHz.
> I know that there are schematics for such a device out there - but I didn't
> find it.
>
> Thank you very much!
>
> 73 de DF1PAW, Andreas Weller
>
>

1798. Tandem Match

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-25 02:38:33 UTC
From: Gary & Angela Belcaster <gbelcas@charter.net>
Message-ID: <gbelcas-EC2A86.21383324082002@corp.supernews.com>
Source record: 41961

Anybody built the Tandem Match swr/wattmeter and can answer a couple of questions? Thanks in advance.

Gary

1799. Atlas 210x - external VFO help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-25 15:07:02 UTC
From: Andreas Weller <weller@andreas-weller.de>
Message-ID: <akarqleem06$1@news.t-online.com>
Source record: 41962
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hallo!

One of my friends owns an old "Atlas 210x". Now he wants to use it as his "digital modes Transceiver" because the receivers spectrum is very linear. But it has a terrible frequency drift problem.
Now he remembered that there is a connector for an external VFO at his radio's rear. His idea is that there must be a way to stabilize the radio on the frequency - for example 14.070 for PSK31. May be with a little circuit using crystals, etc...

Do you have any ideas about how to do this? Schematics? Or something that may help him...

Thank you very much!

73 de Andreas, DF1PAW

1800. RadioConstructorsGroup BBS.(Sir douglas Hall)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-25 16:41:48 UTC
From: geoffrey brown <geoff@spontaflex.freeserve.co.uk>
Message-ID: <akb1b0cdf1@newsg1.svr.pol.co.uk>
Source record: 41963
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.shortwave,uk.radio.amateur

The Ingenious Circuits of Sir Douglas Hall.

We have set up a Radio Constructors Group BBS for anyone interested in his circuits for exchanging information, component availability problems and general help etc.

If you wish to join please go to

http://groups.yahoo.com/group/radioconstructors/

(if your not a member of Yahoo you will have to go thro the signup procedure but it only takes a few minutes.)

Most of his circuits can be found at

http://www.spontaflex.freeserve.co.uk/

Cheers

Geoff

geoff@spontaflex.freeserve.co.uk

1801. Re: Using old TX as linear?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-25 19:29:34 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <akbb4u$72i$1@slb7.atl.mindspring.net>
Source record: 41965

5 watts is way to hot to grid drive a pair of 6146s. But you can always swamp it down a bit with some resistance. Or even make it link coupled and make it a loose coupling.

You can probably get away without changing the tank circuit. Use the 20 meter band and see how that works out. If not, then try the 15 tap.

Just some thoughts.

Dan/W4NTI

"Bill Meara" <n2cqr@clix.pt> wrote in message
news:3d6936c5.597395154@news.clix.pt...
> I recently built a solid state 17 meter SSB transmitter and have been
> having a lot of fun with it. (Details on my web site -- URL below).
> The only problem is that the 5 watt output sometimes makes copy tough
> for my 17 meter friends. They are threatening to take up a collection
> to buy me a linear.
>
> I tried using a little Ramsey kit 20 watt MOSFET-based linear. Those
> MOSFETS are too sensitive!
>
> So... I've come to my senses and am looking at alternatives that glow
> in the dark.
> After building the transmitter, I don't want to immediately launch
> into another HB project. This morning I was sitting in the shack. I
> was looking at the old HT-37 that has been JUST SITTING THERE for a
> long time. Two nice 6146s in there, already wired for linear service.
> Power supply already built. You guys see where I'm going.
>
> How about me running the 5 watts of RF out of the HB 17 meter SSB rig
> into the PA section of the old HT-37?
>
> Any suggestions on how to do this? I'm looking for ideas that don't
> involve major surgery on my beloved Hallicrafters TX.
>
> Should I run the RF stright to the 6146s? Or should I make use of the
> 12BY7A driver? How much drive will I need for the 6146s?
>
> Do you guys think I will have to change the values of the coils in the
> PA tank and/or the driver plate circuit? Or will I be able to tune 17
> with the bandswitch in the 20 or 15 meter positions.
>
> Suggestions welcomed. Thanks,
>

> 73 de Bill CU2JL N2CQR
> Sao Miguel Island, The Azores, Portugal
> 37.7 N 25.7 W
> http://planeta.clix.pt/n2cqr

1802. Using old TX as linear?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-25 19:58:38 UTC
From: n2cqr@clix.pt
Message-ID: <3d6936c5.597395154@news.clix.pt>
Source record: 41964

I recently built a solid state 17 meter SSB transmitter and have been having a lot of fun with it. (Details on my web site -- URL below). The only problem is that the 5 watt output sometimes makes copy tough for my 17 meter friends. They are threatening to take up a collection to buy me a linear.

I tried using a little Ramsey kit 20 watt MOSFET-based linear. Those MOSFETS are too sensitive!

So... I've come to my senses and am looking at alternatives that glow in the dark.
After building the transmitter, I don't want to immediately launch into another HB project. This morning I was sitting in the shack. I was looking at the old HT-37 that has been JUST SITTING THERE for a long time. Two nice 6146s in there, already wired for linear service. Power supply already built. You guys see where I'm going.

How about me running the 5 watts of RF out of the HB 17 meter SSB rig into the PA section of the old HT-37?

Any suggestions on how to do this? I'm looking for ideas that don't involve major surgery on my beloved Hallicrafters TX.

Should I run the RF stright to the 6146s? Or should I make use of the 12BY7A driver? How much drive will I need for the 6146s?

Do you guys think I will have to change the values of the coils in the PA tank and/or the driver plate circuit? Or will I be able to tune 17 with the bandswitch in the 20 or 15 meter positions.

Suggestions welcomed. Thanks,

73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 25.7 W
http://planeta.clix.pt/n2cqr

1803. PARTS FOR THE BUILDER IN YOU.....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-25 20:13:22 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3D693A62.8090202@charter.net>
Source record: 41966
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

Hello All
I have aprox 40 lbs shipping weight of all sorts of really good parts.
Might be a little less or maybe more i have a bunch of hard to find
items and will fill the box up.
17 Ceramic bandswitches every one will handle legal limit + .
Some really Nice Air Varaibles big and small ones.
3 varaics
Tubes 3-813's, 1- 811, a bunch more tubes all transmitting tubes
5 panel mount meters
A nice collection of knobs
Aprox 12 lbs of ceramic and regular tube sockets
Plate choke with plate resistors and caps for 2-811
handfull of ceramic plate caps big and small
really to much to list individually. I have some pics if your interested.
There is alot here.
would like to sell it all in one shot, Make me an offer i can't refuse.
Chris NI4L

--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

1804. Re: RadioConstructorsGroup BBS.(Sir douglas Hall)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-25 21:39:30 UTC
From: ronayling@hotmail.com
Message-ID: <3d6c4e16.54745481@news.freeserve.co.uk>
Source record: 41967

Well a radioconstructor group is a good idea but these
old circuits are a bit dated!!!
things have moved on a bit from the 60's

On Sun, 25 Aug 2002 17:41:48 +0100, "geoffrey brown"
<geoff@spontaflex.freeserve.co.uk> wrote:

>The Ingenious Circuits of Sir Douglas Hall.
>
>We have set up a Radio Constructors Group BBS for anyone interested in his
>circuits for exchanging information, component availability problems and
>general help etc.
>
>If you wish to join please go to
>
>http://groups.yahoo.com/group/radioconstructors/
>
>(if your not a member of Yahoo you will have to go thro the
>signup procedure but it only takes a few minutes.)
>
>Most of his circuits can be found at
>
>http://www.spontaflex.freeserve.co.uk/
>
>Cheers
>
>Geoff
>
>geoff@spontaflex.freeserve.co.uk
>
>

1805. Re: RadioConstructorsGroup BBS.(Sir douglas Hall)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-25 22:03:09 UTC
From: geoffrey brown <geoff@spontaflex.freeserve.co.uk>
Message-ID: <akbk5h$8h1$1@newsg3.svr.pol.co.uk>
Source record: 41968

Very true but there are still quite a few still interested.

Cheers

Geoff

1806. Re: Again - how do you clean old variable capacitors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-26 00:12:14 UTC
From: Terry <tsanford@nf.sympatico.ca>
Message-ID: <3D69725E.7E82CECE@nf.sympatico.ca>
Source record: 41969

Max Foo wrote:
>
> Heck, I've used the dishwasher to clean my pc keyboards,
> fixes those sticky keys from spilled coffee and soda.

Question:
Presumably just with hot water?
Detergent could/would corrode components?
Reason I ask is that telephones 'put through a dishwasher' do
not, generally, work very well afterwards!
Curious. Terry.

1807. Re: PARTS FOR THE BUILDER IN YOU.....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-26 02:34:23 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3D6993AF.4040103@charter.net>
Source record: 41970
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

SOLD........

NI4L wrote:

> Hello All
> I have aprox 40 lbs shipping weight of all sorts of really good parts.
> Might be a little less or maybe more i have a bunch of hard to find
> items and will fill the box up.
> 17 Ceramic bandswitches every one will handle legal limit + .
> Some really Nice Air Varaibles big and small ones.
> 3 varaics
> Tubes 3-813's, 1- 811, a bunch more tubes all transmitting tubes
> 5 panel mount meters
> A nice collection of knobs
> Aprox 12 lbs of ceramic and regular tube sockets
> Plate choke with plate resistors and caps for 2-811
> handfull of ceramic plate caps big and small
> really to much to list individually. I have some pics if your
> interested.
> There is alot here.
> would like to sell it all in one shot, Make me an offer i can't refuse.
> Chris NI4L
>
>

--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

1808. Wanted: VERY Long Whips

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-26 02:35:32 UTC
From: "Dana Hoggatt (KB9SSS)" <kb9sss@arrl.net>
Message-ID: <3D6993F4.DE8E922F@arrl.net>
Source record: 41971

I've seen plenty of whips at about 100" or so,
but I'm looking for whips in excess of 200".
Does anyone know where I can find some?

Thanks.

Dana, KB9SSS

1809. Re: Using old TX as linear?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-26 02:41:26 UTC
From: gaschafer@attbi.com
Message-ID: <3d69958d.9641437@netnews.attbi.com>
Source record: 41972

You will need to link couple it if driving the 6146 grids. They are biased with about 50 volts of
bias. You need to reach that to drive them. 5 watts at 50 ohms is only about 15 volts. You
could put a small 2 turn loop around the driver coil in the ht37's grid coil. You will then need to
provide a load on the 5 watt transmitter. A 50 ohm resistor would probably do it. Just run a
small piece of coax out of the ht37 from the little link.

If you drive the 12by7 grid you can probably just couple in with a small capacitor to it. You still
need a 50 ohm load on the solid state transmitter though. I would go for the link at the 6146
grids. Probably best to pull the 12by7. Should work great.

73
Gary K4FMX

On Sun, 25 Aug 2002 19:58:38 GMT, n2cqr@clix.pt (Bill Meara) wrote:

>I recently built a solid state 17 meter SSB transmitter and have been
>having a lot of fun with it. (Details on my web site -- URL below).
>The only problem is that the 5 watt output sometimes makes copy tough
>for my 17 meter friends. They are threatening to take up a collection
>to buy me a linear.
>
>I tried using a little Ramsey kit 20 watt MOSFET-based linear. Those
>MOSFETS are too sensitive!
>
>So... I've come to my senses and am looking at alternatives that glow
>in the dark.
>After building the transmitter, I don't want to immediately launch
>into another HB project. This morning I was sitting in the shack. I
>was looking at the old HT-37 that has been JUST SITTING THERE for a
>long time. Two nice 6146s in there, already wired for linear service.
>Power supply already built. You guys see where I'm going.
>
>How about me running the 5 watts of RF out of the HB 17 meter SSB rig
>into the PA section of the old HT-37?
>
>Any suggestions on how to do this? I'm looking for ideas that don't
>involve major surgery on my beloved Hallicrafters TX.
>
>Should I run the RF stright to the 6146s? Or should I make use of the

>12BY7A driver? How much drive will I need for the 6146s?
>
>Do you guys think I will have to change the values of the coils in the
>PA tank and/or the driver plate circuit? Or will I be able to tune 17
>with the bandswitch in the 20 or 15 meter positions.
>
>Suggestions welcomed. Thanks,
>
>73 de Bill CU2JL N2CQR
>Sao Miguel Island, The Azores, Portugal
>37.7 N 25.7 W
>http://planeta.clix.pt/n2cqr

1810. Re: Wanted: VERY Long Whips

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-26 03:18:52 UTC
From: Idontwantspam@net
Message-ID: <3d699a51.50734412@news.bellatlantic.net>
Source record: 41973

On Sun, 25 Aug 2002 21:35:32 -0500, "Dana Hoggatt (KB9SSS)"
<kb9sss@arrl.net> wrote:

>I've seen plenty of whips at about 100" or so,
>but I'm looking for whips in excess of 200".
>Does anyone know where I can find some?
>
One continuous rigid piece 17 feet long would be hard to ship, except
by motor freight, and hard to transport. I also assume this is not for
mobile use unless you bend it way over.

You would either need a more flexible one that could be coiled.

A more practical arrangement might be to have a 100" whip and a
loading coil.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

1811. Re: Wanted: VERY Long Whips

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-26 03:28:01 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3D69A040.1C9E6566@nettally.com>
Source record: 41974

Try Fair Radio Sales (try Google) They used to sell modular whips for
tank radios. They were pretty long.

"Dana Hoggatt (KB9SSS)" wrote:

> I've seen plenty of whips at about 100" or so,
> but I'm looking for whips in excess of 200".
> Does anyone know where I can find some?
>
> Thanks.
>
> Dana, KB9SSS

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

1812. Re: Wanted: VERY Long Whips

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-26 03:51:55 UTC
From: Fulano de Tal <exray@nospamcaribe.net>
Message-ID: <3D69A5DB.D30F2CF0@nospamcaribe.net>
Source record: 41975

>
> "Dana Hoggatt (KB9SSS)" wrote:
>
> > I've seen plenty of whips at about 100" or so,
> > but I'm looking for whips in excess of 200".
> > Does anyone know where I can find some?
> >
> > Thanks.
> >
> > Dana, KB9SSS

Do you need it to stand straight up or are you going to bend it over somehow? If its the latter, the messenger wire (.109 and .134") from CATV self-support distribution cable could work ok.

-BM

1813. Re: Atlas 210x - external VFO help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-26 07:53:48 UTC
From: Andreas Weller <weller@andreas-weller.de>
Message-ID: <akcmqbcjm02$1@news.t-online.com>
Source record: 41976
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Additional Info:

We just found http://www.hamanuals.com/MMans/ATLS10XB.pdf where you can see the original schematics of the external crystal oscilator. Do you think it's possible to replace this circuit with a PLL?

Any Ideas about that?

73 de Andreas, DF1PAW

1814. Re: Wanted: VERY Long Whips

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-26 09:33:23 UTC
From: Markus L <uo9oew@lnubb.pbz>
Message-ID: <3d69f5c5$0$226$4d4ebb8e@read-nat.news.nl.uu.net>
Source record: 41977

"Dana Hoggatt (KB9SSS)" <kb9sss@arrl.net> wrote in message
news:3D6993F4.DE8E922F@arrl.net...
> I've seen plenty of whips at about 100" or so,
> but I'm looking for whips in excess of 200".
> Does anyone know where I can find some?

Take a look at the famous fiberglass telescope mast made in Germany:
http://www.qsl.net/dk9sq/fibregle.htm
Sold in U.S. by http://www.bright.net/~kanga/kanga/dk9sq.htm
Use as many sections as you need to obtain your desired length (up to 33ft).
Put a simple wire inside and you have your whip.
Am using it for many years as fixed HF antenna, combined with an SG-230 auto
tuner.

73, Markus HB9BRJ
--
e-mail address is ROT13 encoded. Decode before replying.

1815. Re: RadioConstructorsGroup BBS.(Sir douglas Hall)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-26 11:00:53 UTC
From: ronayling@hotmail.com
Message-ID: <3d6a08aa.1785144@news.freeserve.co.uk>
Source record: 41978

Well I joined the group, but not very impressed so far
the problem is going to be finding interesting projects,
talking about old back copies of the Radioconstuctor
is a bit boring, the trouble is these days very few people
build anything, usually just grey heads (like me)
Most of the work I seem to do these days is modifying
existing stuff, like making a Packet tnc from an old
Rabbitt fone base, and interfacing a computer with an
old PMR radio, and that sort of thing, but its very personal
others would probably find that boring as well hi!
from Ron.....

On Sun, 25 Aug 2002 23:03:09 +0100, "geoffrey brown"
<geoff@spontaflex.freeserve.co.uk> wrote:

>Very true but there are still quite a few still interested.
>
>Cheers
>
>Geoff
>

1816. Re: A simple FM receiver awaits you!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-26 11:09:27 UTC
From: ronayling@hotmail.com
Message-ID: <3d6b0b9f.2542355@news.freeserve.co.uk>
Source record: 41979

I agree, its so pointless, ok if you are just starting out with
electronics but to spend years playing with a one transistor
circuit is a bit iffy!!
I still have great fun with radio home brew, but its got to be
interesting !!!!

Ron......

On Sun, 18 Aug 2002 10:56:40 +0100, c.a.m@nospammam.blueyonder.co.uk
wrote:

>
>This guy should be banned, all he does is post this to this NG as regular as
>clockwork :(
>
>Come up with something new and interesting and maybe people might have an
>interest.
>
>Lexx

1817. Re: Again - how do you clean old variable capacitors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-26 12:29:56 UTC
From: Al <afjay*@earthlink.net>
Message-ID: <afjay*-AB7172.08295726082002@news.bellatlantic.net>
Source record: 41980

In article <3D69725E.7E82CECE@nf.sympatico.ca>,
Terry <tsanford@nf.sympatico.ca> wrote:

> Max Foo wrote:
> >
> > Heck, I've used the dishwasher to clean my pc keyboards,
> > fixes those sticky keys from spilled coffee and soda.
>
> Question:
> Presumably just with hot water?
> Detergent could/would corrode components?
> Reason I ask is that telephones 'put through a dishwasher' do
> not, generally, work very well afterwards!
> Curious. Terry.

Use a detergent designed for electronics. Anything containing
phosphorous or chlorine compounds should be avoided.

Al

--

Remove * from the address to reply.

1818. Help with military/navy power supply.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-26 13:19:29 UTC
From: porreta99@yahoo.com
Message-ID: <61c031e6.0208260519.51a3e790@posting.google.com>
Source record: 41981

Hi,

I posted this message to the rec.audio.tubes and someone suggested
(see below) that I post to this group.

Thanks
--
Elias

Post to rec.radio.amateur.homebrew -- sounds like the power supply for
an
AN/ART13

> Hi,
>
> I have an old navy power supply that I suspect I could use on a 845
> power amp project I have in mind. The PS has two transformer:
>
> - the first transformer powers a regulated circuit and puts out both
> 580VDC and 260VDC @125mA. It also has a couple of 6.3V filament supply
> and a 20VDC/10A output. This could be used to power the driver for
> the 845.
>
> - the second one is not regulated and uses a 3B24 regulator tube. I
> was able to measure up to 1000 VDC with about 40% on the Variac. My
> multimeter is only rated to 1000VDC :-(The capcitor following the
> rectifier is rated @ 2000VDC. The markings on the transformer are:
> M-7467114
> GE CO
> CG-301001
> Does anyone have the specs for this tranformer?
>
> With one transformer putting out in excess of 1000 VDC and the other
> with a 20VAC/10A output, can I use it with an 845?
>
> Thanks.
> --
> Elias

1819. Re: Wanted: VERY Long Whips

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-26 13:40:58 UTC
From: Markus Baertschi <markus@markus.org>
Message-ID: <MPG.17d438c955f5e729989687@News.CIS.DFN.DE>
Source record: 41982

I've seen many sailboats using very long whips for shortwave radio. Have
a look at the westmarine catalog: http://www.westmarine.com

Markus

1820. Re: Atlas 210x - external VFO help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-26 15:09:33 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3d6a431c$0$23997@echo-01.iinet.net.au>
Source record: 41983
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

You try my freq counter/stabilizer at
http://members.iinet.net.au/~richardh/vfostab.htm

This will stabilize the VFO if it drifts less than about 5 KHz and provide a
freq readout.

Richard
.
"Andreas Weller" <weller@andreas-weller.de> wrote in message
news:akcmqbcjm02$1@news.t-online.com...
> Additional Info:
>
> We just found http://www.hamanuals.com/MMans/ATLS10XB.pdf where you can
see
> the original schematics of the external crystal oscilator. Do you think
it's
> possible to replace this circuit with a PLL?
>
> Any Ideas about that?
>
>
> 73 de Andreas, DF1PAW
>
>

1821. Re: Direct conversion spectrum analyser

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-26 20:43:49 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0208261243.6dcceabf@posting.google.com>
Source record: 41984

"Richard Hosking" <zaprichardh@iinet.net.au(remove the zap)> wrote in message news:<3d66e02b$0$20680@echo-01.iinet.net.au>...
> Dear all
> I am toying with the idea of a spectrum analyser based on our LO design for
> 1-2 GHz (yes it is still coming! - see http://www.qsl.net/ke5fx/index.html
> for details)
> (snip...)

I once hacked together a VHF direct conversion spectrum analyzer to help align the LO chain in a receiver, and it worked fine. It was as simple as I could get away with, an op amp ramp generator, a Mini-Circuits VCO, a mixer, and an audio amplifier. The ticketaticketaticketa sound was clear from the audio output, and hooking the mess up to an oscilloscope showed a crude but useful display. It told me what I needed to know, and I aligned the LO on the correct harmonic.

I never zoomed in closely enough to see the image response, but I knew it was there. Since you know exactly what's wrong with the output, it would be a simple matter to deconvolve it in the computer before displaying it.

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

1822. fs: MT-1000 P-200 HT-600 convertacom mobile adapter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-26 22:50:47 UTC
From: Skipp <skipp@pilotNOSPAMPLEASE.ucdavis.edu>
Message-ID: <akebc7$a9j$1@woodrow.ucdavis.edu>
Source record: 41985
Cross-posted to: rec.radio.swap,rec.radio.amateur.swap,rec.radio.amateur.homebrew

re: Convertacom HT to mobile vehicle adapter (Motorola)

Hello there,

I'm pulling my MT-1000, HT-600 & P-200 Portable Covertacom out of service today. It's the drop in power supply, battery charger (dual rate... fast and slow), external amplified speaker (high power version) included and the mounting brackets.

I bought and have been using this unit for some time now for both UHF & VHF Motorola Portables... works very well with all the above models. We are going to trunking...

Paid almost $400 for it some years back... I'm asking $65 or best offer now. Drop me a direct Email if your interested... Please no spam or junk Email...

I'll also be listing a number of used HT-600, P-200 and one or two MT-1000 radios here in the next week. Watch for my listing... check my all positive Ebay feedback (my Ebay ID is my Email address you see here) for references.

thanks
73's
skipp

skipp@pilotNOSPAMPLEASE.ucdavis.edu

please take the NOSPAMPLEASE out of the above Email address to reply to me. thanks...

1823. Re: Wanted: VERY Long Whips

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-26 23:43:50 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <umlf51barrve9d@corp.supernews.com>
Source record: 41986

How about a 32 ft fiber-glass mast, to hold a wire as an antenna? I have
one.
Telescopic, down to 40" & 6 Lbs.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Dana Hoggatt (KB9SSS)" <kb9sss@arrl.net> wrote in message
news:3D6993F4.DE8E922F@arrl.net...
> I've seen plenty of whips at about 100" or so,
> but I'm looking for whips in excess of 200".
> Does anyone know where I can find some?
>
> Thanks.
>
> Dana, KB9SSS

1824. Re: Atlas 210x - external VFO help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-26 23:48:33 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3d6abcad$0$25580@echo-01.iinet.net.au>
Source record: 41987
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Let me rephrase that
> You *might* try my freq counter/stabilizer at
> http://members.iinet.net.au/~richardh/vfostab.htm
>
Richard

"Richard Hosking" <zaprichardh@iinet.net.au(remove the zap)> wrote in
message news:3d6a431c$0$23997@echo-01.iinet.net.au...
> This will stabilize the VFO if it drifts less than about 5 KHz and provide
a
> freq readout.
>
> Richard
> .
> "Andreas Weller" <weller@andreas-weller.de> wrote in message
> news:akcmqbcjm02$1@news.t-online.com...
> > Additional Info:
> >
> > We just found http://www.hamanuals.com/MMans/ATLS10XB.pdf where you can
> see
> > the original schematics of the external crystal oscilator. Do you think
> it's
> > possible to replace this circuit with a PLL?
> >
> > Any Ideas about that?
> >
> >
> > 73 de Andreas, DF1PAW
> >
> >
>
>

1825. ARRL Maryland-DC Section Convention & Hamfest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 00:03:10 UTC
From: "E. Allen Brown, FALLFEST 2002 Programs Manager" <KZ3AB@ARRL.net>
Message-ID: <3D6AC1BE.DB706AE4@ARRL.net>
Source record: 41988
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatachors,rec.radio.amateur.homebrew

The Foundation for Amateur Radio (F.A.R.) and The Columbia Amateur
Radio Association (CARA) have joined forces to create what will
become one of the premier Amateur Radio events in the Mid-Atlantic
region.

The dates are Saturday, September 7 and Sunday, September 8, 2002
at the Howard County (MD) Fairgrounds west of Baltimore near the
intersection of I-70 and MD-32.

See: http://www.fall-fest.com/ for details and directions.

VE Exams (amateur radio tests) will run from 8:00 am - 12:00 n
on Sunday, September 8.

Skywarn classes run from 12:00 N - 5:00 pm on Saturday,
September 7. See: http://www.fall-fest.com/skywarn.shtml
for info on how to register.

Many vendors have reserved space including "Satellite Sam," the
"RF Connection," the "Badge Man," "Startek," "Ramsey Electronics,"
and more.

Seminars will include:

Amateur Microwave Communications with Bill Seabreeze, W3IY
RF Interference Investigation with Mike Martin, K3RFI
AMSAT Satellite Communications with Rick Hambly, W2GPS
Coordinated ARRL Presentation with Tom Abernethy, W3TOM, ARRL MDC SM
Demonstration of the Marconi Detector by Chip Weems, W4PBG
APRS Demonstration by Bob Bruninga, WB4APR
Amateur TV demonstration by Tim Keener, N3VGS

And more!

A special event station will be on the air demonstrating vintage and
homebrew equipment (radios that glow in the dark) with that wonderful
rich
sound of AM radio from the "old days."

For more info, contact: <info@fall-fest.com>

--
E. Allen Brown, KZ3AB
FALLFEST 2002 Programs Manager
<KZ3AB@ARRL.net>

1826. Re: Wanted: VERY Long Whips

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 01:44:47 UTC
From: they.are.here@the.light.com
Message-ID: <j4mlmug7hvrmioe8qvkilc1dddua3dej4p@4ax.com>
Source record: 41989

A longe whip is only 6 feet with a 1 foot popper.

IMHO you are better off using restraints and a riding crop. It
adds that personal touch.

On Sun, 25 Aug 2002 21:35:32 -0500, "Dana Hoggatt (KB9SSS)"
<kb9sss@arrl.net> wrote:

>I've seen plenty of whips at about 100" or so,
>but I'm looking for whips in excess of 200".
>Does anyone know where I can find some?
>
>Thanks.
>
>Dana, KB9SSS

1827. Re: Wanted: VERY Long Whips

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 02:59:43 UTC
From: mcalhoun@ksu.edu
Message-ID: <akepuv$svt@unix2.cc.ksu.edu>
Source record: 41990

>> I've seen plenty of whips at about 100" or so,
>> but I'm looking for whips in excess of 200".
>> Does anyone know where I can find some?

>Try Fair Radio Sales (try Google) They used to sell modular whips for
>tank radios. They were pretty long.

Came in different diameters, all in three-foot increments which could be
screwed together (thicker toward the bottom, thinner toward the top).
For field day I once erected a 33-foot version (BY MYSELF; it was like
trying to stand up a 33-foot piece of limp spaghetti!), but it had to be
guyed at least twice, IIRC. I don't remember if a 16-17 foot version
was self supporting, but that'd be close to the limit.

I also purchased the base insulator and mounted it in the center of
my vehicle's spare tire.

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

1828. Re: Tayloe detector again

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 12:17:31 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <akfql1$1hpr6c$1@ID-61331.news.dfncis.de>
Source record: 41991

"John Smith" <someone@micro$oft.com> wrote in message
news:ak4spchon1@newstoo.ericsson.se...
> > I have become a big supporter of the Tayloe method, see my receiver
here:
> > http://www.hanssummers.com/radio/polyphase/index.htm, but no time yet
> > for drawing circuit diagrams I'm afraid.
>
> I know that if you get it right, then it can be a very nice and clean
> system. I have seen several versions where the Tayloe method has been
> decried, but usually due to poor construction and lack of attention to
> details (and ballance).
>
> Like the pix, looking forward to the circuit. Where did you get the dial?

I have used a few of these dials in my projects. They have a 6:1 or 36:1
reduction drive built in. You get 36:1 over a certain range of motion then
the 6:1 kicks in. Stop turning and turn back the other way and you're in
36:1 again. It's quite intuitive and nice. With my Huff Puff VFO Stabiliser
I have lock points separated 11.9 Hz in my 80m receuver with my current
circuit settings, and I can quite easily move the VFO up or down just one
lock point in the 36:1 mode.

I inherited them from my late Father, and had no idea where they could be
sourced until a few months ago, when I received an email query and asked on
this newsgroup and a couple of other places. I found the dials were made by
Jackson Brothers here in the UK, who are now owned by Mainline Electronics
Group. I got a catalogue from them and offered to build them an online
version for their website (in fact, they had no website only the domain and
a message about it being down for maintenance).

See http://www.mainlinegroup.co.uk/jacksonbrothers/index.htm for the result.

--

Hans Summers
http://www.HansSummers.Com

>
> BR Harry
> harryvponospam@nospamhotmail.com
>
>
>
>

1829. Professional circuit boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 13:46:58 UTC
From: smorrisby@cix.compulink.co.uk
Message-ID: <akfvsiicu1@thorium.cix.co.uk>
Source record: 41992

How do manufacturers finish off their circuit boards with that green (I assume) silk screen printing. I can make and populate what I believe is a good looking PCB, I can even print on the component locations, but they never look anything like a professional one. How do the pros do it and why do they use green anyway?.

Thanks

Steve

1830. How CONNECT to a Ufer ground?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 14:41:16 UTC
From: mcalhoun@ksu.edu
Message-ID: <akg32c$hrv@unix2.cc.ksu.edu>
Source record: 41993

Several weeks ago I posted a question about how to provide a really-good ground in the new basement that'll soon be built beneath our house, and several respondees suggested using a "Ufer" ground. However, after studying them, I now have more questions:

HOW does one make connections to the rebar INside the footing?
Does the contractor just leave some rebar sticking out here and there?

If s/he leaves a few inches sticking out on the INside of the footing, that will be BENEATH (or in) the slab floor, so I won't be able to connect to it. Maybe "out and up" or "up and then out"?

(FWIW, my contractor says there will be no rebar in the slab itself, just some kind of fiber mixed in with the concrete.)

If a few inches of rebar are left sticking out OUTside the footing, what keeps that rebar from corroding from contact with moist soil and thereby quickly becoming useless as an electrical connection?

Incidentally, I spoke with a representative from the local power company yesterday, and we concluded that the new electrical service entrance should enter at a spot that (probably unbeknownst to him, since all he considered was code regulations for closest distance to windows, decks, and overhangs, maximum runs, etc.) is almost optimum for a "common entrance" for electricity, telephone, and my antenna coaxes!

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

1831. Re: Professional circuit boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 14:56:09 UTC
From: Frank <fworm@norpak.ca>
Message-ID: <3D6BBD49.1070206@norpak.ca>
Source record: 41994

The grean stuff is called soldermask.
You can get it in different colours.
Tuff to do at home.

smorrisby@cix.compulink.co.uk wrote:

> How do manufacturers finish off their circuit boards with that green (I
> assume) silk screen printing. I can make and populate what I believe is a
> good looking PCB, I can even print on the component locations, but they
> never look anything like a professional one. How do the pros do it and why
> do they use green anyway?.
>
> Thanks
>
> Steve
>

1832. Re: ARRL Maryland-DC Section Convention & Hamfest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 15:09:15 UTC
From: Vito <vito@crosslink.net>
Message-ID: <3D6B961B.DCE5180F@crosslink.net>
Source record: 41995
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatachors,rec.radio.amateur.homebrew

"E. Allen Brown, FALLFEST 2002 Programs Manager" wrote:
>
> The Foundation for Amateur Radio (F.A.R.) and The Columbia Amateur
> Radio Association (CARA) have joined forces to create what will
> become one of the premier Amateur Radio events in the Mid-Atlantic
> region.
>
> The dates are Saturday, September 7 and Sunday, September 8, 2002
> at the Howard County (MD) Fairgrounds west of Baltimore near the
> intersection of I-70 and MD-32.
>
> See: http://www.fall-fest.com/ for details and directions.....

Das in Merlin near Bomber where the Oreos play, rat?

73, K3DWW

1833. Re: How CONNECT to a Ufer ground?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 15:31:12 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <db6nmus1lvqhc65vautsbddo81ltoac6k8@4ax.com>
Source record: 41996

On 27 Aug 2002 09:41:16 -0500, mcalhoun@ksu.edu (Myron A Calhoun) wrote:
>HOW does one make connections to the rebar INside the footing?
>Does the contractor just leave some rebar sticking out here and there?
>
>If s/he leaves a few inches sticking out on the INside of the footing,
>that will be BENEATH (or in) the slab floor, so I won't be able to
>connect to it. Maybe "out and up" or "up and then out"?
>
> (FWIW, my contractor says there will be no rebar in the slab
> itself, just some kind of fiber mixed in with the concrete.)

A minimum Ufer consists of 20 continuous lineal feet of half inch
rebar jacketed in a minimum of 2 inches of concrete. Anything much
smaller won't be markedly better than an ordinary driven rod. So
messing with short bars in the footing probably won't accomplish
much.

Where the Ufer technique really shines is when you have a bonded
grid of rebar in a large slab. Then the contact area gives you a very
low impedance connection to Earth.

If it were me, I'd slip the contractor a few extra bucks to lay in a
bonded rebar lattice for the slab. That'd get you a great ground.
Have one end of one of the rebars bent up above the slab surface
so you can tie to it.

>If a few inches of rebar are left sticking out OUTside the footing, what
>keeps that rebar from corroding from contact with moist soil and thereby
>quickly becoming useless as an electrical connection?

Nothing. That's why a real Ufer ground requires the rebar to be
fully jacketed in concrete.

Gary

1834. PLATE TRANSFORMER AND CHOKE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 15:58:48 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3D6BA1B8.7080000@charter.net>
Source record: 41897

Stancor P-8045 120v primary center tapped 1000v 250ma 750v 250ma
weighs about 26lbs
50.00 + shipping
Thordarson Choke coil type 6408 weighs about 13lbs not sure on the
specs $25.00+ shipping

--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

1835. Re: How CONNECT to a Ufer ground?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 16:00:20 UTC
From: SeeSignature@below.com
Message-ID: <3d6ba190.351723297@news.ga.comcast.giganews.com>
Source record: 41898

Gary

Can you just weld the rebar sections togetherwith a conventional
welder to get the "bonded" connection you refer to?

Jerry W4UK

On Tue, 27 Aug 2002 11:31:12 -0400, Gary Coffman <ke4zv@bellsouth.net>
wrote:

>On 27 Aug 2002 09:41:16 -0500, mcalhoun@ksu.edu (Myron A Calhoun) wrote:
>>HOW does one make connections to the rebar INside the footing?
>>Does the contractor just leave some rebar sticking out here and there?
>>
>>If s/he leaves a few inches sticking out on the INside of the footing,
>>that will be BENEATH (or in) the slab floor, so I won't be able to
>>connect to it. Maybe "out and up" or "up and then out"?
>>
>> (FWIW, my contractor says there will be no rebar in the slab
>> itself, just some kind of fiber mixed in with the concrete.)
>
>A minimum Ufer consists of 20 continuous lineal feet of half inch
>rebar jacketed in a minimum of 2 inches of concrete. Anything much
>smaller won't be markedly better than an ordinary driven rod. So
>messing with short bars in the footing probably won't accomplish
>much.
>
>Where the Ufer technique really shines is when you have a bonded
>grid of rebar in a large slab. Then the contact area gives you a very
>low impedance connection to Earth.
>
>If it were me, I'd slip the contractor a few extra bucks to lay in a
>bonded rebar lattice for the slab. That'd get you a great ground.
>Have one end of one of the rebars bent up above the slab surface
>so you can tie to it.
>
>>If a few inches of rebar are left sticking out OUTside the footing, what
>>keeps that rebar from corroding from contact with moist soil and thereby
>>quickly becoming useless as an electrical connection?
>
>Nothing. That's why a real Ufer ground requires the rebar to be
>fully jacketed in concrete.
>
>Gary
>

--
To reply, remove space in je flanders@comcast.net

1836. Re: How CONNECT to a Ufer ground?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 16:56:38 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <bmbnmuo07fsf1jeptetvpki7aqe9b0qbtr@4ax.com>
Source record: 41899

On Tue, 27 Aug 2002 16:00:20 GMT, SeeSignature@below.com wrote:
>Gary
>
>Can you just weld the rebar sections togetherwith a conventional
>welder to get the "bonded" connection you refer to?

Sure, though that's probably overkill. You can just wire tie them
together at the crossovers.

Gary

1837. Re: How CONNECT to a Ufer ground?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 17:09:11 UTC
From: john graesser <graesser@tca.net>
Message-ID: <umncgseeng419b@corp.supernews.com>
Source record: 41900

<SeeSignature@below.com> wrote in message
news:3d6ba190.351723297@news.ga.comcast.giganews.com...
> Gary
>
> Can you just weld the rebar sections togetherwith a conventional
> welder to get the "bonded" connection you refer to?
>
> Jerry W4UK

He apparantly lives in an area where it is cheaper to use fiber reinforcing (expensive material) instead of wire mesh or rebar (expensive labor). Before the advent of fiber, there used to be experiments with metal needles, which would do roughly the same job and did give your slab a small metal content.

Here where labor is cheap (plenty of subs use day labor to dig their trenches and wire up rebar) most contractors will build with a rebar ring round the edge of the foundation and wire mesh spread across the center. Six gauge wire mesh will give a great ground, it is 5 foot by 150 foot rolls of 6in mesh, with welded crosspieces. Never have I seen rebar welded together in residential construction.

Another alternative to rebar is the tension wire bundle used in commercial construction, it is stretched across the foundation and the ends have to extend past the concrete so that they can be tensioned. Even exposed to some weather, I have seen ends still sticking out 10-15 years later.
thanks, John.
KC5DWD

If you can get it past your local building inspector, more power to you. The problem is, that they are more worried about a slab cracking apart and shifting, than they are in getting a good rf ground

1838. Re: How CONNECT to a Ufer ground?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 17:09:48 UTC
From: Sylvan Butler <Znospam+noZs_0208@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnamncir.vdj.Znospam+noZs_0208@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 41901

On 27 Aug 2002 09:41:16 -0500, Myron A Calhoun <mcalhoun@ksu.edu> wrote:
> If s/he leaves a few inches sticking out on the INside of the footing,
> that will be BENEATH (or in) the slab floor, so I won't be able to
> connect to it. Maybe "out and up" or "up and then out"?

The Ufer should be the rebar in the slab and the footings all connected together. CAD welding is the preferred method, but some claim that a double wire-tie, extra tight, will suffice. The connection point to that grid of rebar should either protrude inside the structure (perhaps inside a wall) or outside the structure (into the air). That connection point needs to be near the electrical service entrance, which hopefully will be near where your other lines enter the building.

If inside the wall you will need to provide access (eg a blank cover plate) to the clamp connecting the ground wire to the rebar.

> (FWIW, my contractor says there will be no rebar in the slab
> itself, just some kind of fiber mixed in with the concrete.)

Typical, that is much less labor intensive (but some of the savings is consumed by the more expensive concrete). How much extra would it cost for rebar in the slab? You really want that if you want a good ground...

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Senator Fritz Hollings-S2048, Palladium, and TCPA, NOW!
http://investor.cnet.com/investor/news/newsitem/0-9900-1028-20173919-0.html
http://zdnet.com.com/2100-1106-945976.html

1839. Looking for prescaler

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 17:28:10 UTC
From: Bob Liesenfeld <robert.liesenfeld@neicoltech.org>
Message-ID: <3D6BB6AA.16102269@neicoltech.org>
Source record: 41902

Hi,
I'm looking to buy a few (~5) prescaler chips in DIP style. Something
along the lines of the Motorola MC12017 or such.
Anyone have any old stock laying around they want to get rid of?

Thanks

Bob WB0POQ

1840. Re: Atlas 210x - external VFO help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 18:26:35 UTC
From: la8ak.xnd@online.no
Message-ID: <3d6bc370.76779596@news.online.no>
Source record: 41903
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

could you just repeat the first URL, couldn't decode the information
(http://www.hamanuals.com/MMans/ATLS10XB.pdf)

73
Jan-Martin
On Tue, 27 Aug 2002 07:48:33 +0800, "Richard Hosking"
<zaprichardh@iinet.net.au(remove the zap)> wrote:

>Let me rephrase that
>> You *might* try my freq counter/stabilizer at
>> http://members.iinet.net.au/~richardh/vfostab.htm
>>
> Richard
>
>"Richard Hosking" <zaprichardh@iinet.net.au(remove the zap)> wrote in
>message news:3d6a431c$0$23997@echo-01.iinet.net.au...
>> This will stabilize the VFO if it drifts less than about 5 KHz and provide
>a
>> freq readout.
>>
>> Richard
>> .
>> "Andreas Weller" <weller@andreas-weller.de> wrote in message
>> news:akcmqbcjm02$1@news.t-online.com...
>> > Additional Info:
>> >
>> > We just found http://www.hamanuals.com/MMans/ATLS10XB.pdf where you can
>> see
>> > the original schematics of the external crystal oscilator. Do you think
>> it's
>> > possible to replace this circuit with a PLL?
>> >
>> > Any Ideas about that?
>> >
>> >
>> > 73 de Andreas, DF1PAW
>> >
>> >
>>
>>
>
>

--
remove ,xnd to reply

1841. Re: Help with military/navy power supply.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 18:57:36 UTC
From: porreta99@yahoo.com
Message-ID: <61c031e6.0208271057.55af0adf@posting.google.com>
Source record: 41904

You can see some pictures of the PS at:

http://www.eih.com/mil_ps/

Thanks.

porreta99@yahoo.com (Mazur) wrote in message
news:<61c031e6.0208260519.51a3e790@posting.google.com>...
> Hi,
>
> I posted this message to the rec.audio.tubes and someone suggested
> (see below) that I post to this group.
>
> Thanks
> --
> Elias
>
> ----------------------------------
> Post to rec.radio.amateur.homebrew -- sounds like the power supply for
> an
> AN/ART13
>
> > Hi,
> >
> > I have an old navy power supply that I suspect I could use on a 845
> > power amp project I have in mind. The PS has two transformer:
> >
> > - the first transformer powers a regulated circuit and puts out both
> > 580VDC and 260VDC @125mA. It also has a couple of 6.3V filament supply
> > and a 20VDC/10A output. This could be used to power the driver for
> > the 845.
> >
> > - the second one is not regulated and uses a 3B24 regulator tube. I
> > was able to measure up to 1000 VDC with about 40% on the Variac. My
> > multimeter is only rated to 1000VDC :-(The capcitor following the
> > rectifier is rated @ 2000VDC. The markings on the transformer are:
> > M-7467114
> > GE CO
> > CG-301001
> > Does anyone have the specs for this tranformer?
> >
> > With one transformer putting out in excess of 1000 VDC and the other
> > with a 20VAC/10A output, can I use it with an 845?
> >
> > Thanks.

> > --
> > Elias

1842. Re: Atlas 210x - external VFO help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 19:00:53 UTC
From: chuck & shirley hawks <s_hawks@bellsouth.com>
Message-ID: <xXPa9.77550$%v4.3235059@e3500-atl2.usenetserver.com>
Source record: 41906
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I went to the home page of hammanuals.com and followed the link for manuals online. The mentioned pdf file is for the noise blanker only.

I have a 210X and found the manual and schematics at the following site. Also the Atlas 210X-215X news group at Yahoo.com has the same info.

Hope this is of help

Chuck
KE4ETH

--
x-no-archive: yes
"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3d6bc370.76779596@news.online.no...
> could you just repeat the first URL, couldn't decode the information
> (http://www.hamanuals.com/MMans/ATLS10XB.pdf)
>
> 73
> Jan-Martin
> On Tue, 27 Aug 2002 07:48:33 +0800, "Richard Hosking"
> <zaprichardh@iinet.net.au(remove the zap)> wrote:
>
> >Let me rephrase that
> >> You *might* try my freq counter/stabilizer at
> >> http://members.iinet.net.au/~richardh/vfostab.htm
> >>
> > Richard
> >
> >"Richard Hosking" <zaprichardh@iinet.net.au(remove the zap)> wrote in
> >message news:3d6a431c$0$23997@echo-01.iinet.net.au...
> >> This will stabilize the VFO if it drifts less than about 5 KHz and
provide
> >a
> >> freq readout.
> >>
> >> Richard
> >> .
> >> "Andreas Weller" <weller@andreas-weller.de> wrote in message
> >> news:akcmqbcjm02$1@news.t-online.com...
> >> > Additional Info:
> >> >
> >> > We just found http://www.hamanuals.com/MMans/ATLS10XB.pdf where you
can

> >> see
> >> > the original schematics of the external crystal oscilator. Do you
think
> >> it's
> >> > possible to replace this circuit with a PLL?
> >> >
> >> > Any Ideas about that?
> >> >
> >> >
> >> > 73 de Andreas, DF1PAW
> >> >
> >> >
> >>
> >>
> >
> >
>
> --
> remove ,xnd to reply

1843. Re: Wanted: VERY Long Whips

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 19:00:57 UTC
From: John Fletcher <johnfletch@2e1gmv.freeserve.co.uk>
Message-ID: <akgi8mvno1@newsg1.svr.pol.co.uk>
Source record: 41905

seen at a local big market, 7.7 and 8.8 meter fibreglass fishing "rods"
excellent for 40m self supporting!

cost about £20 in the UK

"

1844. Re: Professional circuit boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 19:05:33 UTC
From: chuck & shirley hawks <s_hawks@bellsouth.com>
Message-ID: <W%Pa9.77576$%v4.3235256@e3500-atl2.usenetserver.com>
Source record: 41907

Make another silkscreen with the traces and component numbering only, no pads, and screen the board after etching it. Had to do at a company I worked for a number of years ago. Takes a long while to get it right.

Chuck

--
x-no-archive: yes
<smorrisby@cix.compulink.co.uk> wrote in message
news:akfvsiicu1@thorium.cix.co.uk...
> How do manufacturers finish off their circuit boards with that green (I
> assume) silk screen printing. I can make and populate what I believe is a
> good looking PCB, I can even print on the component locations, but they
> never look anything like a professional one. How do the pros do it and why
> do they use green anyway?.
>
> Thanks
>
> Steve

1845. Re: Zener diode as noise generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 21:09:33 UTC
From: donrm@soco.agilent.com
Message-ID: <1030482572.959750@cswreg.cos.agilent.com>
Source record: 41908

"Sverre Holm \(LA3ZA\)" <la3za@qsl.net> wrote:
>
> If I remember right there is a voltage where the temperature dependence of
> the voltage is almost 0 (is it 6.2 Volts?) Is there any correlation between
> noise and temperature coefficient?

Right - this is the dividing point between the Zener and Avalanche
breakdown mechanisms.

When I worked at Fairchild Semiconductor Diode (more years ago than
I care to remember) we tested 6 volt reference diodes by dunking them
in silicon oil baths at -55 and 100 degrees C while storing their
expanded breakdown knees on a Tek 564 storage 'scope. Where the knee
curves crossed, the current was noted and this was the true current and
voltage where zero TC occurred.

IIRC, the noise is contributed by a microsparks mechanism - these can
actually be seen under a microscope viewing the unpackaged chip in
darkened conditions, manifesting itself as a blue glow under the
passivating rings. Blue LEDs in 1965! I did note that 10-20 volt
"zeners" lit up brighter than most, particularly when driven with
lots of current...but that may have been a pecularity of manufacture.

Don Montgomery, K6LTS
donrm@soco.agilent.com

1846. Re: Looking for prescaler

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 21:23:17 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D6BEEC7.29A3@pop.removethistomailme.net>
Source record: 41910

Bob Liesenfeld wrote:
>
> Hi,
> I'm looking to buy a few (~5) prescaler chips in DIP style. Something
> along the lines of the Motorola MC12017 or such.
> Anyone have any old stock laying around they want to get rid of?
>

The old DIP-style MC12xxx chips are getting rather hard to find. Try eBay, or one of the obsolete parts-vendors at www.findchips.com.

The MC12080D is one of the few parts from that series they're still making (http://www.onsemi.com/pub/Collateral/MC12080-D.PDF). It's a darned nice part, too -- selectable division by 80, 40, 20, or 10 well past 1 GHz. But it's only available in an 8-pin SOIC, with half the pin spacing of a DIP. A little tougher to solder to but not impossible.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1847. Re: Simpel 20 m Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 21:23:30 UTC
From: vdberghak@zonnet.nl
Message-ID: <a62e44f4.0208271323.3a01f9f8@posting.google.com>
Source record: 41909
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:<umgc4v4rbfsae8@corp.supernews.com>...
> There have been a number of articles in the QRP Homebrewer and QQ, if I
> recall, on simple PSK rigs. You might check the NJQRP site,
> http://www.njqrp.org, most probably there are schematics of an 80 meter PSK
> rig that could give you ideas.
>
> Also, you might check the DL-QRP club at http://www.werdau.net/dl-qrp-ag/.
> The transmitter circuit from their Black Forest rig might be pressed into
> service. I'm not a German speaker but it appears there is more on their
> German language pages than their English pages so there may be something
> else there useful, as well.
>
> You might also try emailing Peter, DL2FI, who is the engine behind DL-QRP.
> He is one heck of a fun guy and a bundle of ideas. (Also a recent inductee
> to the QRP Hall of Fame).
>
> ..
>
> "Andreas Weller" <weller@andreas-weller.de> wrote in message
> news:ak013v$m3f$05$1@news.t-online.com...
> > Hallo!
> >
> > I'm looking for schematics for an easy to build simple Transmitter for 20
> m.
> > I want to take it on holiday for PSK31. So it can be on the fixed
> frequency
> > 14.070 MHz.
> > I know that there are schematics for such a device out there - but I
> didn't
> > find it.
> >
> > Thank you very much!
> >
> > 73 de DF1PAW, Andreas Weller
> >
> >

Hi,
about a year ago (in the summer of 2001) there was an article in QST
with a x-tal controlled transceiver specialy intented for PSK31.
May be this information can help you because may be someone can
provide you a copy.

Good luck,
Chris PA3CRX

1848. Re: Zener diode as noise generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 21:53:29 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D6BF4D9.6080200@eznec.com>
Source record: 41911

Most interesting.

I looked briefly at using a zener as a noise source, and checked a number of them on a Tek curve tracer long ago. What I saw with zeners of 12- 15 volts or more was a region at pretty low current (around 50 - 100 uA as I recall) where the vertical line was very visably fuzzy, indicating movement between two voltage points. Sure enough, when I biased one of these at that current level, there was a whole lot of noise. At the time I was interested in an HF noise generator, so I didn't see what the noise did at higher frequencies.

I recall noting that there seemed to be two distinct levels the diode was switching between. That's consistent with your spark explanation.

Roy Lewallen, W7EL

donrm@soco.agilent.com wrote:
> "Sverre Holm \(LA3ZA\)" <la3za@qsl.net> wrote:
>
>>If I remember right there is a voltage where the temperature dependence of
>>the voltage is almost 0 (is it 6.2 Volts?) Is there any correlation between
>>noise and temperature coefficient?
>
>
> Right - this is the dividing point between the Zener and Avalanche
> breakdown mechanisms.
>
> When I worked at Fairchild Semiconductor Diode (more years ago than
> I care to remember) we tested 6 volt reference diodes by dunking them
> in silicon oil baths at -55 and 100 degrees C while storing their
> expanded breakdown knees on a Tek 564 storage 'scope. Where the knee
> curves crossed, the current was noted and this was the true current and
> voltage where zero TC occurred.
>
> IIRC, the noise is contributed by a microsparks mechanism - these can
> actually be seen under a microscope viewing the unpackaged chip in
> darkened conditions, manifesting itself as a blue glow under the
> passivating rings. Blue LEDs in 1965! I did note that 10-20 volt
> "zeners" lit up brighter than most, particularly when driven with
> lots of current...but that may have been a pecularity of manufacture.
>
> Don Montgomery, K6LTS
> donrm@soco.agilent.com

1849. Re: How CONNECT to a Ufer ground?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-27 22:35:19 UTC
From: n7ws@nowhere.com
Message-ID: <3d6bfb3a.58153031@news.triconet.org>
Source record: 41912

On Tue, 27 Aug 2002 12:09:11 -0500, "john graesser" <graesser@tca.net> wrote:

|
|<SeeSignature@below.com> wrote in message
|news:3d6ba190.351723297@news.ga.comcast.giganews.com...
|> Gary
|>
|> Can you just weld the rebar sections togetherwith a conventional
|> welder to get the "bonded" connection you refer to?
|>
|> Jerry W4UK
|
|He apparantly lives in an area where it is cheaper to use fiber reinforcing
|(expensive material) instead of wire mesh or rebar (expensive labor). Before
|the advent of fiber, there used to be experiments with metal needles, which
|would do roughly the same job and did give your slab a small metal content.

Here in Pima County, AZ, contractors do not typically use rebar in slabs.
Footings are required to be reinforced by code. I added a garage to my house
and specified rebar in the slab as my concrete contractor (also a ham) said the
the wire mesh was a waste.
|
|Here where labor is cheap (plenty of subs use day labor to dig their
|trenches and wire up rebar) most contractors will build with a rebar ring
|round the edge of the foundation and wire mesh spread across the center. Six
|gauge wire mesh will give a great ground, it is 5 foot by 150 foot rolls of
|6in mesh, with welded crosspieces. Never have I seen rebar welded together
|in residential construction.

Welding some rebar is problematic. I believe it has to do with the carbon
content and possible embrittlement.
|
|Another alternative to rebar is the tension wire bundle used in commercial
|construction, it is stretched across the foundation and the ends have to
|extend past the concrete so that they can be tensioned. Even exposed to some
|weather, I have seen ends still sticking out 10-15 years later.
|thanks, John.

Post-tensioned slabs are used in areas of expansive soils. The concrete is
placed without reinforcing bar or wire. Steel cables are placed in the slab and
after some cure are tensioned with hydraulic rams and the ends of the cables are
terminated while under tension.

The cured slab is then essentially free to "float" on the earth with the cables
keeping it from cracking. However, the cables would make lousy ground as they
are covered with plastic sheathes to keep them free of the concrete and allow

them to be tensioned.

1850. Re: Professional circuit boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 00:21:54 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D6C17A2.10600@eznec.com>
Source record: 41913

The printing that looks green is solder resist. This is a material used to mask areas where you don't want solder to stick, and it basically covers everything but component pads. Without it, automated wave soldering would be impossible, since solder would bridge between pads and runs. You'd also use a whole lot more solder than necessary. I've seen a few boards that went through a wave soldering machine without solder resist, and it's not a pretty sight.

Roy Lewallen, W7EL

smorrisby@cix.compulink.co.uk wrote:
> How do manufacturers finish off their circuit boards with that green (I
> assume) silk screen printing. I can make and populate what I believe is a
> good looking PCB, I can even print on the component locations, but they
> never look anything like a professional one. How do the pros do it and why
> do they use green anyway?.
>
> Thanks
>
> Steve

1851. Re: ARRL Maryland-DC Section Convention & Hamfest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 00:26:31 UTC
From: Al Brown <KZ3AB@ARRL.net>
Message-ID: <3D6C18B7.DAB47890@ARRL.net>
Source record: 41914
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatachors,rec.radio.amateur.homebrew

Vito wrote:
>
> "E. Allen Brown, FALLFEST 2002 Programs Manager" wrote:
> >
> > The Foundation for Amateur Radio (F.A.R.) and The Columbia Amateur
> > Radio Association (CARA) have joined forces to create what will
> > become one of the premier Amateur Radio events in the Mid-Atlantic
> > region.
> >
> > The dates are Saturday, September 7 and Sunday, September 8, 2002
> > at the Howard County (MD) Fairgrounds west of Baltimore near the
> > intersection of I-70 and MD-32.
> >
> > See: http://www.fall-fest.com/ for details and directions.....
>
> Das in Merlin near Bomber where the Oreos play, rat?
>
> 73, K3DWW

Das rat! The Oreos play in Bawlmer, Merlin. Dat's north of
Napolis, Hon.

73, Al
--
E. Allen Brown, KZ3AB
FALLFEST 2002 Programs Manager

1852. FILAMENT TRANSFORMER

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 01:15:06 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3D6C241A.4050708@charter.net>
Source record: 41915

```
Radio Corporation of America
Type 902 376-2 50/60cy
Pri 220/205/190
Sec 5.0/2.5v-20A rms
Nice 25.00+shipping

--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/
```

1853. Re: Professional circuit boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 01:41:29 UTC
From: Idontwantspam@net
Message-ID: <3d6c2965.14759743@news.bellatlantic.net>
Source record: 41916

On Tue, 27 Aug 2002 17:21:54 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>The printing that looks green is solder resist. This is a material used
>to mask areas where you don't want solder to stick, and it basically
>covers everything but component pads. Without it, automated wave
>soldering would be impossible, since solder would bridge between pads
>and runs. You'd also use a whole lot more solder than necessary. I've
>seen a few boards that went through a wave soldering machine without
>solder resist, and it's not a pretty sight.
>
>Roy Lewallen, W7EL
>
It is also helpful in protecting the circuit traces from shorts and
corrosion, although it makes board troubleshooting more difficult.

I believe it is screened on as one of the final steps in manufacturing
the empty circuit board before any components are added.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

1854. Re: How CONNECT to a Ufer ground?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 02:37:39 UTC
From: mcalhoun@ksu.edu
Message-ID: <akhd1j$45m@unix2.cc.ksu.edu>
Source record: 41917

>On 27 Aug 2002 09:41:16 -0500, mcalhoun@ksu.edu (Myron A Calhoun) wrote:
>>HOW does one make connections to the rebar INside the footing?
>>Does the contractor just leave some rebar sticking out here and there?
>>....[snip]....

>A minimum Ufer consists of 20 continuous lineal feet of half inch
>rebar jacketed in a minimum of 2 inches of concrete. Anything much
>smaller won't be markedly better than an ordinary driven rod. So
>messing with short bars in the footing probably won't accomplish much.

You forget that the footing has TWO dimensions; my total footing will be
about 150 feet, and it sure BETTER have longitudinal rebar or it won't
support my house!-)

>Where the Ufer technique really shines is when you have a bonded grid of
>rebar in a large slab.... slip the contractor a few extra bucks to lay
>in a bonded rebar lattice for the slab....

Won't work for (at least) TWO reasons:
1) Slabs are laid on coarse gravel to allow water and radon to
percolate to the drainage tubes; gravel won't make much of a ground!
2) Although mine won't be, slabs can be laid on thermal insulation
(usually one inch of some kind of foam); foam doesn't conduct
at all!

>>If a few inches of rebar are left sticking out OUTside the footing, what
>>keeps that rebar from corroding from contact with moist soil and thereby
>>quickly becoming useless as an electrical connection?

>Nothing. That's why a real Ufer ground requires the rebar to be
>fully jacketed in concrete.

I've received several answers, all of them describing what a Ufer ground
is, but that is NOT what I asked! I KNOW how to make a Ufer ground
(at least 20 feet of rebar in the FOOTING), but I did not know how to
bring the ground out to where it can be connected to something.

At least I didn't know at the time I posted my question. However, today
I spoke with the local code-enforcement officer and learned that Ufer
grounds are fairly common around here (he mentioned a nearby large
building now under construction that uses one) and he essentially said
"A wire is run from wherever the ground is desired into the footing forms
and tack-welded to the rebar"; thus it is a WIRE--and not rebar--which
passes through the form walls.

My thanks to all who responded to both the original question ("How can
I get the best ground in my new basement?") and to this one.

--Myron
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

1855. Re: How CONNECT to a Ufer ground?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 03:12:34 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3D6C3FA2.748A22EC@nettally.com>
Source record: 41918

1. It is good that you can have all your circuits enter near same point. It will make single point grounding simpler. A "grounded entrance window" of ~ 1/8" thick aluminum or copper sheet with all of your lightning protectors should be installed there.

2. Don't let the bare re-bar exit the footer. It will rust and spall (break open) the concrete. Three inches of concrete must encase the re-bar. Bond the re-bar to a copper pig tail lead inside the pour as suggested below.

3. I suggested an isolated and separate copper conductor around the inside of the footer. However you can use just the rebar or both copper and re-bar. If you use the rebar it should be tightly tied with iron wire at each junction. A purist may suggest arc welding the rebar at major junctions, however it is difficult to do this (from experience) and some say it weakens the rebar. To electrically and mechanically bond the rebar to the copper pig tail lead, I would suggest getting stainless steel clamps such as those used for water hoses and use to bind the copper conductor(s) to the rebar.

Ideally the connection joint would be Iron re-bar to Stainless Steel to Copper with a Stainless steel clamp for mechanical connection. You could take apart a wider hose clamp and cut up a section to use as an interface around the re-bar before clamping the copper wire.

Use a sander or grinder to cut through the oxide and grease on the rebar first. Clamp all together with the hose clamp and finally coat the junction with de-oxit compound (I used the stuff to spray on battery terminals) and coat the junction with rubberized cloth electrical tape and coat liberally with roofing tar to waterproof. Make several copper to re-bar bonds to ensure redundancy in the event something breaks or corrodes.

As a note to above, I found some electrolytic action (very small measured electrical potential) between separately terminated copper conductor and iron re-bar ground systems in my foundation. I cannot comment on the long term effect of this. I believe PolyPhazer has published a report on Ufer ground systems that may offer more insight.

Joe

Myron A Calhoun wrote:

> Several weeks ago I posted a question about how to provide a really-good
> ground in the new basement that'll soon be built beneath our house, and
> several respondees suggested using a "Ufer" ground. However, after
> studying them, I now have more questions:
>
> HOW does one make connections to the rebar INside the footing?
> Does the contractor just leave some rebar sticking out here and there?

>
> If s/he leaves a few inches sticking out on the INside of the footing,
> that will be BENEATH (or in) the slab floor, so I won't be able to
> connect to it. Maybe "out and up" or "up and then out"?
>
> (FWIW, my contractor says there will be no rebar in the slab
> itself, just some kind of fiber mixed in with the concrete.)
>
> If a few inches of rebar are left sticking out OUTside the footing, what
> keeps that rebar from corroding from contact with moist soil and thereby
> quickly becoming useless as an electrical connection?
>
> Incidentally, I spoke with a representative from the local power company
> yesterday, and we concluded that the new electrical service entrance
> should enter at a spot that (probably unbeknownst to him, since all he
> considered was code regulations for closest distance to windows, decks,
> and overhangs, maximum runs, etc.) is almost optimum for a "common
> entrance" for electricity, telephone, and my antenna coaxes!
>
> --Myron.
> --
> Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
> PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
> NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

1856. Re: Help with military/navy power supply.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 04:06:55 UTC
From: n2ey@aol.com
Message-ID: <20020828000655.03046.00000198@mb-fy.aol.com>
Source record: 41919

In article <61c031e6.0208260519.51a3e790@posting.google.com>,
porreta99@yahoo.com (Mazur) writes:

>I posted this message to the rec.audio.tubes and someone suggested
>(see below) that I post to this group.
>
>Thanks
>--
>Elias
>
>-----------------------------------
>Post to rec.radio.amateur.homebrew -- sounds like the power supply for
>an
>AN/ART13
>
>> Hi,
>>
>> I have an old navy power supply that I suspect I could use on a 845
>> power amp project I have in mind. The PS has two transformer:
>>
>> - the first transformer powers a regulated circuit and puts out both
>> 580VDC and 260VDC @125mA. It also has a couple of 6.3V filament supply
>> and a 20VDC/10A output. This could be used to power the driver for
>> the 845.

That'll work.

>>
>> - the second one is not regulated and uses a 3B24 regulator tube.

The 3B24 is not a regulator tube. It's a high-voltage low-current vacuum
rectifier. The fact that there is only one indicates a half-wave rectifier
circuit.

>> I
>> was able to measure up to 1000 VDC with about 40% on the Variac. My
>> multimeter is only rated to 1000VDC :-(The capcitor following the
>> rectifier is rated @ 2000VDC. The markings on the transformer are:
>> M-7467114
>> GE CO
>> CG-301001
>> Does anyone have the specs for this tranformer?
>>
>> With one transformer putting out in excess of 1000 VDC and the other
>> with a 20VAC/10A output, can I use it with an 845?
>>

I think this power supply was meant for an oscilloscope or for a radar unit. The 2000 volt supply is low current and probably not adequate fpr the current demand of the 845.

73 de Jim, N2EY

1857. HELP solorcon A99

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 05:56:29 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <hCZa9.38355$Ke2.2732853@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41920

Im going to co-phase a pair of A99's, one new one, and Im going to make the other from a "wonder pole".
question, has anyone seen the inards of the base? Are there ____ turns of wire for the bottom tuning rings? I cant seem to find the right treads (yet) for the "tuning" rings
If you got a busted bottom, Id love to SEE it.. thanks guys.

--
If first you don't succeed, do the same thing again...see what happens

1858. Re: Professional circuit boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 09:28:57 UTC
From: smorrisby@cix.compulink.co.uk
Message-ID: <aki54p$l04$1@thorium.cix.co.uk>
Source record: 41921

Thanks very much, I guess I should have realised it was for more than asthetics, and of limited use for one offs. But it does make a beautiful finish.

Steve

1859. Re: Simpel 20 m Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 12:13:35 UTC
From: Andreas Weller <weller@andreas-weller.de>
Message-ID: <akiep8mvo07$1@news.t-online.com>
Source record: 41922
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

Thank you!
Good idea - if someone would be so nice to scan the article, please

Thanks!

Andreas Weller, DF1PAW

> Hi,
> about a year ago (in the summer of 2001) there was an article in QST
> with a x-tal controlled transceiver specialy intented for PSK31.
> May be this information can help you because may be someone can
> provide you a copy.
> Good luck,
> Chris PA3CRX

1860. Re: Simpel 20 m Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 13:32:42 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0208280532.72ddd507@posting.google.com>
Source record: 41923
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

vdberghak@zonnet.nl (Chris) wrote in message
news:<a62e44f4.0208271323.3a01f9f8@posting.google.com>...
>
> Hi,
> about a year ago (in the summer of 2001) there was an article in QST
> with a x-tal controlled transceiver specialy intented for PSK31.
> May be this information can help you because may be someone can
> provide you a copy.
> Good luck,
> Chris PA3CRX

Yes, it's the March 2001 issue of QST, on page 37, "The Warbler --
A Simple PSK31 Transceiver for 80 Meters", by Dave Benson and
George Heron. I dug up the article when I first saw this thread,
then just didn't get around to posting.

It certainly is simple, trading duplication (they use separate
crystal filters for both transmit and receive) for simplicity
no fussing with a lot of switching between RX and TX).
It a direct conversion transceiver, with the crystal filters
right on the operating system; in this case they use 3.58MHz
subcarrier crystals for the ladder filters.

Michael VE2BVW

1861. Microwave gunn

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 14:49:27 UTC
From: nads <nads_67uk@yahoo.co.uk>
Message-ID: <3d6ce35e$1_1@mk-nntp-1.news.uk.worldonline.com>
Source record: 41924

I'm looking for a UK supplier microwave gunn diode oscillators mounted in a waveguide with a horn operating at about 10.6 GHz and any schematics for transmitting and receiving equipment for some experimenting in this band

1862. Homebuilt dummy load concerns?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 16:45:27 UTC
From: senecal@mapson.cs.ucdavis.edu
Message-ID: <senecal-2808020945270001@iras-3-62.ucdavis.edu>
Source record: 41925
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi all,

I'm looking to build my own dummy load for my HF shack (to keep costs down). Question: Are there any special precautions that I need to take for SWR (or anything else) or will it suffice to take twenty 10 Watt 1K resistors and wire them in parallel?

73,

Josh, KG6IBF

--
Remove the reversed nospam in the e-mail address.

1863. Coax cable question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 16:51:58 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <Oc7b9.39051$Ke2.2777348@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41926

Is there such an item as 300 ohm coax cable?

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.381 / Virus Database: 214 - Release Date: 8/2/02

1864. Re: Coax cable question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 16:56:19 UTC
From: Fulano de Tal <exray@nospamcaribe.net>
Message-ID: <3D6D00B3.74E80877@nospamcaribe.net>
Source record: 41927

marvin rosen wrote:
>
> Is there such an item as 300 ohm coax cable?

No. At least not commonly found.
-BM

1865. Re: Homebuilt dummy load concerns?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 17:26:23 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D6D07BD.593C3C9F@clifto.com>
Source record: 41928
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Joshua Senecal wrote:
> I'm looking to build my own dummy load for my HF shack (to keep costs
> down). Question: Are there any special precautions that I need to take for
> SWR (or anything else) or will it suffice to take twenty 10 Watt 1K
> resistors and wire them in parallel?

For HF, the lead inductance shouldn't be terrible. But obviously, don't use standard wirewound power resistors. Watch the tolerances, too; one 10%-low resistor in the bunch will pop quickly, making very little difference in resistance (52.6 ohms) but now spreading 200 watts over "190 watts of resistors".

--
.signature in flux

1866. Re: Homebuilt dummy load concerns?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 17:26:27 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <umq1usp2eec094@corp.supernews.com>
Source record: 41929
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Josh - there's no magic here, but there are some things to be careful of.

Many higher power resistors are inductive, you need resistors that have a very small inductance at HF - and be sure it's at HF. For example, Radio Shack sells some "non-inductive" resistors for audio use, but they exhibit significant inductance at RF. This will cause your dummy load to exhibit some surprising impedance, certainly not 50 ohms.

As if that's not enough, you need to wire them together in such a way as to not add your own inductance. At 80 meters, you can probably be pretty sloppy and not have a problem. But at 10 meters, you will need to think about how you arrange those resistors to keep the lead inductance down.

Finally, there is the issue of heat. A 10 watt resistor won't stand 10 watts if it can't cool itself because it's surrounded by other 10 watt resistors trying to cool themselves.

So sure, you can build your own dummy load, and it really isn't hard, but you do need to think about it a little. If you just throw together twenty resistors chances are you'll have a problem.

..

"Joshua Senecal" <senecal@mapson.cs.ucdavis.edu> wrote in message news:senecal-2808020945270001@iras-3-62.ucdavis.edu...
> Hi all,
>
> I'm looking to build my own dummy load for my HF shack (to keep costs
> down). Question: Are there any special precautions that I need to take for
> SWR (or anything else) or will it suffice to take twenty 10 Watt 1K
> resistors and wire them in parallel?
>
> 73,
>
> Josh, KG6IBF
>
> --
> Remove the reversed nospam in the e-mail address.

1867. Triton II Audio Board Schematic needed!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 17:27:54 UTC
From: Larry Anderson <w6lar@cybertime.net>
Message-ID: <akj1lo$1dn9$1@madmax.keyway.net>
Source record: 41933

Anyone out there have a Triton II manual that shows the 80130 Audio board schematic?? Scan and e-mail a copy to me if you can. Have one smoked.

Thanks

Larry Anderson, W6LAR

1868. Re: Zener diode as noise generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 17:29:23 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <TL7b9.14959$sR2.274418@news4.ulv.nextra.no>
Source record: 41930

Thanks for replies to my Zener diode noise generator question, I found it very useful!

73 Sverre LA3ZA

www.qsl.net/la3za

1869. Linear PA without output filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 17:29:23 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <TL7b9.14960$sR2.274418@news4.ulv.nextra.no>
Source record: 41931

Output power amplifiers seem always to require output lowpass filters in order to meet FCC and other PTT's requirements saying "The mean power of any spurious emission from a station transmitter or external RF power amplifier transmitting on a frequency below 30 MHz must not exceed 50 mW and must be at least 40 dB below the mean power of the fundamental emission. "

Now, 40 dB corresponds to a voltage ratio of 1:100, i.e. maximum 1% total harmonics distortion (THD). However, audio power amplifiers are regularly made with THD specs of 0.1 or 0.01% - and of course there are no output filters.

My question is: why can't one build an HF PA that meets these specs - without filters?

I can think of the following answers:
- If one only used the PA more conservatively, say at only 25% of its rated maximum, it would be OK without filters.
- If you used a higher bias, i.e. move the class AB amplifier closer to class A, and allowed more dissipation, it would be OK.

I would be very interested in the opinions and experiences of this group on this question.

73, Sverre, LA3ZA
www.qsl.net/la3za

1870. Re: Homebuilt dummy load concerns?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 17:34:55 UTC
From: UnTale <i@i.com>
Message-ID: <3R7b9.116614$n04.2984785@twister2.libero.it>
Source record: 41932
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

> Hi all,
> I'm looking to build my own dummy load for my HF shack (to keep costs
> down). Question: Are there any special precautions that I need to take for
> SWR (or anything else) or will it suffice to take twenty 10 Watt 1K
> resistors and wire them in parallel?
> Josh, KG6IBF

Hi,
i've used various resistor
and, of course, no-inductive one are the best;
but you can use common resistor in parallel (the more in parallel, the
better is)
to make parasitic inductance lower;
take a look here were there's a table with some measure made with my MFJ259
http://www.qsl.net/iz7ath/web/02_brew/15_lab/03_dummy/pag01_eng.htm

73 de iz7ath, Talino

Homebrew, RF projects and digital tecniques on
http://www.qsl.net/iz7ath
IZ7ATH Talino +39 338 5029196

1871. Re: Coax cable question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 17:39:17 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D6D0AC5.3030409@eznec.com>
Source record: 41934

No.

From the _ARRL Antenna Book_, the characteristic impedance of coax is:

Z0 = [138/sqrt(epsilon)] * log(D/d)

where
epsilon = dielectric constant of insulator (2.3 for PE)
D = inner diameter of shield
d = diameter of center conductor

so with polyethylene insulation, the ratio of shield to center conductor diameter would have to be 1980:1. 300 ohm coax the size of RG-8 or RG-213 (0.285" core inner dia) would have a center conductor diameter of 0.000144 inches (0.00365 mm), or about AWG 67.

Even if you could construct some (good luck!), it would be terribly lossy.

Roy Lewallen, W7EL

marvin rosen wrote:
> Is there such an item as 300 ohm coax cable?

1872. Re: Linear PA without output filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 17:47:37 UTC
From: Ralph Mowery <rmowery@cetlink.net>
Message-ID: <akj2pv$2hg0$1@newsreader.cetlink.net>
Source record: 41935

While it might be possiable to build an amp that is class A and meet the specificiations you have to remember that if it is built for a kilowatt output then you will also be dissiapating atleast that much on the plate of the tube , or would that be 2 KW as the efficiency will be around 35 % if I am thinking right. That is a lot of heat to get rid of and a big power bill and the components have to be a lot heaver and expensive.

It is easier and cheaper to go to class AB or B and then filter the output.

"Sverre Holm (LA3ZA)" <la3za@qsl.net> wrote in message news:TL7b9.14960$sR2.274418@news4.ulv.nextra.no...
> Output power amplifiers seem always to require output lowpass filters in
> order to meet FCC and other PTT's requirements saying "The mean power of any
> spurious emission from a station transmitter or external RF power amplifier
> transmitting on a frequency below 30 MHz must not exceed 50 mW and must be
> at least 40 dB below the mean power of the fundamental emission. "
>
> Now, 40 dB corresponds to a voltage ratio of 1:100, i.e. maximum 1% total
> harmonics distortion (THD). However, audio power amplifiers are regularly
> made with THD specs of 0.1 or 0.01% - and of course there are no output
> filters.
>
> My question is: why can't one build an HF PA that meets these specs -
> without filters?
>
> I can think of the following answers:
> - If one only used the PA more conservatively, say at only 25% of its rated
> maximum, it would be OK without filters.
> - If you used a higher bias, i.e. move the class AB amplifier closer to
> class A, and allowed more dissipation, it would be OK.
>
> I would be very interested in the opinions and experiences of this group on
> this question.
>
> 73, Sverre, LA3ZA
> www.qsl.net/la3za
>
>
>

1873. Re: Homebuilt dummy load concerns?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 18:09:18 UTC
From: mike <spamme0@juno.com>
Message-ID: <3D6D11CE.D3DD1C47@juno.com>
Source record: 41936
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

There have been a zillion articles written on this subject. Check the ARRL handbook,
or about any issue of any ham magazine.

Short answer is, "what do you want to do with it?"
If all you want to do is see if you're getting output, a 120V light bulb will do.
If you want to make measurements, you need a resistor.
If you want to make measurements that you trust, you need a resistor you can trust.

The higher you go in frequency, the worse your problem becomes. AT HF, it's certainly
possible to cobble together a bunch of resistors, but it's not trivial. The equipment
you need to do it right will cost you WAY more than a real dummy load.

Inductance is your enemy. You need non-inductive resistors. Wire-wound will NOT do.
Power ratings are based on some estimate of heat sinking. For wire lead resistors,
that usually means soldered into a ground plane. IF you bundle a bunch together,
they will get too hot at rated power. Different types of resistors handle short term overloads
better. Carbon composition are pretty good at that, so if you only need to power it
for a few seconds at a time, you can get by with fewer resistors and a big fan or an oil bath.

Go to a swapmeet and buy a dummy load. Unless you already have the non-inductive
resistors, a swapmeet cantenna will be much cheaper.
Take your meter and measure it before you pay.
I don't know of any failure modes that would cause the dummy load to fail at RF and still
check good with an ohmmeter. Again, if you don't need accurate measurements you
can get by with a resistor that's a few ohms either way of 50. But you shouldn't pay much
for it. There are a LOT of BAD dummy loads for sale at swapmeets.

mike

Bunch of stuff For Sale and Wanted at the link below.
http://www.geocities.com/SiliconValley/Monitor/4710/

Joshua Senecal wrote:

> Hi all,
>
> I'm looking to build my own dummy load for my HF shack (to keep costs
> down). Question: Are there any special precautions that I need to take for
> SWR (or anything else) or will it suffice to take twenty 10 Watt 1K
> resistors and wire them in parallel?
>
> 73,
>
> Josh, KG6IBF
>
> --
> Remove the reversed nospam in the e-mail address.

--

1874. Re: Linear PA without output filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 18:59:07 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <umq7crnt6b765f@corp.supernews.com>
Source record: 41938

"Sverre Holm (LA3ZA)" <la3za@qsl.net> wrote in message
news:TL7b9.14960$sR2.274418@news4.ulv.nextra.no...

> harmonics distortion (THD). However, audio power
> amplifiers are regularly made with THD specs of
> 0.1 or 0.01% - and of course there are no output filters.

Don't forget that the advertised specifications of audio power amplifiers
rarely have much to do with reality these days.

..

1875. Re: Linear PA without output filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 19:02:06 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d6d1e30$0$204$ba620e4c@news.skynet.be>
Source record: 41937

Don't forget the filter also serves as an impedance matching device.

73 de Jacques - ON5MJ

1876. Re: Linear PA without output filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 19:28:14 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <umq9499k6bv194@corp.supernews.com>
Source record: 41939

Good Catch, Jacques. So from a 12 volt supply, you could have 1.4 watts out
without an output network ... pretty unhandy!

..

"JC" <jacques.culot@skynet.be> wrote in message
news:3d6d1e30$0$204$ba620e4c@news.skynet.be...
> Don't forget the filter also serves as an impedance matching device.
>
> 73 de Jacques - ON5MJ
>
>

1877. Re: Linear PA without output filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 19:37:38 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d6d2691$0$222$ba620e4c@news.skynet.be>
Source record: 41940

I still use tubes at the PA ...

1878. Re: Homebuilt dummy load concerns?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 19:51:04 UTC
From: Mark Hales <markhals@nospamdircon.co.uk>
Message-ID: <k6ab9.21$vF3.2572@news.dircon.co.uk>
Source record: 41942
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Josh...
Just my 2 pence worth, but...
20 years ago I made a dummy load thus.
Twenty 1k 2 watt carbon resistors, 3 inches of RG11, two pieces of copper clad board cut into 2 inch circles with one inch holes on the center.
The two rings were drilled with twenty holes and the resistors soldered between the two.
One end was soldered to the inner conductor of the RG11 which was run up the center and at the other end, the braid was soldered.
A suitable 50 ohm connector was then fitted.
This was used at low power on a homebrew 10 m rig with no ill effects and on literally hundreds of CB rigs for tuning.
I give this recipie only as a guide as to what may be possible, but no guarentees.
Good luck and cheers.
Mark H.
"Joshua Senecal" <senecal@mapson.cs.ucdavis.edu> wrote in message news:senecal-2808020945270001@iras-3-62.ucdavis.edu...
> Hi all,
>
> I'm looking to build my own dummy load for my HF shack (to keep costs
> down). Question: Are there any special precautions that I need to take for
> SWR (or anything else) or will it suffice to take twenty 10 Watt 1K
> resistors and wire them in parallel?
>
> 73,
>
> Josh, KG6IBF
>
> --
> Remove the reversed nospam in the e-mail address.

1879. Re: Linear PA without output filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 20:03:24 UTC
From: chuck & shirley hawks <s_hawks@bellsouth.com>
Message-ID: <I2ab9.87052$%v4.4675230@e3500-atl2.usenetserver.com>
Source record: 41941

1.4 watts with a 27Mhz walky-talky?

--

Chuck
KE4ETH

x-no-archive: yes
"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:umq9499k6bv194@corp.supernews.com...
> Good Catch, Jacques. So from a 12 volt supply, you could have 1.4 watts
out
> without an output network ... pretty unhandy!
>
> ..
>
> "JC" <jacques.culot@skynet.be> wrote in message
> news:3d6d1e30$0$204$ba620e4c@news.skynet.be...
> > Don't forget the filter also serves as an impedance matching device.
> >
> > 73 de Jacques - ON5MJ
> >
> >
>
>

1880. Re: How CONNECT to a Ufer ground?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 20:19:54 UTC
From: Sylvan Butler <Znospam+noZs_0208@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnamqc3a.4g2.Znospam+noZs_0208@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 41847

On Tue, 27 Aug 2002 23:12:34 -0400, Joe Leikhim <jleikhim@nettally.com> wrote:
> 2. Don't let the bare re-bar exit the footer. It will rust and spall (break open)
> the concrete. Three inches of concrete must encase the re-bar. Bond the re-bar to
> a copper pig tail lead inside the pour as suggested below.

Interesting.

That is the opposite advice from what I have been given to
understand. Copper inside of concrete does not do well. Steel does
much better, and it is usually suggested around here (southern
Idaho) to bring out the rebar.

> this (from experience) and some say it weakens the rebar. To electrically and
> mechanically bond the rebar to the copper pig tail lead, I would suggest getting
> stainless steel clamps such as those used for water hoses and use to bind the
> copper conductor(s) to the rebar.

Copper and steel touching will lead to galvanic corrosion. In the
wet alkaline environment of concrete, this corrosion will be
accelerated. Not a good idea.

> Ideally the connection joint would be Iron re-bar to Stainless Steel to Copper
> with a Stainless steel clamp for mechanical connection. You could take apart a
> wider hose clamp and cut up a section to use as an interface around the re-bar
> before clamping the copper wire.

That would be better.

> Use a sander or grinder to cut through the oxide and grease on the rebar first.

Good idea.

> Clamp all together with the hose clamp and finally coat the junction with de-oxit

Or rather coat the components with de-oxit and then assemble.
Contact pressure will suffice to make a connection thru the de-oxit
and the grease will seal against most corrosion, for awhile.

> As a note to above, I found some electrolytic action (very small measured
> electrical potential) between separately terminated copper conductor and iron
> re-bar ground systems in my foundation. I cannot comment on the long term effect
> of this. I believe PolyPhazer has published a report on Ufer ground systems that

Probably one of these (ufer tower grounding?):
http://www.polyphaser.com/ppc_technical.asp

sdb
--

| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Senator Fritz Hollings-S2048, Palladium, and TCPA, NOW!
http://investor.cnet.com/investor/news/newsitem/0-9900-1028-20173919-0.html
http://zdnet.com.com/2100-1106-945976.html

1881. Re: Linear PA without output filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 20:34:32 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <stab9.11459$0p1.183699@news2.ulv.nextra.no>
Source record: 41943

Good point about the impedance matching, but say that you could use a 100 V power supply, then the absolute max could be P = (100/1.4)^2 / 50 = 100 W

Of course here the audio amplifiers have an advantage in that they use a 4 or 8 ohm load. The same calculation would give 28 V supply for 100 W into 4 ohms. But class A is only rarely used in audio, usually class AB gives distortion down into the 0.01 % range. It is easy to measure so I don't think there is too much cheating there.

Would a 1.8 - 30 MHz PA running from say 120-150 V power supply be impractical? - of course running class AB, not class A. What I am trying to get at is if one could trade off all the bandswitching on the output of a PA by using higher supply voltage, more expensive output transistors etc.

Sverre LA3ZA

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:umq9499k6bv194@corp.supernews.com...
> Good Catch, Jacques. So from a 12 volt supply, you could have 1.4 watts
out
> without an output network ... pretty unhandy!

> "JC" <jacques.culot@skynet.be> wrote in message
> news:3d6d1e30$0$204$ba620e4c@news.skynet.be...
> > Don't forget the filter also serves as an impedance matching device.
> >
> > 73 de Jacques - ON5MJ

1882. Re: Linear PA without output filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 20:36:17 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <umqd2bqpdoim49@corp.supernews.com>
Source record: 41944

"JC" <jacques.culot@skynet.be> wrote in message
news:3d6d2691$0$222$ba620e4c@news.skynet.be...
> I still use tubes at the PA ...

I would have expected all the glass bottles to be used up on the calvados.

1883. Re: Coax cable question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 21:11:51 UTC
From: ronayling@hotmail.com
Message-ID: <3d6d3ba1.52865873@news.freeserve.co.uk>
Source record: 41945

On Wed, 28 Aug 2002 10:39:17 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>No.
>
> From the _ARRL Antenna Book_, the characteristic impedance of coax is:
>
> Z0 = [138/sqrt(epsilon)] * log(D/d)
>
>where
> epsilon = dielectric constant of insulator (2.3 for PE)
> D = inner diameter of shield
> d = diameter of center conductor
>
>so with polyethylene insulation, the ratio of shield to center conductor
>diameter would have to be 1980:1. 300 ohm coax the size of RG-8 or
>RG-213 (0.285" core inner dia) would have a center conductor diameter of
>0.000144 inches (0.00365 mm), or about AWG 67.
>
>Even if you could construct some (good luck!), it would be terribly lossy.
>
>Roy Lewallen, W7EL
>
>marvin rosen wrote:
>> Is there such an item as 300 ohm coax cable?

I've seen a high impedance cable of small diameter though not strictly
coax, the centre conducter was a very fine coil, I think it was used
on mf frequencies, very lossy of course.

1884. Re: Linear PA without output filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 21:16:52 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <85bb9.11490$0p1.184591@news2.ulv.nextra.no>
Source record: 41946

On second thought, you don't need the output filters for impedance transformation, only the broadband output transformer - it must be there anyway in order to combine the outputs from the two transistors that form the push-pull output stage.

So, yes it is possible to generate 100 W from a 12 V supply without output filters. Usually the filters are 50 ohms in and 50 ohms out anyway.

All I want to do is to look at the design of HF PA's with fresh eyes, maybe the kind of transistors, power supplies etc required have become cheaper today than they used to be so the trade-offs also are different - making it possible to meet the spurious output specs without filters and bandswitching on the output?

73 Sverre
LA3ZA

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:umq9499k6bv194@corp.supernews.com...
> Good Catch, Jacques. So from a 12 volt supply, you could have 1.4 watts
out
> without an output network ... pretty unhandy!
>
> ..
>
> "JC" <jacques.culot@skynet.be> wrote in message
> news:3d6d1e30$0$204$ba620e4c@news.skynet.be...
> > Don't forget the filter also serves as an impedance matching device.
> >
> > 73 de Jacques - ON5MJ
> >
> >
>
>

1885. Re: Coax cable question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 21:44:30 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D6D443E.8050307@eznec.com>
Source record: 41848

What you're describing sounds like a delay line. Tektronix made
differential oscilloscope delay lines for lower-frequency scopes by
winding two fine wires in a helix, with the two helices in opposite
directions. As I recall, the differential impedance was around 100 ohms.
I'd expect the common mode impedance to be somewhere around 70 or 80,
although it wasn't of much interest.

About the highest impedance coax I've seen is the stuff they use, or
used to use, for car radios. I'd guess this stuff at a bit more than 100
ohms, but somewhat variable since the center conductor is free to flop
around in the polyethylene shell.

Roy Lewallen, W7EL

Ron wrote:
>
> I've seen a high impedance cable of small diameter though not strictly
> coax, the centre conducter was a very fine coil, I think it was used
> on mf frequencies, very lossy of course.
>

1886. Re: Linear PA without output filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 22:05:13 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <njfqmu02m1ellfe740mpbeqh46oncr7d1q@4ax.com>
Source record: 41849

On Wed, 28 Aug 2002 14:59:07 -0400, "xpyttl"
<xpyttl_nospam@earthling.net> wrote:

>"Sverre Holm (LA3ZA)" <la3za@qsl.net> wrote in message
>news:TL7b9.14960$sR2.274418@news4.ulv.nextra.no...
>
>> harmonics distortion (THD). However, audio power
>> amplifiers are regularly made with THD specs of
>> 0.1 or 0.01% - and of course there are no output filters.
>
>Don't forget that the advertised specifications of audio power amplifiers
>rarely have much to do with reality these days.

There is not very much problems in getting the THD down to those
figures at 1 kHz with plenty of negative feedback.

While I have seen some preamplifiers with good strong signal handling,
I have not seen RF power amplifiers with negative feedback. I just
wonder, how an RF power amplifier with a lot of negative feedback
would behave, if a mismatched load (antenna) is connected to the
amplifier output. You might end up with some stability problems.

Paul OH3LWR

1887. Re: Coax cable question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-28 22:16:07 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <0ciqmu4avrscqmnvs44fn8sa483pkd2eoj@4ax.com>
Source record: 41850

On Wed, 28 Aug 2002 16:51:58 GMT, "marvin rosen"
<raghead@worldnet.att.net> wrote:

>Is there such an item as 300 ohm coax cable?

Certainly not as a simple unbalanced cable, since the inner conductor
would be very thin.

However, balanced 300 ohm cables have been used for TV reception. In
these, two coaxial lines are running side by side or you could think
about it as a shielded twin lead.

Paul OH3LWR

1888. Sidetone and other oscillators, what are they for?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 00:19:50 UTC
From: vshah101@aol.com
Message-ID: <20020828201950.28641.00002863@mb-mn.aol.com>
Source record: 41851

I have some oscillator questions.

First what is a sidetone oscillator? I saw this in a block diagram of a CW transceiver but do not know what it does. Is the sidetone oscillator audio frequency or rf frequency? Why is the sidetone oscillator applied to the receiver audio section and not to the receiver mixer. What does it mean when a CW receiver does not have a Sidetone Oscillator. Is this possible? What effect does this have on the reception or decoding of the signal?

Also, what is a Beat Frequency Oscillator? I know this is rf frequency, close to the rf input frequency. What does the Beat Frequency Oscillator do? If the frequency is off, what would this do?

Also, what is a Private Line? (No, I have not used this feature yet). If a repeater has a private line audio frequency, how do I access the repeater's frequency? Do I have to turn on some switch? Lets say the carrier is frequency modulated. Is private line amplitude modulated over this carrier or frequency modulated on the carrier?

1889. FA Coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 00:37:42 UTC
From: Lou <tech@dp.net>
Message-ID: <akjqur$jn2$1@news.dp.net>
Source record: 41852

FA - E-Bay

Coils for Transmitter, Receiver, Antenna. Have seen similar coils in projects in QST Magazines of equipment made years ago. There are about 6 total, of various sizes.

There is also a CRT from a Tek 533 scope for replacement or experimenting, whatever......

Sorry, too dumb to post the sites. Will have to look it up on your own. It is listed almost word for word as I've listed it here.

Thanks,

Lou/Tech@DP.NET

1890. Re: Sidetone and other oscillators, what are they for?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 01:20:18 UTC
From: Roger Leone <arleoneSPAMBLOCK@inreach.com>
Message-ID: <CEeb9.318$id4.71694422@news.inreach.com>
Source record: 41854

> First what is a sidetone oscillator?

It is an AUDIO oscillator that produces a tone that corresponds to the output signal of your transmitter. When operating CW (Morse Code) this allows you to hear with your own ears the signal (dots and dashes) that is being sent out. It is for operator convenience.

What does it mean when a CW receiver does not have a Sidetone Oscillator. Is this possible?

A sidetone is in use only when you are transmitting and has no purpose on receive.

>
> Also, what is a Beat Frequency Oscillator? I know this is rf frequency, close
> to the rf input frequency. What does the Beat Frequency Oscillator do? If the
> frequency is off, what would this do?

The BFO allows you to hear the incoming CW (Morse) signal as a tone, rather than a hiss. You can tune in CW signals with an AM radio but you won't hear the familiar tone. The BFO mixes with the incoming signal and produces this tone. The BFO must be offset from the incoming frequency in order to produce a tone and in fact the tone you hear is equal to the difference between the incoming signal and the BFO. The BFO is usually fed into the detector stage or an IF stage preceding the detector.

> Also, what is a Private Line?

Private Line (PL) is a subaudible tone that turns on the repeater. If a repeater requires a PL and you don't transmit the correct one, you will not be able to access the repeater.

If a repeater has a private line audio frequency, how do I access the repeater's
> frequency? Do I have to turn on some switch? Lets say the carrier is frequency
> modulated. Is private line amplitude modulated over this carrier or frequency
> modulated on the carrier?

The PL tone is fed in as audio, just like your voice, and frequency modulates your radio's transmitted carrier. Most recently made FM transceivers have a provision for inserting PL tones when you program in the repeater's frequency and will store the PL tone in memory along with the frequency. Older radios can use an add on PL board or module but usually

you have to change the switch settings on the PL unit when you change repeaters.

Roger K6XQ

1891. Ameritron QSK-5 Schematic Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 01:22:16 UTC
From: KA9S - Jeff <ka9s@attbi.com>
Message-ID: <cHeb9.220328$983.441543@rwcrnsc53>
Source record: 41853
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap

I am too cheap to buy an Ameritron QSK-5 self-contained pin diode QSK TR switch. I would like to replicate one (that means home brew), but Ameritron/MFJ does not publish the schematic on their web site. Would someone be kind enough to scan the schematic for me? I would prefer a scanned image file that you could e-mail. I am willing to pay postage if you don't have that ability.

Thanks for you help - Jeff - KA9S

1892. Re: Linear PA without output filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 02:52:43 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <%%fb9.277099$UU1.48848@sccrnsc03>
Source record: 41855

There are MOSFET devices rated for 100 - 120 volts, usually used in medical applications.

The problems that I have seen in these package designs is that the surface area is inadequate for efficient heat transfer to the heat sink.

w9gb
Greg

PS Guess no one reads Helge Granberg, W7SE's (sk) Motorola work anymore.

"Sverre Holm (LA3ZA)" <la3za@qsl.net> wrote in message
news:stab9.11459$0p1.183699@news2.ulv.nextra.no...
> Good point about the impedance matching, but say that you could use a 100
V
> power supply, then the absolute max could be P = (100/1.4)^2 / 50 = 100 W
>
> Of course here the audio amplifiers have an advantage in that they use a 4
> or 8 ohm load. The same calculation would give 28 V supply for 100 W into
4
> ohms. But class A is only rarely used in audio, usually class AB gives
> distortion down into the 0.01 % range. It is easy to measure so I don't
> think there is too much cheating there.
>
> Would a 1.8 - 30 MHz PA running from say 120-150 V power supply be
> impractical? - of course running class AB, not class A. What I am trying
to
> get at is if one could trade off all the bandswitching on the output of a
PA
> by using higher supply voltage, more expensive output transistors etc.
>
>
> Sverre LA3ZA
>
>
> "xpyttl" <xpyttl_nospam@earthling.net> wrote in message
> news:umq9499k6bv194@corp.supernews.com...
> > Good Catch, Jacques. So from a 12 volt supply, you could have 1.4 watts
> out
> > without an output network ... pretty unhandy!
>
> > "JC" <jacques.culot@skynet.be> wrote in message
> > news:3d6d1e30$0$204$ba620e4c@news.skynet.be...
> > > Don't forget the filter also serves as an impedance matching device.
> > >

> > > 73 de Jacques - ON5MJ
>
>

1893. Re: HELP solorcon A99

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 02:59:52 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <I6gb9.39888$Ke2.2832623@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41856

recieved info, thanks guys.

--
If first you don't succeed, do the same thing again...see what happens

1894. Re: Sidetone and other oscillators, what are they for?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 03:26:54 UTC
From: vshah101@aol.com
Message-ID: <20020828232654.28641.00002911@mb-mn.aol.com>
Source record: 41857

This was very helpful. Thank you, Roger.

1895. Re: Wanted: VERY Long Whips

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 04:49:31 UTC
From: la8ak.xnd@online.no
Message-ID: <3d6d1738.163776895@news.online.no>
Source record: 41858

On Tue, 27 Aug 2002 20:00:57 +0100, "John Fletcher"
<johnfletch@2e1gmv.freeserve.co.uk> wrote:

>seen at a local big market, 7.7 and 8.8 meter fibreglass fishing "rods"
>excellent for 40m self supporting!
>
>cost about ?20 in the UK
>
>"
>
>
and even better for 30m

73
LA8AK
--
remove ,xnd to reply

1896. Re: Linear PA without output filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 06:48:54 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <qtjb9.15156$sR2.276241@news4.ulv.nextra.no>
Source record: 41859

"Paul Keinanen" <keinanen@sci.fi> wrote in message
news:njfqmu02m1ellfe740mpbeqh46oncr7d1q@4ax.com...
>
> While I have seen some preamplifiers with good strong signal handling,
> I have not seen RF power amplifiers with negative feedback. I just
> wonder, how an RF power amplifier with a lot of negative feedback
> would behave, if a mismatched load (antenna) is connected to the
> amplifier output. You might end up with some stability problems.
>
> Paul OH3LWR
>

I think you hit on the main difference between Audio and RF power
amplifiers: negative feedback. This is probably where the difference between
0.01% and >1% distortion lies.

The problem with RF amplifiers must be to have a controlled phase response
to ensure stability over the whole frequency range. The trend in audio is to
use more local feedback and less global feedback. Applied to RF that could
mean e.g. small unbypassed resistors in the emitter.

Maybe an RF PA with less gain per stage due to feedback and more stages
would have less distortion?

Sverre LA3ZA

1897. Re: Linear PA without output filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 08:20:38 UTC
From: c.a.m@nospammam.blueyonder.co.uk
Message-ID: <5clrmus2ifp7f8moq6som0e145d837j90v@4ax.com>
Source record: 41860

Hi.

It's all about simplicity mostly I think, keep it simple - is a general rule in electronics, the simpler something is the less to go wrong and the cheaper it is, and using passive components is mostly more reliable than using semiconductors, although I've seen a few caps and resistors go in my time - usually though due to not being beefy enough for the job.

But ... that doesn't mean to say the home user has to do that though, I'd say go for it myself, come up with a PA design that is as linear as possible, for that I fully expect you'll need to use negative feedback, transistors are simply not linear and in say a push-pull or totem pole arrangement you normally have switching going between transistors (as each takes a turn at driving the load).

The problem with negative feedback in RF amplifiers the way I see it is prolly going to be the fact that you'll need to use devices that are normally used at much higher frequencies in order for negative feedback to work properly and respond quickly as you go thru the sine wave so is prolly going to cost you more, which is no bad thing really if cost is not the prime concern.

Their are some nice op-amps around these days don't forget that work in the 100's of MHz region, I'm sure you could make use of them in the pre stages somewhere.

Anyone else agree ?

Go for it ! :)

Clive

1898. Re: Homebuilt dummy load concerns?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 08:29:52 UTC
From: Ricardo Martins <ricardo.martins@pt.uu.net>
Message-ID: <3D6DDB7F.62D77908@pt.uu.net>
Source record: 41861
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hello Joshua,

Look at the one I made: http://www.qsl.net/ct2gqv/dummy.html
Handles about 50W from transceiver (in AM mode) and 100W SSB for about
3-4 minutes without overheating to much.
Next step is to fill the can with OIL to dissipate better.
Good from 1 to 30Mhz but very bad at 144Mhz (probably because of
resistor nature), strange is that at 440Mhz works fine (eg: low SWR)

Regards,

Ricardo Martins / CT2GQV

Joshua Senecal wrote:
>
> Hi all,
>
> I'm looking to build my own dummy load for my HF shack (to keep costs
> down). Question: Are there any special precautions that I need to take for
> SWR (or anything else) or will it suffice to take twenty 10 Watt 1K
> resistors and wire them in parallel?
>
> 73,
>
> Josh, KG6IBF
>
> --
> Remove the reversed nospam in the e-mail address.

--
Ricardo Martins

1899. Re: Coax cable question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 09:26:23 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d6de855.391930@news.freeserve.net>
Source record: 41862

On Wed, 28 Aug 2002 16:51:58 GMT, "marvin rosen"
<raghead@worldnet.att.net> wrote:

>Is there such an item as 300 ohm coax cable?
>
>
ISTR that car aerial coax is somewhere about this impeadance, the
inner is very thin and the outer about the same diameter as UR43.

1900. Re: New from www.magnetic-loop.de

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 11:00:21 UTC
From: marvin rosen <raghead@worldnet.att.net>
Message-ID: <99nb9.40476$Ke2.2867637@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41863
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.swap

Appears to be a modified loop ant site!!!
"Andre Vaupel" <avaupel@web.de> wrote in message
news:zCjb9.51065$IY.709969@news.easynews.com...
> Hi again!
>
> First...thank you for the high mount of visit to our page :-))
> We are happy that you use our support and info bbs!
>
> Our news is, that we now moved the Board System to another
> host service and can provide now the full speed!
> Delay should be now nearly zero.
>
> We plan to setup a news database wich is not only for Magnetic Loop
> Antennas. Just for all other HAM RADIO News worldwide.
>
> Just enjoy it and test the faster speeed now at
http://www.magnetic.loop.de
>
> Bye!
>
> Andre
>
>
>
>
> ---
> Info about www.magnetic-loop.de:
>
> we build up a new website wich is NON COMMERCIAL and without any ads.
> The site contains information about Magnetic Loop Antennas for shortwave.
> We would be happy if we can find some postings and exchange of experience
> inside the webboard. We would be happy if you take a look and leave some
> interesting question or infos on the board.
>
> http://www.magnetic-loop.de
>
> Thanks a lot!
>
> Andre
>
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.381 / Virus Database: 214 - Release Date: 8/2/02

1901. Re: Homebuilt dummy load concerns?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 14:40:31 UTC
From: KB9TMP <kb9tmp@juno.com>
Message-ID: <umscfrplp0p8c6@corp.supernews.com>
Source record: 41864
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

"Joshua Senecal" <senecal@mapson.cs.ucdavis.edu> wrote in message
news:senecal-2808020945270001@iras-3-62.ucdavis.edu...
> Hi all,
>
> I'm looking to build my own dummy load for my HF shack (to keep costs
> down). Question: Are there any special precautions that I need to take for
> SWR (or anything else) or will it suffice to take twenty 10 Watt 1K
> resistors and wire them in parallel?
>
> 73,
>
> Josh, KG6IBF
>
> --
> Remove the reversed nospam in the e-mail address.

Josh
When all else fails check out the Ten Tec web site.
Here is a link to a 300 watt dummy load 'kit' they sell:
http://www.tentec.com/amaccyKit.htm#1203store
best of all they sell it for $29.

1902. 572Bs which way???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 14:49:34 UTC
From: Magma <ve3gid@rac.ca>
Message-ID: <2wqb9.10276$V21.219419@news>
Source record: 41865

If anyone has an answer I'd appreciate it...

I have an FL2100b and changed the 2 x 572b tubes in it. Ofcourse I didn't look when I took them out now I'm stuck. This is a 4 pin tube, non polarized, ei: they can go into the socket any old way.... any ideas which way,? does it matter?

FRANK
VE3GID@RAC.CA

1903. Re: Using old TX as linear?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 14:52:31 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <qBqb9.1709$CG1.72647@newsfep1-win.server.ntli.net>
Source record: 41866

>
> Should I run the RF stright to the 6146s? Or should I make use of the
> 12BY7A driver? How much drive will I need for the 6146s?
>
> Do you guys think I will have to change the values of the coils in the
> PA tank and/or the driver plate circuit? Or will I be able to tune 17
> with the bandswitch in the 20 or 15 meter positions.
=====
Many commercial rigs from the 1970-80s run nominally 100 W RF from 2x
6146 in parallel driven by a 12BY7A.
Your 5W drive would be excellent if not slightly too much to drive the 12BY7
and hence the 2 x 4146
Since many of the original rigs were not designed for the WARC bands
(although my Yaesu FT901DM using the same valves is),you 'might' have to
modify the output inductor of the 12BY7A ,where a grid-dipper would come
handy.
Matching the QRP transmitter to the 12BY7A input could probably be best done
by a fixed bias for linear operation and capacitive coupling to a say 200
Ohms input resistor which can then be matched to the QRP rig via a small
T50-2 or larger toroidal balun 4:1 or a smilar balun made of a ferrite rod
antenna (piece of it)
With the 17m band only covering 100 KHz there would probably no requirement
for any adjustment to the power amp once setup.

Frank , gm0csz.kn6wh@ntlworld.com

1904. Re: 572Bs which way???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 15:25:30 UTC
From: Roger Leone <arleoneSPAMBLOCK@inreach.com>
Message-ID: <01rb9.342$La6.79715501@news.inreach.com>
Source record: 41867

Frank:

They are polarized and they won't go in any old way. Look closer and you will see that two of the pins are larger than the other two. The socket has the same difference so you can't put them in wrong.

Roger K6XQ

1905. Re: 572Bs which way???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 17:01:58 UTC
From: Magma <ve3gid@rac.ca>
Message-ID: <assb9.10285$V21.219846@news>
Source record: 41868

Thanks... I didn't look closely enough....

I just wanted to be sure after forking out $100/pair

"Roger Leone" <arleoneSPAMBLOCK@inreach.com> wrote in message
news:01rb9.342$La6.79715501@news.inreach.com...
> Frank:
>
> They are polarized and they won't go in any old way. Look closer and you
> will see that two of the pins are larger than the other two. The socket
has
> the same difference so you can't put them in wrong.
>
> Roger K6XQ
>
>

1906. Looking for 110pF NPO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 19:32:18 UTC
From: "rec.radio.amateur.homebrew" <w8diz@fpqrp.com>
Message-ID: <6Fub9.68406$N9.11246666@twister.neo.rr.com>
Source record: 41869

Anybody know where I can obtain 200 pieces of 110pF
disk NPOs at 50V or greater to be used in a LPF?

--
72 & "oo's" - Dieter (DIZ) Gentzow - W8DIZ - Loveland, Ohio
Clermont County - EM79uf - near Cincinnati; 39.218N - 84.305W
SOC-8 DLQRPAG-1454 ARCI-10226 ARS-781 QRPL-1998 10X-9389 CATT-26
FP#-1 http://home.cinci.rr.com/w8diz & http://kitsandparts.com

1907. Re: Linear PA without output filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 20:15:09 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <ncpsmu8kvtfv3f2tjhp35eainkva5ke131@4ax.com>
Source record: 41870

On Thu, 29 Aug 2002 06:48:54 GMT, "Sverre Holm \(LA3ZA\)"
<la3za@qsl.net> wrote:

>Maybe an RF PA with less gain per stage due to feedback and more stages
>would have less distortion?

Feedback has been used in RF and IF amplifiers to get a good signal
handling capacity with moderate bias current. For instance the article
"A High-Dynamic-Range MF/HF Receiver Front End" by Jacob Makhinson
N6NWP (QST February 1993 starting at page 23) describes push-pull
preamplifiers with feedback running at 2x25mA or 2x40mA.

These might give some ideas for power amplifier design.

Paul OH3LWR

1908. Re: Linear PA without output filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 20:31:15 UTC
From: "Sverre Holm (LA3ZA)" <la3za@qsl.net>
Message-ID: <nwvb9.15477$sR2.279850@news4.ulv.nextra.no>
Source record: 41871

Thansk,

Found the schematics of one of them on the web at
http://www.arrl.org/files/ard/rf_7-96.pdf

Sverre LA3ZA

"Paul Keinanen" <keinanen@sci.fi> wrote in message

> Feedback has been used in RF and IF amplifiers to get a good signal
> handling capacity with moderate bias current. For instance the article
> "A High-Dynamic-Range MF/HF Receiver Front End" by Jacob Makhinson
> N6NWP (QST February 1993 starting at page 23) describes push-pull
> preamplifiers with feedback running at 2x25mA or 2x40mA.
>
> These might give some ideas for power amplifier design.
>
> Paul OH3LWR
>

1909. Varicap tuned LW/MW loops

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 21:16:58 UTC
From: Richard Daventry <nearlynews_email@ntlworld.com>
Message-ID: <akm2qo$1jmt0b$1@ID-150848.news.dfncis.de>
Source record: 41872

Surprisingly I only found one design on the whole of the web at:

http://www.carcanada.net/dx/RTL.html

If one were to seperate the coupling loop from the varicap control lines, would 75 Ohm twin or even twin bellwire be good to use, feeding a balun at the rx end? Also, would it be okay to use a single 2 core screened cable to the varicap? Are varicaps unreasonably lossy? It seems odd that there is only one design seeing that varicaps are eminetly suitable for remote tuning.

I can hardly read the schematic, anyone tell what C1 to C6 values are? 0.1 uF? Apparantly article published in Practical Wireless Oct. 1984, which I do not have a copy of. :c(TIA. Rich.

1910. FS Teflon Wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 21:21:12 UTC
From: James Skalski <jskalski@bellatlantic.net>
Message-ID: <3D6E9EEF.30009@bellatlantic.net>
Source record: 41873
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

I have some Silver plated stranded teflon wire for sale. (The Gud Stuff)

Wire will be shipped via UPS and shipping is included. I will need a street address not a PO Box to ship.

On Colors - No solids, No special requests. It is packaged already. To do otherwise would raise the cost considerably in terms of time and manpower.

On wire Gauge. Most of the wire is 22AWG, Some is 24AWG. There might be some 26AWG. No other sizes are available here. You might try Newark.

The wire is excellent. It has been used for boatanchor repairs, new construction, Mars Probes, model rockets, robotics, Manhattan construction, people have used it for portable antennas, and some permanent stealth types I have heard but have not confirmed that birds slide right off the stuff.

It has high reliability and solders extremely well. The teflon will not melt or shrink when you solder the wire. Unless you use a blow torch and raise the temp above 200 degrees C.

The price is $30 for one 1000' roll including UPS shipping. This is for a Continental USA address. (About one third of this cost is for the UPS and shipping container.

Payable by Money order, Check or Paypal.
Paypal address is n2go@arrl.net
Confirm availability before sending payment.

If you can use larger quantities, the price is $20 per 1000' roll plus the UPS costs. The savings reflect the ups rate sheet.after 10 pounds the price goes up slowly.Larger quantities can be supplied in a variety of colors but again no specific color choices and no solid colors.

Jim n2go

1911. Manual Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 21:26:19 UTC
From: joeee1621@aol.com
Message-ID: <20020829172619.07118.00000011@mb-mv.aol.com>
Source record: 41874

http://hometown.aol.com/joeee1621/myhomepage/business.html

1912. Re: Homebuilt dummy load concerns?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 21:31:08 UTC
From: WA6LZH <tangeram@lucent.com>
Message-ID: <3D6E929C.8060705@lucent.com>
Source record: 41875
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I built the one pictured in the ARRL Handbook. I don't remember the year but I could look it up if you need to know. It was very simple it just took carbon resistors, of an appropriate value and parrelleld them by soldering them between two pieces of circuit board. You can work it out by estimating the wattage of a single resistor then using X number of them to achieve a Y wattage rating. Plug in the numbers to the resistors in parrllel formula and you can find the value of each one. Next is the hard part. Scrounge around the surplus stores until you find a handfull and make up the load. Mine worked well 160-10 although it ran cooler when I cooled it with a small muffin fan and even cooler when I submersed it in some (Silicone) Oil left over from a Xerox Machine. I can't understand why my wife thinks I'm crazy though?

Tony

1913. Re: Homebuilt dummy load concerns?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 21:33:20 UTC
From: WA6LZH <tangeram@lucent.com>
Message-ID: <3D6E9320.6040803@lucent.com>
Source record: 41876
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Oh almost forgot I still have it but I don't use it because I have several others that are a bit more convenient i.e. an ME-165U. Anything to trade for it? I'm looking for tubes and hi-power rf stuff.

Tony

1914. Re: Varicap tuned LW/MW loops

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 21:56:54 UTC
From: Fulano de Tal <exray@nospamcaribe.net>
Message-ID: <3D6E98A6.748E0894@nospamcaribe.net>
Source record: 41877

Richard Daventry wrote:
>
> Surprisingly I only found one design on the whole of the web at:
>
> http://www.carcanada.net/dx/RTL.html
>
> If one were to seperate the coupling loop from the varicap control lines,
> would 75 Ohm twin or even twin bellwire be good to use, feeding a balun at
> the rx end? Also, would it be okay to use a single 2 core screened cable to
> the varicap? Are varicaps unreasonably lossy? It seems odd that there is
> only one design seeing that varicaps are eminetly suitable for remote
> tuning.
>
> I can hardly read the schematic, anyone tell what C1 to C6 values are? 0.1
> uF? Apparantly article published in Practical Wireless Oct. 1984, which I
> do not have a copy of. :c(TIA. Rich.

The biggest problem I have found with trying to remotely locate a loop
is the feedline pickup. Even a few feet of wire can ruin an otherwise
good setup. Coax obviously would load the circuit. I don't know a good
answer but he seems to have a solution.
I think .05 or .1 caps would be suitable. It says 0uf on the
schematic?!?
-Bill

1915. Re: Varicap tuned LW/MW loops

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-29 22:56:25 UTC
From: Richard Daventry <nearlynews_email@ntlworld.com>
Message-ID: <akm8jo$1jhc2v$1@ID-150848.news.dfncis.de>
Source record: 41878

"Fulano de Tal" <exray@nospamcaribe.net> wrote in message
news:3D6E98A6.748E0894@nospamcaribe.net...
> The biggest problem I have found with trying to remotely locate a loop
> is the feedline pickup. Even a few feet of wire can ruin an otherwise
> good setup. Coax obviously would load the circuit. I don't know a good
> answer but he seems to have a solution.
> I think .05 or .1 caps would be suitable. It says 0uf on the
> schematic?!?
> -Bill

I wonder then if the coupling loop should be connected with balanced twin coax sheathed cable. Probably. That would not be unsimilar to his set-up, except that he uses two seperate coax lines instead of twin wires in a coax sheath. And of course he sends the DC to varicap down these lines.

1916. AO-40 on the cheap in OZ... check this

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 00:53:35 UTC
From: feralmet@dodo.com.au
Message-ID: <3d6ebd3b.4241804@news.dodo.com.au>
Source record: 41879

Hi Scroungers.

Here's our new club website with an article on AO40
reception the cheap and easy way.

URL http://www.cgfar.com

We will post all sorts of el cheapo homebrew articles
as time permits. In the meantime have a rummage around.
We are still under construction.
Feedback welcome.

73 de Chris VK3CJS

1917. FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 02:59:48 UTC
From: Al <none@none.com>
Message-ID: <akmn2v$7ql$1@geraldo.cc.utexas.edu>
Source record: 41880
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

What are the advantages and disadvantages of using a "large" frequency deviation for an FM channel (say
+/-75kHz) over a "small" freq deviation (say +/- 6kHz)? I can't see how this would affect message signal
bandwidth. Thanks for the help. I really appreciate it.

Al

1918. Kits and Parts for sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 03:51:35 UTC
From: w8diz <w8diz@fpqrp.com>
Message-ID: <bZBb9.70185$N9.11531015@twister.neo.rr.com>
Source record: 41881

Hi Gang,

First time on the news group. Want to say hello to all and
let you all know that I supply parts and kits to homebrewers.

73 - Dieter (DIZ) Gentzow - W8DIZ - Loveland, Ohio
Clermont County near Cincinnati; EM79uf; 39.218N - 84.305W
http://kitsandparts.com

1919. Re: Varicap tuned LW/MW loops

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 04:04:13 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <3D6EEE90.E791A19F@flash.net>
Source record: 41882

Perhaps you overlooked this one; I know one person who used it very
successfully for NDB DXing with a large outdoor loop.
http://www.computerpro.com/~lyle/preamp/preamp.htm
Steve

Richard Daventry wrote:
>
> Surprisingly I only found one design on the whole of the web at:
>
> http://www.carcanada.net/dx/RTL.html
>
> If one were to seperate the coupling loop from the varicap control lines,
> would 75 Ohm twin or even twin bellwire be good to use, feeding a balun at
> the rx end? Also, would it be okay to use a single 2 core screened cable to
> the varicap? Are varicaps unreasonably lossy? It seems odd that there is
> only one design seeing that varicaps are eminetly suitable for remote
> tuning.
>
> I can hardly read the schematic, anyone tell what C1 to C6 values are? 0.1
> uF? Apparantly article published in Practical Wireless Oct. 1984, which I
> do not have a copy of. :c(TIA. Rich.

1920. Re: Homebuilt dummy load concerns?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 04:05:30 UTC
From: k7itm@aol.com
Message-ID: <3200347.0208292005.59388ffe@posting.google.com>
Source record: 41883
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

senecal@mapson.cs.ucdavis.edu (Joshua Senecal) wrote in message
news:<senecal-2808020945270001@iras-3-62.ucdavis.edu>...
> Hi all,
>
> I'm looking to build my own dummy load for my HF shack (to keep costs
> down). Question: Are there any special precautions that I need to take for
> SWR (or anything else) or will it suffice to take twenty 10 Watt 1K
> resistors and wire them in parallel?
>
> 73,
>
> Josh, KG6IBF

Pretty much everyone mentioned that you'll have trouble using
wirewound resistors, which is true. Even if you parallel a bunch,
above some frequency it won't help because they have so much
inductance and distributed capacitance that they will be
self-resonant. There are some other tricks you can play however. If
you can get a long piece of RG-58 cheap (like some old lan cable
perhaps), you'll get reasonably close to 50 ohms load no matter what
you put at the other end. The down side is you'll need several
hundred feet of it for that to be effective at 3.5MHz, because the
coax loss is pretty low there. In this case, loss (in the line) is
your friend! Another thing you can do, if you have a tuner, is use
the tuner to tune out the reactance (and the resistance mismatch) of
whatever load you build. In fact, if your load is simply inductive
because of the coiled wire in wirewound resistors, you can tune that
out with a series capacitor. (Alas, there seem to be a lot fewer air
variables kicking about in junque boxes these days...) You're liable
to find that only works at the low end of the HF band because of the
self-resonance effects. I just measured a pair of parallel 100 ohm 5W
wirewounds, and found them to degrade rapidly as a load above 14MHz.
Larger wirewounds would likely be worse. On the other hand, I
measured a 51 ohm metal oxide 2 watt resistor ("very short" leads),
and it would be very servicable as a dummy load even at 440MHz, where
it's 55.87+j17.61 ohms (per a precision RF component analyzer...),
giving an SWR in a 50-ohm system of 1.42:1. At 146MHz, it's
51.43+j5.95, SWR=1.13:1. Interesting thing about metal oxides is that
they seem to be able to stand rather incredible power overloads, and
one could probably make quite a respectable load with twenty or so of
them dropped into some oil. Best to think carefully about how to wire
them up to avoid parasitic inductance and capacitance.

Cheers,
Tom

1921. Re: Coax cable question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 04:22:45 UTC
From: k7itm@aol.com
Message-ID: <3200347.0208292022.4b9bd7ef@posting.google.com>
Source record: 41884

"marvin rosen" <raghead@worldnet.att.net> wrote in message
news:<Oc7b9.39051$Ke2.2777348@bgtnsc04-news.ops.worldnet.att.net>...
> Is there such an item as 300 ohm coax cable?

If you want it with a straight center conductor, then the d/D ratio
must be 1:148.4, and that's assuming air dielectric. A very light
foam wouldn't make it too much worse, but still, you'd need to be
using a 40-guage center conductor in a nearly half-inch diameter outer
conductor. I figured the loss would be awful, but my calc tells me
that it wouldn't be so bad...about 1.5dB/100 feet at 10MHz, which
isn't much different from RG-58. (Did I make an arithmetic error??
Don't think so, but maybe.)

So yes, one _could_ make such a line, but why??

As others mentioned, if you make the center conductor a helix, you can
make darned near any impedance line you'd like. It won't behave
exactly like standard coax, though, with respect to propagation
velocity versus frequency...the turn-to-turn capacitance will do funny
things.

Cheers,
Tom

1922. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 04:38:55 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D6EF6DF.8020006@eznec.com>
Source record: 41885
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

All else being equal, increasing the deviation will increase the bandwidth, and if properly received, will also increase the signal/noise ratio. That's the trade: bandwidth for S/N ratio.

FM analysis for anything other than simple tone modulation is very complex -- tone modulation is complex enough --, so for tone modulation:

The modulation index m = fd / fm

where
fd = peak deviation
fm = modulation frequency

For very narrowband FM (m << 1), bandwidth ~ 2*fm. For wideband FM (m >> 1), bandwidth ~ 2*fd, and for m ~ 1 (typical "narrowband" FM), bandwidth ~ 2*(fd + fm). If you're frequency modulating with, say, a 3 kHz tone, m = 2 for fd = 6 kHz, so the bandwidth is about 18 kHz. For 75 kHz deviation, m = 25, so the bandwidth is ~ 150 kHz. The improvement in S/N ratio depends on the modulation index and whether preemphasis is used, but in wideband systems it increases as the square of the deviation.

The reason there are several equations is that frequency modulation of any amount actually creates an infinite number of sidebands on both sides of the carrier, spaced from the carrier at each harmonic of the modulating frequency and having amplitudes described by Bessel functions. The bandwidth is defined by deciding which sidebands contain significant energy, and declaring the bandwidth to be the space these occupy.

You'll find a brief discussion of this in the _ARRL Handbook. For more detail, see Terman's _Radio Engineering_, or a communications text such as Carlson's _Communications Systems_.

Roy Lewallen, W7EL

Al wrote:
> What are the advantages and disadvantages of using a "large" frequency deviation for an FM channel (say
> +/-75kHz) over a "small" freq deviation (say +/- 6kHz)? I can't see how this would affect message signal
> bandwidth. Thanks for the help. I really appreciate it.
>
> Al
>
>

1923. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 05:35:20 UTC
From: allan_herriman.hates.spam@agilent.com
Message-ID: <3d6f00dd.77082548@netnews.agilent.com>
Source record: 41886
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Thu, 29 Aug 2002 21:59:48 -0500, "Al" <none@none.com> wrote:

>What are the advantages and disadvantages of using a "large" frequency deviation for an FM channel (say
>+/-75kHz) over a "small" freq deviation (say +/- 6kHz)? I can't see how this would affect message signal
>bandwidth. Thanks for the help. I really appreciate it.

It affects the RF bandwidth (do a web search for "carson's law fm bandwidth") but not the message signal bandwidth, as you point out.

But the real reason has to do with the improved signal to noise ratio that can be achieved with a wide deviation.

You could read a textbook to find out why, or search the web for articles like this one:
http://groups.google.com/groups?selm=37733912.21210660%40newshost&rnum=2

Regards,
Allan.

1924. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 06:55:58 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <dr4umugfft75shhiu5cb15rrkettobvdvo@4ax.com>
Source record: 41887
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Thu, 29 Aug 2002 21:59:48 -0500, "Al" <none@none.com> wrote:

>What are the advantages and disadvantages of using a "large" frequency deviation for an FM channel (say
>+/-75kHz) over a "small" freq deviation (say +/- 6kHz)? I can't see how this would affect message signal
>bandwidth. Thanks for the help. I really appreciate it.

FM with a large modulation index is typically used in situations,
where a high _baseband_ SNR is required.

When receiving broadcast quality FM signals, audio signal to noise ratios of 50-70 dB are typically achieved. To achieve similar audio SNR using AM, the signal at the receiver antenna terminal would also have to be 50-70 dB stronger than the noise. However, when using wide FM, the antenna signal only needs to be, say, 40-60 dB stronger than the noise, thus the transmitter power can be 10 dB less than in the AM case. Thus, if a 50 kW FM transmitter is needed to get a specific audio SNR, a 500 kW AM transmitter would be required to get the same audio SNR. The "FM advantage" or the ratio between the audio SNR and the antenna SNR varies with the modulation index used, but 10 dB is here used as an example.

Thus, this is an exchange between bandwidth and power.

When the antenna signal power goes down, the FM receiver gets saturated by noise at the FM-threshould and the FM-advantage is quickly lost and eventually wide-FM is worse than narrow-FM at very low levels.

Thus, if the target audio SNR is in the 20-30 dB, such as in communication class audio (radio telephony), there is no point of using wide-FM, since it would be operating near or below the FM-treshold anyway.

Even wide-FM can not provide audio SNR in the 70 to 100 dB range, since this would need huge transmitter powers and extremely wide bandwidths. The only way to reach such SNRs is to use digital audio. By adding one bit to the audio sample will increase the audio SNR by 6 dB, but will only increase the required transmitter power and bandwidth by less than 10 %. Thus, this is a very effective exchange between bandwidth and power. However, uncompressed digital audio has an even worse threshold, when using low signal to noise ratios.

Paul

1925. Re: Varicap tuned LW/MW loops

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 08:15:26 UTC
From: k7itm@aol.com
Message-ID: <3200347.0208300015.15be9b46@posting.google.com>
Source record: 41889

"Richard Daventry" <nearlynews_email@ntlworld.com> wrote in message
news:<akm2qo$1jmt0b$1@ID-150848.news.dfncis.de>...
> Surprisingly I only found one design on the whole of the web at:
>
> http://www.carcanada.net/dx/RTL.html
>
> If one were to seperate the coupling loop from the varicap control lines,
> would 75 Ohm twin or even twin bellwire be good to use, feeding a balun at
> the rx end? Also, would it be okay to use a single 2 core screened cable to
> the varicap? Are varicaps unreasonably lossy? It seems odd that there is
> only one design seeing that varicaps are eminetly suitable for remote
> tuning.
>
> I can hardly read the schematic, anyone tell what C1 to C6 values are? 0.1
> uF? Apparantly article published in Practical Wireless Oct. 1984, which I
> do not have a copy of. :c(TIA. Rich.

Oh, dear! There are quite a few designs on the web that I'm aware of.
Have you not found Lyle Kohler's site? Have a look for it.

Darn, I really should find some more round tuits. I did a
modification of one design Lyle has posted, which offers very stable
remote tuning and power feed over the same feedline that comes back
from the antenna. Just hook the antenna to the preamp, and a feedline
between the preamp and the power supply/control box, and you're set.

The clearest explanation I've seen of the need for balance in a small
loop is in King, Mimno and Wing, "Transmission Lines, Antennas and
Waveguides." There should be no particular problem using coax as a
feedline, IF you keep your wits about you with respect to balance.
Balance is critical! The advantage of a "shielded" loop is that the
shield acts as the antenna, and it can be made very symmetrical. It's
inherently easy to feed coaxially, actually.

Cheers,
Tom

1926. Re: AO-40 on the cheap in OZ... check this

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 09:07:44 UTC
From: n2cqr@clix.pt
Message-ID: <3d6f35a9.176731858@news.clix.pt>
Source record: 41888

On Fri, 30 Aug 2002 00:53:35 GMT, feralmet@dodo.com.au (Chris Shaw)
wrote:

>Hi Scroungers.
>
>Here's our new club website with an article on AO40
>reception the cheap and easy way.
>
>URL http://www.cgfar.com
>
>We will post all sorts of el cheapo homebrew articles
>as time permits. In the meantime have a rummage around.
>We are still under construction.
>Feedback welcome.
>
>73 de Chris VK3CJS

Great stuff Chris! Keep up the good scrounging!

73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 25.7 W
http://planeta.clix.pt/n2cqr

1927. Re: Homebuilt dummy load concerns?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 10:48:08 UTC
From: k9sqg@aol.com
Message-ID: <20020830064808.05915.00000120@mb-fg.aol.com>
Source record: 41890

Just use an antenna w/wo a tuner for a load. Pick a broadcast station on 40 m
at night and nobody will know the difference...

1928. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 16:09:20 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <0v4vmu4pa6fnfcb5le3t7mcudc178rfgme@4ax.com>
Source record: 41891
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Thu, 29 Aug 2002 21:59:48 -0500, "Al" <none@none.com> wrote:
>What are the advantages and disadvantages of using a "large" frequency deviation for an FM channel (say
>+/-75kHz) over a "small" freq deviation (say +/- 6kHz)? I can't see how this would affect message signal
>bandwidth. Thanks for the help. I really appreciate it.

A large modulation index improves capture ratio and FM "quieting" in a FM system. This threshold effect means that a signal with a large modulation index can have a higher baseband SNR (Signal to Noise Ratio) than its raw CNR (Carrier to Noise Ratio) in the presence of noise and interference. This gives relatively high quality audio right out to the edge of coverage. In other words, you have a good signal right out to near the point where you have no copyable signal. This is why FM broadcast uses it. The obvious downside is that you can't pack many signals in a given hunk of spectrum.

A signal with a modulation index of 1 behaves more like an AM signal in that there is very little threshold effect. As the CNR declines, so does the SNR, almost in lock step. But since the occupied bandwidth is less, the CNR can be better in the first place (narrower IF filtering), so ultimate range may be better than for a FM signal with a high modulation index, though the signal gets progressively noisier as range increases. You can also pack more signals in a given hunk of spectrum, thanks to each signal being narrower. This is generally a better tradeoff for communications quality speech. Hence this is why it is used for 2-way and amateur systems.

Another factor is that in the early days of VHF/UHF it was difficult to maintain good frequency accuracy and stability, and a wider signal is more forgiving with respect to tuning errors. Thus most early systems used large deviations for this reason too.

Gary

1929. Re: AO-40 on the cheap in OZ... check this

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 16:09:31 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d6f98be$0$216$ba620e4c@news.skynet.be>
Source record: 41892

Hi Chris,

I got error messages on the links mentionned on your site (query too old in your server).

73 de Jacques ON5MJ - Belgium

1930. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 17:24:41 UTC
From: w9wi@linux1.localdomain
Message-ID: <slrnamvbdj.of5.w9wi@linux1.localdomain>
Source record: 41893
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Fri, 30 Aug 2002 12:09:20 -0400, Gary Coffman <ke4zv@bellsouth.net> wrote:
>Another factor is that in the early days of VHF/UHF it was difficult to
>maintain good frequency accuracy and stability, and a wider signal
>is more forgiving with respect to tuning errors. Thus most early systems
>used large deviations for this reason too.

Also, a FM modulator was (usually) a single receiving-type tube, rather than
a set of power tubes at least as big as the final RF amplifier and drawing
about as much power. Important for mobile applications.
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

1931. Use GFI as an emergency power cut-off?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 17:51:09 UTC
From: mcalhoun@ksu.edu
Message-ID: <akobad$5aa@unix2.cc.ksu.edu>
Source record: 41894

I've been convinced to put a bathroom in our soon-to-be-built basement. Unfortunately, the floor of the basement is 4-5 feet BELOW the entrance to our sewer line, so we'll also have to install a "sump" for sewage, and that, of course, necessitates the use of a sewage-capable sump pump. (This is all in addition to the usual sump and pump for water that makes its way down to the basement footings after a rain.) FWIW, the sewage sump supposedly will have a capacity of about 25 gallons, although I've not yet seen it.

My plumber says that, although it may last 15 years, that sewage-capable pump WILL eventually fail, so I intend to also install an extra float-activated switch to trigger an alarm when the level in the sump pit rises above the maximum level that it should. I have no idea at what level the sewage pump should normally engage, but, for the sake of the following example, let's assume the "normal" maximum level is 10 gallons and my "emergency" monitor triggers at 15 gallons.

Years of experience have convinced me that Murphy's first law ("Whatever can go wrong will!") applies in my household, so I can forsee the following failure mode:

Suppose it is laundry day. According to the manual, our washing machine uses 38 gallons of water for a regular load. Also suppose that, at the instant the aforementioned sewage pump quits, a bit of "stuff" is caught in the one-way valve which normally keeps "stuff" from the upstairs floors from making its way to the basement instead of going out the sewer line as it should. The pump probably quit at start-up time, so the pit now contains about 10 gallons of stuff.

Add the washer's 38 gallons, and, even if a VERY LOUD alarm is triggered, by the time someone realizes what's happening, there's going to be LOTS of water (and other "stuff") overflowing onto the basement floor!

Obviously the sump alarm needs to turn the washing machine off automagically. I've never looked inside a GFI (Ground Fault Interrupter), but I wonder if one can be homebrewed into a shut-off relay triggered in some way by the sump alarm. Do any of you electrical homebrewers know just what's in one of those GFI boxes often seen in bathrooms? (I'd go buy one and disect it, but my workshop and all of its tools are currently packed away waiting for the new basement!)

--Myron, W0PBV.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

1932. Re: Use GFI as an emergency power cut-off?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 18:11:25 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <33dvmust8h0ij1c8gfue37628tm8qvc2ve@4ax.com>
Source record: 41895

On 30 Aug 2002 12:51:09 -0500, mcalhoun@ksu.edu (Myron A Calhoun) wrote:
>Obviously the sump alarm needs to turn the washing machine off automagically.
>I've never looked inside a GFI (Ground Fault Interrupter), but I wonder
>if one can be homebrewed into a shut-off relay triggered in some way by
>the sump alarm. Do any of you electrical homebrewers know just what's
>in one of those GFI boxes often seen in bathrooms? (I'd go buy one and
>disect it, but my workshop and all of its tools are currently packed
>away waiting for the new basement!)

A GFI senses differences in current between hot and neutral. If there is
no fault, they should be the same. When there's a fault, the currents begin
to differ. The GFI will trip when the difference exceeds about 4 mA.

It'd be tricky to safely use the GFI as an appliance relay, though. Simpler to
just use an X10 appliance module for the washer, and an X10 contact closure
triggered transmitter module (burglar alarm module) to activate it.

Gary

1933. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 18:43:31 UTC
From: "John S. Dyson" <dyson@iquest.net>
Message-ID: <RXOb9.1216$I4.222401@news.iquest.net>
Source record: 41896
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"Doug Smith " <w9wi@linux1.localdomain> wrote in message
news:slrnamvbdj.of5.w9wi@linux1.localdomain...
> On Fri, 30 Aug 2002 12:09:20 -0400, Gary Coffman <ke4zv@bellsouth.net> wrote:
> >Another factor is that in the early days of VHF/UHF it was difficult to
> >maintain good frequency accuracy and stability, and a wider signal
> >is more forgiving with respect to tuning errors. Thus most early systems
> >used large deviations for this reason too.
>
> Also, a FM modulator was (usually) a single receiving-type tube, rather than
> a set of power tubes at least as big as the final RF amplifier and drawing
> about as much power. Important for mobile applications.
>
One more thing, chiming in on Doug's comments: The FM modulation can
indeed be done at low power stages, and the subsequent amplification needs
only a limited form of 'linearity' when compared with low level AM modulation.
(FM modulation can be done at higher powers, but tends to have limited
deviation because of the PM vs. effective FM being done in an oscillator.)

The sum total of low power modulation of FM, and the need for fewer kinds
of linearity than amplication of AM signals (if done at low power), make FM
potentially more desirable for portable usage power needs.

John

1934. Home Brew Paddles

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 18:58:10 UTC
From: "R. Scott" <washingtonham@yahoo.com>
Message-ID: <3D6FC042.30504C20@yahoo.com>
Source record: 41797

Want to play around with the keyer that came with my 706. I don't have my paddles any more and was wondering about home brewing some. I find lots of references but don't have tool and die machinery around. The DEC 99 QST has a poor mans paddle article that I found by accident and I wonder if anyone has a DEC 99 laying around and can check it out for me.

Or has a nice Paddle possibility I could try.

Thanks
N7HJ

1935. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 19:25:27 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <umvhlldhmb72fa@corp.supernews.com>
Source record: 41798
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I've never run across an FM transmitter that didn't perform the modulation at the low level stages. Often Phase Modulation is actually used (the actual output is the same as an FM signal) because it is done in a separate stage and doesn't impact the stability of the oscillator. Since an FM signal changes only in frequency and not in amplitude, the following amplifier stages can be class C. Class C amplifiers are more efficient than the class AB amplifies needed to maintain the linearity needed for AM or SSB.

1936. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 19:46:51 UTC
From: troglodite@aol.com
Message-ID: <20020830154651.11544.00000329@mb-fi.aol.com>
Source record: 41799

>Often Phase Modulation is actually
>used (the actual output is the same as an FM signal)

Actually, this is not exactly true. In true FM, the modulation vector is independent of frequency. In PM, it is not. However, a simple RC network can usually "correct" PM to make it look like FM - at least for voice frequencies.

1937. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 20:27:52 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D6FD548.FDEB579E@oda.com.au>
Source record: 41800
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Roy Lewallen wrote:
>

> deviation, m = 25, so the bandwidth is ~ 150 kHz. The improvement in S/N
> ratio depends on the modulation index and whether preemphasis is used,
> but in wideband systems it increases as the square of the deviation.

Worth noting that common application of FM for narrowband voice applications applies a nominal 6dB of preemphasis across (essentially) the entire modulation passband. Applied accurately to single tone modulation, this results in deviation proportional to modulating frequency and therefore modulation index being independent of modulating frequency (which characterises PM), and the noise improvement is not as described for FM. (This is not to comment on the technique used by the modulator, but on the characteristic of the modulated signal to air.)

Owen

1938. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 20:35:07 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D6FD6FB.2C3030B3@oda.com.au>
Source record: 41801
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Roy Lewallen wrote:
>

> deviation, m = 25, so the bandwidth is ~ 150 kHz. The improvement in S/N
> ratio depends on the modulation index and whether preemphasis is used,
> but in wideband systems it increases as the square of the deviation.

Worth noting that common application of FM for narrowband voice applications applies a nominal 6dB of preemphasis per octave across (essentially)
the entire modulation passband. Applied accurately to single tone modulation, this results in deviation proportional to modulating frequency and therefore modulation index being independent of modulating frequency (which characterises PM), and the noise improvement is not as described for FM. (This is not to comment on the technique used by the modulator, but on the characteristic of the modulated signal to air.)

Owen

1939. Re: Home Brew Paddles

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-30 23:45:22 UTC
From: Bob Nielsen <nielsen@remove_this.oz.net>
Message-ID: <akp02i$66d$0@216.39.144.81>
Source record: 41802

On Fri, 30 Aug 2002 18:58:10 GMT, R. Scott wrote:
> Want to play around with the keyer that came with my 706. I don't have
> my paddles any more and was wondering about home brewing some. I find
> lots of references but don't have tool and die machinery around. The
> DEC 99 QST has a poor mans paddle article that I found by accident and
> I wonder if anyone has a DEC 99 laying around and can check it out for
> me.
>
> Or has a nice Paddle possibility I could try.

See the NorCal web page for these which you can build yourself:
http://www.fix.net/~jparker/norcal/paddle/nb6m.htm

73,
Bob, N7XY

1940. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-31 01:39:22 UTC
From: gaschafer@attbi.com
Message-ID: <3d701ae1.35310019@netnews.attbi.com>
Source record: 41803

On 30 Aug 2002 19:46:51 GMT, troglodite@aol.com (Troglodite) wrote:

>>Often Phase Modulation is actually
>>used (the actual output is the same as an FM signal)
>
>Actually, this is not exactly true. In true FM, the modulation vector is
>independent of frequency. In PM, it is not. However, a simple RC network can
>usually "correct" PM to make it look like FM - at least for voice frequencies.
>

It is usually done the other way around. True FM modulation gives a
flat modulation (deviation)
response with modulation frequency. PM gives a response that in effect
increases the deviation
with modulation frequency. You can think of PM as having it's own
built in pre emphasis. To
use a true FM transmitter in the same system, pre emphasis is added
to the FM transmitter to
match that of the PM transmitters.

Pre emphasis is desired for noise reduction at the receive end. This
allows the receiver to roll
the high frequency response off in it's audio stages thus reducing
high frequency noise.

It is interesting to note that FM has a much better signal to noise
ratio than AM but as the signal
starts to go into the noise it gets lost very quickly. AM is superior
for high noise to signal
performance. AM can be copied when FM can not. If I remember right
there is a 6 db
advantage of AM over FM.
There is some interesting discussion on this in some of the older
handbooks.

73
Gary K4FMX

1941. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-31 02:57:34 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D70309E.3060302@eznec.com>
Source record: 41804

Yes, an interesting effect is that at poor S/N ratios, the modulation on an FM signal ends up getting approximately multiplied by the noise, rather than added as in AM. So extreme distortion occurs when the S/N ratio of an FM signal deteriorates. I've been told that this is the reason that aircraft radio is still AM -- so a person can still be understood even when the signal is marginal.

The FM capture effect, where a louder signal completely masks a weaker one, might also be a disadvantage in some emergency situations. With AM, you can at least usually tell when more than one station is trying to transmit at once.

Roy Lewallen, W7EL

Gary Schafer wrote:
> . . .
> It is interesting to note that FM has a much better signal to noise
> ratio than AM but as the signal
> starts to go into the noise it gets lost very quickly. AM is superior
> for high noise to signal
> performance. AM can be copied when FM can not. If I remember right
> there is a 6 db
> advantage of AM over FM.
> There is some interesting discussion on this in some of the older
> handbooks.
>
> 73
> Gary K4FMX
>
>
>

1942. Re: Use GFI as an emergency power cut-off?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-31 03:17:34 UTC
From: hrbcrb@aol.com.goaway
Message-ID: <20020830231734.11933.00000210@mb-mw.aol.com>
Source record: 41805

Have the sump switch/alarm also complete a 10k circuit between the 'hot and ground' of the GFI circuit run. This will trip the "Ground Fault Interrupt" breaker the washer is on. Make sure the alarm is powered by a different circuit breaker.

Hugh KF6HHS
Retired, now life moves at my pace.
please note spam filter

1943. Re: Use GFI as an emergency power cut-off?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-31 05:21:17 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3D70524C.7B46872C@nettally.com>
Source record: 41806

I wouldn't mess with a GFCI, whatever you do to trigger it probably would not pass an electrical inspection. I think there is at least one better solution:

Assuming that the only danger is water from sources within the house (you might want a backflow valve on the sewer line to keep the sewer from dumping into the house), consider an electrically operated valve on the main water line. The valve could be configured so that as long as electrical power (low 24 VAC) is present, the valve is wide open. Wire the overflow switch so that the power to the water main valve is interrupted at high water level. In the same way, an electrical power failure will close the valve preventing flooding due to the sewage lift pump's inability to run. You might consider a battery operated sump pump as a back up to your rainwater sump pump as power failures often accompany heavy rain.

Finally try to plumb the system (floor grade) so that a lift pump overflow will run into the rainwater sump pump before going anywhere else (environmentalists will hate this) in the basement.

Also keep in mind that the water heater may need to be shut off if the water supply fails. If the water heater is in the basement with no risk of siphoning dry, this may not be an issue.

Myron A Calhoun wrote:

> I've been convinced to put a bathroom in our soon-to-be-built basement.
> Unfortunately, the floor of the basement is 4-5 feet BELOW the entrance
> to our sewer line, so we'll also have to install a "sump" for sewage,
> and that, of course, necessitates the use of a sewage-capable sump pump.
> (This is all in addition to the usual sump and pump for water that makes
> its way down to the basement footings after a rain.) FWIW, the sewage
> sump supposedly will have a capacity of about 25 gallons, although I've
> not yet seen it.
>
> My plumber says that, although it may last 15 years, that sewage-capable
> pump WILL eventually fail, so I intend to also install an extra float-
> activated switch to trigger an alarm when the level in the sump pit rises
> above the maximum level that it should. I have no idea at what level
> the sewage pump should normally engage, but, for the sake of the following
> example, let's assume the "normal" maximum level is 10 gallons and my
> "emergency" monitor triggers at 15 gallons.
>
> Years of experience have convinced me that Murphy's first law ("Whatever
> can go wrong will!") applies in my household, so I can forsee the
> following failure mode:
>
> Suppose it is laundry day. According to the manual, our washing machine
> uses 38 gallons of water for a regular load. Also suppose that, at the

> instant the aforementioned sewage pump quits, a bit of "stuff" is caught
> in the one-way valve which normally keeps "stuff" from the upstairs
> floors from making its way to the basement instead of going out the
> sewer line as it should. The pump probably quit at start-up time, so
> the pit now contains about 10 gallons of stuff.
>
> Add the washer's 38 gallons, and, even if a VERY LOUD alarm is triggered,
> by the time someone realizes what's happening, there's going to be LOTS
> of water (and other "stuff") overflowing onto the basement floor!
>
> Obviously the sump alarm needs to turn the washing machine off automagically.
> I've never looked inside a GFI (Ground Fault Interrupter), but I wonder
> if one can be homebrewed into a shut-off relay triggered in some way by
> the sump alarm. Do any of you electrical homebrewers know just what's
> in one of those GFI boxes often seen in bathrooms? (I'd go buy one and
> disect it, but my workshop and all of its tools are currently packed
> away waiting for the new basement!)
>
> --Myron, W0PBV.
> --
> Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
> PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
> NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

1944. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-31 05:47:50 UTC
From: Mike Monett <Die@Spam.Bots>
Message-ID: <3D705886.18CF@Spam.Bots>
Source record: 41807

Roy Lewallen wrote:
>
> Yes, an interesting effect is that at poor S/N ratios, the modulation on
> an FM signal ends up getting approximately multiplied by the noise,
> rather than added as in AM. So extreme distortion occurs when the S/N
> ratio of an FM signal deteriorates. I've been told that this is the
> reason that aircraft radio is still AM -- so a person can still be
> understood even when the signal is marginal.
>
> The FM capture effect, where a louder signal completely masks a weaker
> one, might also be a disadvantage in some emergency situations. With AM,
> you can at least usually tell when more than one station is trying to
> transmit at once.
>
> Roy Lewallen, W7EL

Both are significant advantages of AM over FM. If you fly the Los Angeles basin, or near any busy airport, you'll find many transmissions from the control tower are stepped on by another pilot. With AM, you can tell the controller you missed his transmission. With FM, you might never know.

Of course, flying in the Los Angeles basin might be considered an emergency situation by some pilots:)

73, Mike

1945. Re: any recommendations on books for beginner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-31 07:32:39 UTC
From: Brian Short <bshort4@cox.net>
Message-ID: <MPG.17d917528dd1faf4989687@news.west.cox.net>
Source record: 41808

Try: http://www.k7on.com/references/books.htm

In article <978fb1e5.0208192004.3cd6b44b@posting.google.com>, an101
@cuic.ca says...
> Hi
> I've come across the subject of rf scanning and ham radio, neither of
> which I know anything about. The key is that I do want to know more
> but don't know which books would be best to start me off. If anyone
> has any suggestions they would be very very very welcome.
>
> thanks
> -Ann
>

1946. Re: Homebuilt dummy load concerns?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-31 07:47:01 UTC
From: "paul.g7izx" <paul.g7izx@ntlworld.com>
Message-ID: <C60c9.1814$5g6.23684@newsfep2-win.server.ntli.net>
Source record: 41810
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

HI FROM THE UK
I have made three myself , and as a club we have made at leat 10 of these beasts and all work very well .

A sryp tin , a so239 socket 2 standoffs and two disks of pcb board.

it is bascally 2 disks of pcb board with 20 (none-inductive) 1K 2w resistors soldered between them , with a thick piece of cooker cable carrying the rf to the bottom plate , insulated of course , and then some thick copper wire solderd from the top plate of a syrp tin to the ground-plane , to reduce the resistance of the metal standoffs
either filled with sand or oil .

rated at 50watts cont
100watts 4 mins
200 for 2mins all approx

hope the info helps

de Paul

1947. Evaluating ATU efficiency

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-31 07:55:15 UTC
From: John Fletcher <John@kanga.demon.co.uk>
Message-ID: <nGrg3AAjZHc9Ew52@kanga.demon.co.uk>
Source record: 41813

Hi all!

When I get the time... I want to home-brew an ATU for QRP use, probably of the Z-match type. Because it's for QRP I want it to be efficient. It will be used with short or random wires from temporary locations (campsites, hotel rooms and such). I want to do some comparisons of ATUs using different components, different core mixes, air-spaced and polyvaricon tuning caps. Is the following a good approach to comparing efficiency?

Transmitter connected to calibrated bi-directional wattmeter connected to ATU-under-test connected to complex load made from R and C or R and L representing a random wire.

Set transmitter output power to a reference level (say, 1 watt).

Adjust ATU to give best match.

Measure voltage across resistive part of load using a 'scope. Record it.

Repeat this with different values in the load and different components in the ATU. Highest voltage across the resistive part of the load equals highest efficiency.

Am I on the right lines or is there more to it than this?

Thanks for any comments,

John G4EDX
--
John Fletcher

1948. Re: Home Brew Paddles

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-31 09:11:34 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d708733.305638@news.freeserve.net>
Source record: 41809

On Fri, 30 Aug 2002 18:58:10 GMT, "R. Scott" <washingtonham@yahoo.com>
wrote:

>Want to play around with the keyer that came with my 706. I don't have
>my paddles any more and was wondering about home brewing some. I find
>lots of references but don't have tool and die machinery around. The
>DEC 99 QST has a poor mans paddle article that I found by accident and
>I wonder if anyone has a DEC 99 laying around and can check it out for
>me.
>
I have built one using PCB and a few 6BA nuts and bolts. Its not
pretty but it works.

1949. 603 beam and tower 4sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-31 11:15:04 UTC
From: Me <j.dauphinais@worldnet.att.net>
Message-ID: <Yy1c9.44268$Ke2.3113498@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41811
Cross-posted to:
rec.radio.amateur.digital.misc,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I have for sale 1 full size "HY-Gain" beam 10 meters. fully assembled for your inspection. 13' Boom and longest element is 22' $100.00 I also have a steel tower totaling 25'. this is in 3 sections 1 10 foot st8 and 1 5foot st8 and 1 10 foot top section. I don't not have a rotator. $50.00. pickup only from Nashua,NewHampshire. I am selling these because they are to big for my new QTH. This beam has spent a large portion of its life in storage. 73's Jeff AA1GR

1950. Re: Use GFI as an emergency power cut-off?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-31 12:05:01 UTC
From: Larry Gauthier - K8UT <larryg5099@chartermi.net>
Message-ID: <un1c85kvvnmi0c@corp.supernews.com>
Source record: 41812

Myron,

It sounds to me like you are way over-engineering this problem. I have (what sounds like) the exact same arrangement in my home - all plumbing is on the first and second floors (including the laundry) but I added a lav, shower and utility tub in the basement. Lav and utility tub share a common sewage crock and pump in the basement floor, which must be pumped up, through a one-way valve, through a loop OVER and down into the house main sewage line and eventually out into the septic system. The crock has an alarm on it to notify me when the pump has failed to operate. (hasn't happened yet)

For you to experience the problem you describe, several simultaneous failures would have to occur - including the fact that the rest of your domestic waste plumbing would have to back-up and fill so that the laundry run-off would drain down into the crock. [keep in mind that the "T" from the house line to the crock does not point down, it points up - meaning that your septic field would also have to be backed up in addition to the failed one-way valve and the failed pump.]

If you worry about events that require multiple simultaneous causes... I'd suggest that you have your builder put a privy out in the backyard, and simply avoid all running-water-related possibilities! ;-)

And, what does this have to do with ham radio? Let me guess - the Ham Shack will also be down in that basement and if the flooding reached the top of the desk you would have some unfashionable two-tone equipment! ... now I understand! ;-)))

-larry
K8UT
"Myron A Calhoun" <mcalhoun@ksu.edu> wrote in message
news:akobad$5aa@unix2.cc.ksu.edu...
> I've been convinced to put a bathroom in our soon-to-be-built basement.
> Unfortunately, the floor of the basement is 4-5 feet BELOW the entrance
> to our sewer line, so we'll also have to install a "sump" for sewage,
> and that, of course, necessitates the use of a sewage-capable sump pump.
...lotsa stuff deleted...

1951. Re: Use GFI as an emergency power cut-off?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-31 15:34:16 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <un1og99723r525@corp.supernews.com>
Source record: 41814

The safer way to do it would be to install a box with a relay near the washer rather than fooling with the GFI device. Let the alarm circuit hold the power relay closed to keep power on the washer. Open power to the relay coil and the washer turns off.

By the way, I've had a septic pump with an alarm installed for over 15 years and never had a failure (although my tank is around 500 gal as I recall).

1952. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-31 16:36:27 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <9qr1nust08udkonhfsbm4qcnhbeqeqoq0k@4ax.com>
Source record: 41815

The actual primary reason is that the whole world would have to switch from AM to FM at the same precise instant and that is an impossible task. We would have gone to FM with the rest of the world in the '50s but for the logistics problem.

Individual safety units (fire and cops) could do it one city at a time, but doing everywhere from Kalamazoo to Copenhagen at the same instant is damn near impossible. Believe me, there have been more task forces studying this one problem than anything else in aviation. There are answers, none of them cheap and all of them difficult.

Jim

Roy Lewallen <w7el@eznec.com>
shared these priceless pearls of wisdom:

I've been told that this is the
->reason that aircraft radio is still AM -- so a person can still be
->understood even when the signal is marginal.

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

1953. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-31 16:58:06 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <RO6c9.3430$5g6.71905@newsfep2-win.server.ntli.net>
Source record: 41816

> The FM capture effect, where a louder signal completely masks a weaker
> one, might also be a disadvantage in some emergency situations. With AM,
> you can at least usually tell when more than one station is trying to
> transmit at once.
========
That's precisely the reason why VHF-UHF Aeronautical comms is done in DSB AM
mode , and HF Aeronautical comms in SSB (also AM be it without carrier
using only 1 sideband).
I suppose SSB VHF-UHF for this service would be no advantage over DSB in
view of line of sight propagation .

Frank gm0csz.kn6wh@ntlworld.com

1954. Re: Home Brew Paddles

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-31 18:16:11 UTC
From: UnTale <i@i.com>
Message-ID: <LJ7c9.130274$lu5.3296312@twister1.libero.it>
Source record: 41817

> Want to play around with the keyer that came with my 706. I don't have
> my paddles any more and was wondering about home brewing some. I find
> lots of references but don't have tool and die machinery around. The
> DEC 99 QST has a poor mans paddle article that I found by accident and
> I wonder if anyone has a DEC 99 laying around and can check it out for
> me.
> Or has a nice Paddle possibility I could try.
> Thanks
> N7HJ

Hi,
here you'll find two very simple project
http://www.qsl.net/iz7ath/web/02_brew/09_buga/buga_eng.htm
http://www.qsl.net/iz7ath/web/02_brew/10_bugb/bugb_eng.htm

I hope it'll be usefull..
ciao

73 de iz7ath, Talino

Homebrew, RF projects and digital tecniques on
http://www.qsl.net/iz7ath
IZ7ATH Talino +39 338 5029196

1955. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-31 18:46:09 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <un23o0sg4lhibb@corp.supernews.com>
Source record: 41818

> That's precisely the reason why VHF-UHF Aeronautical
> comms is done in DSB AM mode....

I think the reason it was done that way is because AM was the standard at the time it was done. The "primary" reason it is still AM is because it would cost so much to make the switch to FM (aircraft would have to carry two radio systems, one AM and one FM until everyone was able to make the change over). All the other stuff provides some additional justification for leaving it AM.

FM also does not provide as much of a benefit for aircraft because their height generally give them good signal strength and they don't have much multi-path to deal with.

1956. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-31 20:28:59 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <gn92nu0jeve12v2oia5j3bkljrmjvbatfb@4ax.com>
Source record: 41819

That doesn't happen to be so.

Jim

"Frank Dinger" <gm0csz.kn6wh@ntlworld.com>
shared these priceless pearls of wisdom:

->> The FM capture effect, where a louder signal completely masks a weaker
->> one, might also be a disadvantage in some emergency situations. With AM,
->> you can at least usually tell when more than one station is trying to
->> transmit at once.
->========
->That's precisely the reason why VHF-UHF Aeronautical comms is done in DSB AM
->mode , and HF Aeronautical comms in SSB (also AM be it without carrier
->using only 1 sideband).
Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

1957. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-31 20:29:29 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <ro92nu876bgmgehvkjflm6tuep587ehb7n@4ax.com>
Source record: 41820

You are precisely correct.

Jim

"Bob Lewis \(AA4PB\)" <rlewis@staffnet.com>
shared these priceless pearls of wisdom:

->> That's precisely the reason why VHF-UHF Aeronautical
->> comms is done in DSB AM mode....
->
->I think the reason it was done that way is because AM was the standard
->at the time it was done. The "primary" reason it is still AM is
->because it would cost so much to make the switch to FM (aircraft would
->have to carry two radio systems, one AM and one FM until everyone was
->able to make the change over). All the other stuff provides some
->additional justification for leaving it AM.
->
->FM also does not provide as much of a benefit for aircraft because
->their height generally give them good signal strength and they don't
->have much multi-path to deal with.
->
->

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

1958. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-08-31 20:54:38 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <g0a2nuo4p0gnddekkkpc81lmrnvcvrhroo@4ax.com>
Source record: 41821

On Sat, 31 Aug 2002 17:58:06 +0100, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>I suppose SSB VHF-UHF for this service would be no advantage over DSB in
>view of line of sight propagation .

With jets flying at 300 m/s, the doppler shift would be 1 ppm, so at
120 MHz, the frequency shift would be 120 Hz and at 1 GHz a whole kHz,
thus, with SSB reception, you would have to operate the clarifier
(with twice that amount) each time the plane flew over a place.

Implementing a diversity reception system with remote receiving sites
would also be hard, since each receiver station would experience a
different doppler and combining the audio would produce strange
effects.

When using AM, the audio is recovered as the difference between the
carrier and the sideband, while both suffer (approximately) the same
doppler shift, so the sound pitch does not change.

Paul OH3LWR

1959. CTCSS Schematic needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 00:02:30 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <akrlmd$ag1$1@slb5.atl.mindspring.net>
Source record: 41822
Cross-posted to: rec.radio.amateur.homebrew,alt.ham-radio.vhf-uhf

Anyone have or know where I can find a schematic of a CTCSS generator. I want to encode a older transceiver.

Dan/W4NTI

1960. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 00:05:08 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D7159B4.4050200@eznec.com>
Source record: 41823

So I take it that, if it weren't for the practical difficulty of switching from AM to FM, that aircraft radio would be FM. Weak signals would be unintelligible, and stronger signals would capture receivers. What would be the advantages over the present system that would still make it worthwhile in light of the disadvantages?

Roy Lewallen, W7EL

Jim Weir wrote:
> You are precisely correct.
>
> Jim
>
>
>
> "Bob Lewis \(AA4PB\)" <rlewis@staffnet.com>
> shared these priceless pearls of wisdom:
>
> ->> That's precisely the reason why VHF-UHF Aeronautical
> ->> comms is done in DSB AM mode....
> ->
> ->I think the reason it was done that way is because AM was the standard
> ->at the time it was done. The "primary" reason it is still AM is
> ->because it would cost so much to make the switch to FM (aircraft would
> ->have to carry two radio systems, one AM and one FM until everyone was
> ->able to make the change over). All the other stuff provides some
> ->additional justification for leaving it AM.
> ->
> ->FM also does not provide as much of a benefit for aircraft because
> ->their height generally give them good signal strength and they don't
> ->have much multi-path to deal with.
> ->
> ->
>
> Jim Weir, VP Eng. RST Eng. WX6RST
> A&P, CFI, and other good alphabet soup

1961. Re: CTCSS Schematic needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 01:33:20 UTC
From: Bruce Lane <feedspammerstosharks.4.spamvac@spamgourmet.com>
Message-ID: <MPG.17db0e3bc96f35c29899b4@news.drizzle.com>
Source record: 41824
Cross-posted to: rec.radio.amateur.homebrew,alt.ham-radio.vhf-uhf

In article <akrlmd$ag1$1@slb5.atl.mindspring.net>,
w4nti@mindspringnospam.com says...

> Anyone have or know where I can find a schematic of a CTCSS generator. I
> want to encode a older transceiver.
>
> Dan/W4NTI

The only problem with any sort of homebrewed design is that CTCSS
tone frequencies are critical. They need to be maintained to a tolerance
of about +/- 0.75Hz.

This is, of course, not an issue if you're using a crystal
oscillator and divider chain. However, in this context, there are pre-
made solutions available at reasonable prices.

http://www.com-spec.com/ss64.htm - $28.95, and you can program it
with its DIP switch pack for any of the 64 standard tones.

http://www.hamtronics.com/ - A competing unit from HamTronics.
Available as a kit or pre-built. About $11 more expensive than the
ComSpec unit above.

Good hunting.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

1962. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 01:52:49 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <un2so3ngtkqr7d@corp.supernews.com>
Source record: 41825

We in fact do have some company air-ground channels that do use FM for compatibility with existing ground units. As far as I can tell there's no practical difference in performance from an aircraft in flight because you are always dealing with pretty strong signals. The exception might be a downed aircraft in the middle of the sticks somewhere.

We also have some HF SSB units for long haul communications. The biggest issue with the HF is operator training - getting them to understand that you don't pick a 15 Mhz frequency to communicate with someone 300 miles away.

The bottom line is that I don't think FM was an option when radios were first placed into aircraft so I doubt that engineers sat around and discussed AM vs FM and picked AM as the better mode for aviation.

1963. winding toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 02:15:18 UTC
From: Gary & Angela Belcaster <gbelcas@charter.net>
Message-ID: <gbelcas-243FA9.21151831082002@corp.supernews.com>
Source record: 41826

Anyone know where I might find #24 enameled wire for winding toroids for the 'Tandem Match' project ? Thanks in advance.

Gary

1964. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 05:07:53 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d719f65.2951504@news.cantech.net.au>
Source record: 41827

On Sat, 31 Aug 2002 09:36:27 -0700, Jim Weir <jim@rst-engr.com> wrote:

>The actual primary reason is that the whole world would have to switch from AM
>to FM at the same precise instant and that is an impossible task. We would have
>gone to FM with the rest of the world in the '50s but for the logistics problem.
>
>Individual safety units (fire and cops) could do it one city at a time, but
>doing everywhere from Kalamazoo to Copenhagen at the same instant is damn near
>impossible. Believe me, there have been more task forces studying this one
>problem than anything else in aviation. There are answers, none of them cheap
>and all of them difficult.

It's far from that complicated. If you have ever done power supply
switching or highway construction, you learn how to maintain flow
while inserting a second artery.

It requires only the installation of duplicate services on the ground
and cross-band linking. Employ a frequency raster plan with alternate
AM and NBFM. The plan has been done, the impediment is the inertia of
the GA sector to spend any money esp. on recreational/private a/c.

I also recognise the merits of AM in cases of "doubling", but AM is
prone to many effects that do not compromise FM - such as prop
modulation and the inherently worse impulse noise behaviour of AM.

1965. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 05:14:27 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d71a1e8.3595154@news.cantech.net.au>
Source record: 41828

On Sat, 31 Aug 2002 14:46:09 -0400, "Bob Lewis \(AA4PB\)"
<rlewis@staffnet.com> wrote:

(snip)

>The "primary" reason it is still AM is
>because it would cost so much to make the switch to FM (aircraft would
>have to carry two radio systems, one AM and one FM until everyone was
>able to make the change over).

Garbage!

>All the other stuff provides some
>additional justification for leaving it AM.
>
>FM also does not provide as much of a benefit for aircraft because
>their height generally give them good signal strength and they don't
>have much multi-path to deal with.

1966. Re: winding toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 09:45:21 UTC
From: w8diz <w8diz@fpqrp.com>
Message-ID: <Rklc9.76997$N9.12743840@twister.neo.rr.com>
Source record: 41829

try this link...I just order some myself

http://www.mpja.com/product.asp?product=7253+WI

This is "solderable" magnet wire.
A 700 watt solder pencil will strip the insulation
in about 4-5 seconds

--
72 & "oo's" - Dieter (DIZ) Gentzow - W8DIZ - Loveland, Ohio
Clermont County - EM79uf - near Cincinnati; 39.218N - 84.305W
SOC-8 DLQRPAG-1454 ARCI-10226 ARS-781 QRPL-1998 10X-9389 CATT-26
FP#-1 http://home.cinci.rr.com/w8diz & http://kitsandparts.com

"Gary & Angela Belcaster" <gbelcas@charter.net> wrote in message
news:gbelcas-243FA9.21151831082002@corp.supernews.com...
> Anyone know where I might find #24 enameled wire for winding toroids for
> the 'Tandem Match' project ? Thanks in advance.
>
> Gary

1967. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 11:30:20 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <un3uitlt32df39@corp.supernews.com>
Source record: 41830

> you learn how to maintain flow
> while inserting a second artery.

Good, well I elect you to be the one to tell the multiple thousands of small private pilots that the are going to have to install both FM and AM radios in their planes while you do the switchover.

1968. AO40 el cheapo ..... OZ style. Read this.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 11:53:08 UTC
From: feralmet@dodo.com.au
Message-ID: <3d71ff54.8768507@news.dodo.com.au>
Source record: 41831

Hi Scroungers.

Here's our new club website with an article on AO40
reception the cheap and easy way.

URL http://www.cgfar.com

We will post all sorts of el cheapo homebrew articles
as time permits. In the meantime have a rummage around.
We are still under construction.
Feedback welcome.

73 de Chris VK3CJS

1969. Re: winding toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 12:40:11 UTC
From: mcalhoun@ksu.edu
Message-ID: <akt1rb$3hb@unix1.cc.ksu.edu>
Source record: 41832

>Anyone know where I might find #24 enameled wire for winding toroids for
>the 'Tandem Match' project ? Thanks in advance.

I've never measured its size, but the degausing coil around the face
of a TV picture tube may be about that size, and just one such coil
should give you enough wire for LOTS of toroids!

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

1970. Re: winding toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 13:02:15 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <0r34nuk1u58s2l4sfr890ceku7123flnc0@4ax.com>
Source record: 41833

On Sun, 01 Sep 2002 09:45:21 GMT, "w8diz" <w8diz@fpqrp.com> wrote:
>This is "solderable" magnet wire.
>A 700 watt solder pencil will strip the insulation
>in about 4-5 seconds

I bet it would. :-)

Somehow I can't seem to get my head around calling
a 700 watt iron a "pencil" though.

Gary

1971. Re: winding toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 13:03:38 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <4hoc9.3567$GV5.62179@newsfep1-win.server.ntli.net>
Source record: 41834

> Anyone know where I might find #24 enameled wire for winding toroids for
> the 'Tandem Match' project ? Thanks in advance.
============
AWG24 wire has a diameter of 0.020 inch = 0.51 mm which should be available
from any electrical motor rewinding workshop.
Speak nice to them and they will be giving you a few metres of wire free of
charge. Suggest you bring a calliper (US: caliper) with you .
The nearest standard metric size of wire is 0.56 mm dia
For enameled wire you might have to add 0.2mm.

Frank gm0csz.kn6wh@ntlworld.com

1972. Re: winding toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 14:14:02 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <un485f36h7gv69@corp.supernews.com>
Source record: 41835

Radio Shaft sells a package of 3 spools of magnet wire, one of which, if I recall, is 24. However, the wire size isn't all that critical in toroids except in cases where you are really crammed in. So if you already have some 26 or 22 I'd just go ahead and use it. You'll get a better deal, of course, mail order. But RS has the advantage that you could be winding toroids this afternoon. There's an outfit called "The Coax Connection" that has quite a range of magnet wire at reasonable prices. They tend to frequent a lot of hamfests if you're not in a terrible hurry. They do mail order, too, but I don't know if they are online.

..

"Gary & Angela Belcaster" <gbelcas@charter.net> wrote in message
news:gbelcas-243FA9.21151831082002@corp.supernews.com...
> Anyone know where I might find #24 enameled wire for winding toroids for
> the 'Tandem Match' project ? Thanks in advance.
>
> Gary

1973. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 14:25:02 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <pp84nucqh9d6e64tok8m6relgnpmahujj8@4ax.com>
Source record: 41836

On Sun, 1 Sep 2002 07:30:20 -0400, "Bob Lewis \(AA4PB\)"
<rlewis@staffnet.com> wrote:

>> you learn how to maintain flow
>> while inserting a second artery.
>
>Good, well I elect you to be the one to tell the multiple thousands of
>small private pilots that the are going to have to install both FM and
>AM radios in their planes while you do the switchover.

How many American private pilots will fly over Europe or Africa ?

As long as the ground segment in a certain country has been fully
converted to AM + FM, all those planes flying in that country can use
either AM or FM. It would be natural to replace the AM radio with an
FM radio during a major overhaul of the plane. Only if you intend to
fly to a country that has not converted to AM+FM, the plane needs to
be equipped with both radios.

Anyway the aviation AM/FM debate is obsolete, since in a few years,
the debate is AM phone / digital systems.

Paul OH3LWR

1974. Re: winding toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 14:25:47 UTC
From: chuck & shirley hawks <s_hawks@bellsouth.com>
Message-ID: <%Opc9.20750$FJ1.3065023@e3500-atl1.usenetserver.com>
Source record: 41838

I live in West Tennessee and we have a motor re-wind shop 30 miles from
where I live. You might try a large city. BTW, they also rewind
transformers.

--

Chuck
KE4ETH

x-no-archive: yes
"Max Foo" <maxfoo@punkass.com> wrote in message
news:cv74nu4vd6g6m7tjhpstsh9u6ehksgbr52@4ax.com...
> electrical motor rewinding workshop?
> what country are you from?
> they may be as commonplace as a McDonald's in your country,
> but I don't think I've ever see one in the US...
>
> maybe home depot, radio shack, or digikey has 24 gauge wire.
>
>
>
> On Sun, 1 Sep 2002 14:03:38 +0100, "Frank Dinger"
> <gm0csz.kn6wh@ntlworld.com> wrote:
>
> >> Anyone know where I might find #24 enameled wire for winding toroids
for
> >> the 'Tandem Match' project ? Thanks in advance.
> >============
> >AWG24 wire has a diameter of 0.020 inch = 0.51 mm which should be
available
> >from any electrical motor rewinding workshop.
> >Speak nice to them and they will be giving you a few metres of wire free
of
> >charge. Suggest you bring a calliper (US: caliper) with you .
> >The nearest standard metric size of wire is 0.56 mm dia
> >For enameled wire you might have to add 0.2mm.
> >
> >Frank gm0csz.kn6wh@ntlworld.com
> >
> >
>

1975. Re: CTCSS Schematic needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 14:30:20 UTC
From: ronayling@hotmail.com
Message-ID: <3d7323a0.1526274@news.freeserve.co.uk>
Source record: 41837
Cross-posted to: rec.radio.amateur.homebrew,alt.ham-radio.vhf-uhf

Use an FX335 ic its so simple just a few componants if
its just encode you need, bit more complicated for decode
as well.
I have modded quite a few old PMR's for ctcss no problem

from Ron... G3YUH

On Sat, 31 Aug 2002 19:02:30 -0500, "Dan/W4NTI"
<w4nti@mindspringnospam.com> wrote:

>Anyone have or know where I can find a schematic of a CTCSS generator. I
>want to encode a older transceiver.
>
>Dan/W4NTI
>
>

1976. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 15:18:28 UTC
From: w9wi@linux1.localdomain
Message-ID: <slrnan4c72.b6i.w9wi@linux1.localdomain>
Source record: 41839

On Sun, 01 Sep 2002 17:25:02 +0300, Paul Keinanen <keinanen@sci.fi> wrote:
>As long as the ground segment in a certain country has been fully
>converted to AM + FM, all those planes flying in that country can use
>either AM or FM. It would be natural to replace the AM radio with an

I'm not a pilot, but isn't it important for planes to be able to talk to
each other, not just the ground? Especially at small "uncontrolled"
airfields where there's no control tower?
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

1977. Re: winding toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 15:20:15 UTC
From: w9wi@linux1.localdomain
Message-ID: <slrnan4cae.b6i.w9wi@linux1.localdomain>
Source record: 41840

On Sun, 01 Sep 2002 14:17:17 GMT, Max Foo <maxfoo@punkass.com> wrote:
>electrical motor rewinding workshop?
>what country are you from?
>they may be as commonplace as a McDonald's in your country,
> but I don't think I've ever see one in the US...

I've had motors rewound in Madison, Wis. and I know there are shops here in Nashville that will do it too.

(do they deal with anything small enough to use #24?)
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

1978. Re: AO40 el cheapo ..... OZ style. Read this.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 15:35:30 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d723477$0$191$ba620e4c@news.skynet.be>
Source record: 41841

Here is the nice message I got in trying your links

Microsoft OLE DB Provider for ODBC Drivers error '80004005'

[Microsoft][ODBC Microsoft Access Driver] Operation must use an updateable query.

/links/redir.asp, line 23

73 de Jacques - ON5MJ

1979. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 15:44:59 UTC
From: allan_herriman.hates.spam@agilent.com
Message-ID: <3d72320c.25808090@netnews.agilent.com>
Source record: 41842
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Fri, 30 Aug 2002 15:25:27 -0400, "Bob Lewis \(AA4PB\)"
<rlewis@staffnet.com> wrote:

>I've never run across an FM transmitter that didn't perform the
>modulation at the low level stages. Often Phase Modulation is actually
>used (the actual output is the same as an FM signal)

Phase modulation is never used for wideband FM. This is because the
modulation index is huge when the audio has strong low frequency
content. E.g. M = 75kHz/20Hz = 3750 radian peak. I'd like to see a
phase modulator that can do +/- 3750 radian and still be cost and
performance competitive with a VCO.

Most cheap (and expensive!) broadcast exciters use a VCO that is
locked to a crystal using a PLL with a very low loop bandwidth. The
baseband composite stereo signal is added to the control voltage from
the PLL.
Some modern exciters use direct digital synthesis.
(So why do they still teach Armstrong's method in undergraduate
courses? Has this been used at all in the last few decades?)

Regards,
Allan.

1980. Re: winding toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 15:58:38 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <un4ea3crt5550c@corp.supernews.com>
Source record: 41843

"Max Foo" <maxfoo@punkass.com> wrote in message
news:cv74nu4vd6g6m7tjhpstsh9u6ehksgbr52@4ax.com...
> electrical motor rewinding workshop?
> what country are you from?
> they may be as commonplace as a McDonald's in your country,
> but I don't think I've ever see one in the US...

They used to be as thick as flies in the rural parts of the Midwest. There are still plenty of signs, but my wife found out a few weeks ago, that only about one in ten of those signs is in front of a still operating shop.

Nonetheless, she only had to go a couple of miles, and we are in a part of the country where the next town is 25 miles away, so they are not so uncommon.

..

1981. Re: AO40 el cheapo ..... OZ style. Read this.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 16:30:55 UTC
From: Brian <houge@smart-tech.dk>
Message-ID: <3d7240bd$0$190$edfadb0f@dspool01.news.tele.dk>
Source record: 41844

The link works fine here.

Regards Brian OZ1SKY

"JC" <jacques.culot@skynet.be> wrote in message
news:3d723477$0$191$ba620e4c@news.skynet.be...
> Here is the nice message I got in trying your links
>
>
> Microsoft OLE DB Provider for ODBC Drivers error '80004005'
>
> [Microsoft][ODBC Microsoft Access Driver] Operation must use an updateable
> query.
>
> /links/redir.asp, line 23
>
>
>
> 73 de Jacques - ON5MJ
>
>
>

1982. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 16:50:08 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <f7g4nu81hfp3em5f2a638jn7i7aaq5rsl7@4ax.com>
Source record: 41845

In the Hamsher bible ("Communication System Engineering Handbook, first edition, 1967, page 17-13), the signal to noise ratios of wideband FM (10 kHz. dev), narrowband FM (3.3 kHz. dev), and AM 100% are compared. Down to 0.1 microvolt the narrowband FM is always a better s/n than the AM at the same input level. The crossover level for wideband FM to AM occurs at 0.2 microvolts.

Therefore, with narrowband FM, there IS no weak signal advantage and with wideband FM the advantage is so far down in the noise at the crossover (5 dB sinad) as to be negligible.

It is also true that AM has a "capture" effect. You can call it AGC effect or anything else you choose. Unless the signals are extremely close in level, one will always "step on" (damn, I hate that term) the other. Will you hear a squeal? Possibly, but not always. And, the odds of both stations starting and ending their conversations at the same exact instant is near zero. The point being, you will 99.999% know that two stations are trying to communicate with you if they are on the same frequency at the same time. If not, the general case is to wait half a minute, and if still not acknowledged, repeat your request.

As to the advantages of moving to FM, I hope it happens well after I retire. There aren't but a handful of us left in the industry that specialize in VHF-AM. I could name them on my digits without taking off my socks. It is a built-in job security that I just love.

Being serious, though, you have absolutely no idea of the hassle you go through finding components rated for AM service. SOA means a hell of a lot when your collector voltage goes double the supply on the modulation peaks. Add to that any urps caused by reflected power, and you find yourself specifying a pretty hefty device for a fairly low power transmitter. In the receiver, things are even worse. When is the last time you ever saw an AM IF strip with AGC on a chip? LM373? LM1868? And they've been out of the pipeline for twenty years. Not only that, but they were meant for crackerbox radio AM, so you wind up double-converting (with the concomitant bird and spurious problems) to get down to a point where they are usable.

FM power devices and receiver chips? The kind they use in marine and safety radios? How many boxcars full would you like tomorrow morning?

OK?

Jim

Roy Lewallen <w7el@eznec.com>
shared these priceless pearls of wisdom:

->So I take it that, if it weren't for the practical difficulty of
->switching from AM to FM, that aircraft radio would be FM. Weak signals
->would be unintelligible, and stronger signals would capture receivers.
->What would be the advantages over the present system that would still
->make it worthwhile in light of the disadvantages?
->
->Roy Lewallen, W7EL

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

1983. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 16:54:07 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <lfh4nugadm4olp5cviscl725vgjkke6up5@4ax.com>
Source record: 41846

Nice of you to keep the conversation at a constructive level. One more addition
to the tarverfile.

Jim

budgie@nowhere.cantech.net.au (budgie)
shared these priceless pearls of wisdom:

->>The "primary" reason it is still AM is
->>because it would cost so much to make the switch to FM (aircraft would
->>have to carry two radio systems, one AM and one FM until everyone was
->>able to make the change over).
->
->Garbage!
->

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

1984. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 16:56:52 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <ajh4nu8c8ap8cg91s0bs2qfv4ucbgv3hrm@4ax.com>
Source record: 41747
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Because 99% of all voice modulation units use some phorm of phase modulation.
This **is** after all, a radio amateur newsgroup, and most **all** of us have an
Armstrong modulator in our inventory. Go back to your ivory tower.

Jim

allan_herriman.hates.spam@agilent.com (Allan Herriman)
shared these priceless pearls of wisdom:

->(So why do they still teach Armstrong's method in undergraduate
->courses? Has this been used at all in the last few decades?)
->
->Regards,
->Allan.

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

1985. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 17:28:00 UTC
From: allan_herriman.hates.spam@agilent.com
Message-ID: <3d724d16.32730143@netnews.agilent.com>
Source record: 41748
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Sun, 01 Sep 2002 09:56:52 -0700, Jim Weir <jim@rst-engr.com> wrote:

>
>Because 99% of all voice modulation units use some phorm of phase modulation.
>This **is** after all, a radio amateur newsgroup, and most **all** of us have an
>Armstrong modulator in our inventory. Go back to your ivory tower.

My apologies. I thought the topic was wideband FM, since the OP
mentioned 75kHz deviation.

Allan.

>Jim
>
>
>allan_herriman.hates.spam@agilent.com (Allan Herriman)
>shared these priceless pearls of wisdom:
>
>->(So why do they still teach Armstrong's method in undergraduate
>->courses? Has this been used at all in the last few decades?)
>->
>->Regards,
>->Allan.
>
>Jim Weir, VP Eng. RST Eng. WX6RST
>A&P, CFI, and other good alphabet soup

1986. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 18:04:21 UTC
From: Chuck Simmons <chrlsim@webaccess.net>
Message-ID: <3D72569D.8C6C521B@webaccess.net>
Source record: 41749
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Allan Herriman wrote:
>
> On Sun, 01 Sep 2002 09:56:52 -0700, Jim Weir <jim@rst-engr.com> wrote:
>
> >
> >Because 99% of all voice modulation units use some phorm of phase modulation.
> >This **is** after all, a radio amateur newsgroup, and most **all** of us have an
> >Armstrong modulator in our inventory. Go back to your ivory tower.
>
> My apologies. I thought the topic was wideband FM, since the OP
> mentioned 75kHz deviation.
>
> Allan.
>
> >Jim
> >
> >
> >allan_herriman.hates.spam@agilent.com (Allan Herriman)
> >shared these priceless pearls of wisdom:
> >
> >->(So why do they still teach Armstrong's method in undergraduate
> >->courses? Has this been used at all in the last few decades?)
> >->
> >->Regards,
> >->Allan.

I dunno but when I took over engineering at KMEO-FM in 1964 or 1965, the transmitter had a phase modulator and, after I got the piece of junk on the air, I had FM stereo and the 67KHz subcarrier for Muzac or whatever all nicely in specification according to FCC rules and Regulations. Talk about fun. I had to work after midnight because of rules on testing and I had to chase centipedes and scorpions out of the way whenerver I wanted to put a probe on anything. BTW, KMEO-FM still exists under the same license except that KUEQ-AM, my other headache back then, is now under the KMEO license. If it is still owned by the cheapskate I worked for, the transmitters haven't changed. :-)

Chuck
--
... The times have been,
That, when the brains were out,
the man would die. ... Macbeth
Chuck Simmons chrlsim@webaccess.net

1987. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 18:11:27 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D725877.12BA@pop.removethistomailme.net>
Source record: 41750
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Allan Herriman wrote:
> (So why do they still teach Armstrong's method in undergraduate
> courses? Has this been used at all in the last few decades?)

Not that it matters, but this discussion gave me a good excuse to hit
Google and read up on the history of FM. Turns out that someone scanned
in Armstrong's original paper, and it's a great read:
http://home.att.net/~katzmann/fm.pdf

-- jm

----
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1988. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 18:37:24 UTC
From: Don Pearce <donaldfff@pearce.uk.com>
Message-ID: <bin4nu89feeeoeo100k7oak5mcn8i4li66@4ax.com>
Source record: 41751
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Sun, 01 Sep 2002 18:11:27 GMT, John Miles
<jmiles@pop.removethistomailme.net> wrote:

>Allan Herriman wrote:
>> (So why do they still teach Armstrong's method in undergraduate
>> courses? Has this been used at all in the last few decades?)
>
>Not that it matters, but this discussion gave me a good excuse to hit
>Google and read up on the history of FM. Turns out that someone scanned
>in Armstrong's original paper, and it's a great read:
>http://home.att.net/~katzmann/fm.pdf
>
>-- jm
>
Now that's what I call a paper! Brilliant - thanks for the post.

d

Telecommunications consultant
http://www.pearce.uk.com

1989. Re: winding toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 18:38:34 UTC
From: ZOOM <robert931@sympatico.ca>
Message-ID: <J8tc9.492$QS6.113551@news20.bellglobal.com>
Source record: 41752

How about Radio Shack. They sell a pack of three magnet wire sizes. You'll get pretty close even if it's #22. That's close enough!

"Myron A Calhoun" <mcalhoun@ksu.edu> wrote in message news:akt1rb$3hb@unix1.cc.ksu.edu...
> >Anyone know where I might find #24 enameled wire for winding toroids for
> >the 'Tandem Match' project ? Thanks in advance.
>
> I've never measured its size, but the degausing coil around the face
> of a TV picture tube may be about that size, and just one such coil
> should give you enough wire for LOTS of toroids!
>
> --Myron.
> --
> Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
> PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
> NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

1990. Re: winding toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 18:51:21 UTC
From: Gary & Angela Belcaster <gbelcas@charter.net>
Message-ID: <gbelcas-6BC34E.13512101092002@corp.supernews.com>
Source record: 41753

In article <gbelcas-243FA9.21151831082002@corp.supernews.com>,
Gary & Angela Belcaster <gbelcas@charter.net> wrote:

> Anyone know where I might find #24 enameled wire for winding toroids for
> the 'Tandem Match' project ? Thanks in advance.
>
> Gary

Hearty thanks to all who responded. Sounds like Radio Shack might be an
easy if not most inexpensive source. I believe that we do have a small
motor repair shop in town as well. Well, no more excuses, time to wind.

Gary

1991. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 19:12:18 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D726692.7000605@eznec.com>
Source record: 41754
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

If you're interested in the history of FM, also keep an eye out for a public TV program about Armstrong and Sarnoff. It ran some time ago, but might come around again. It adds another whole dimension to the history.

Roy Lewallen, W7EL

John Miles wrote:
> Allan Herriman wrote:
>
>>(So why do they still teach Armstrong's method in undergraduate
>>courses? Has this been used at all in the last few decades?)
>
>
> Not that it matters, but this discussion gave me a good excuse to hit
> Google and read up on the history of FM. Turns out that someone scanned
> in Armstrong's original paper, and it's a great read:
> http://home.att.net/~katzmann/fm.pdf
>
> -- jm

1992. Re: CTCSS Schematic needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 20:02:39 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <aktrp0lct1@slb0.atl.mindspring.net>
Source record: 41755
Cross-posted to: rec.radio.amateur.homebrew,alt.ham-radio.vhf-uhf

Thanks folks.

Dan/W4NTI

"Ron" <ronayling@hotmail.com> wrote in message
news:3d7323a0.1526274@news.freeserve.co.uk...
>
> Use an FX335 ic its so simple just a few componants if
> its just encode you need, bit more complicated for decode
> as well.
> I have modded quite a few old PMR's for ctcss no problem
>
> from Ron... G3YUH
>
>
> On Sat, 31 Aug 2002 19:02:30 -0500, "Dan/W4NTI"
> <w4nti@mindspringnospam.com> wrote:
>
> >Anyone have or know where I can find a schematic of a CTCSS generator. I
> >want to encode a older transceiver.
> >
> >Dan/W4NTI
> >
> >
>

1993. Re: Looking for 110pF NPO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 20:04:57 UTC
From: jos <soj@sympatico.ca>
Message-ID: <3D7272E9.A49C52A9@sympatico.ca>
Source record: 41756

The only time I saw a 110pf capacitor was in the silver micas series!
Regards! Jos

rec.radio.amateur.homebrew wrote:

> Anybody know where I can obtain 200 pieces of 110pF
> disk NPOs at 50V or greater to be used in a LPF?
>
> --
> 72 & "oo's" - Dieter (DIZ) Gentzow - W8DIZ - Loveland, Ohio
> Clermont County - EM79uf - near Cincinnati; 39.218N - 84.305W
> SOC-8 DLQRPAG-1454 ARCI-10226 ARS-781 QRPL-1998 10X-9389 CATT-26
> FP#-1 http://home.cinci.rr.com/w8diz & http://kitsandparts.com

1994. Re: AO40 el cheapo ..... OZ style. Read this.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 20:30:00 UTC
From: HB9TLK <me@privacy.net>
Message-ID: <3d7278c4$0$23627$4d4ef98e@read.news.ch.uu.net>
Source record: 41757

> AO40
> reception the cheap and easy way.
> URL http://www.cgfar.com

hi,

do you think this would work with a comtech-module ATV receiver
the same way, listening on the IF? or ist the ATV receiver PLL not stable
enough for narrow bandwidth RX?

cesco

1995. Re: winding toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 22:43:43 UTC
From: Lou <lburkel@core.com>
Message-ID: <3d72976b$0$1434$1dc6e903@news.corecomm.net>
Source record: 41758

Gary & Angela Belcaster wrote:
>
> Anyone know where I might find #24 enameled wire for winding toroids for
> the 'Tandem Match' project ? Thanks in advance.
>
> Gary

Marlin P. Jones has a selection of magnet wire from 14 to 32
gauge available on line. They can be found at:
http://www.mpja.com/
Just go to the start page and click on Wire under their wire &
cable class.
Lou

1996. Re: AO-40 on the cheap in OZ... check this

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 23:02:47 UTC
From: feralmet@dodo.com.au
Message-ID: <3d729bd6.2869220@news.dodo.com.au>
Source record: 41759

On Fri, 30 Aug 2002 18:09:31 +0200, "JC" <jacques.culot@skynet.be>
wrote:

>Hi Chris,
>
>I got error messages on the links mentionned on your site (query too old in
>your server).
>
>73 de Jacques ON5MJ - Belgium
>
>
Hi Jacques

Sorry about that.
We are still learning.... will be fixed anytime now.

Also I was able to make much better pix of the circuit boards
in the AO40 article. That will be changed in a day or two I hope.
Please visit again.

73 de Chris

1997. Re: winding toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 23:28:37 UTC
From: DrGrok@mungednet.com
Message-ID: <aku7itfec1@bob.news.rcn.net>
Source record: 41760

In article <gbelcas-243FA9.21151831082002@corp.supernews.com>, Gary & Angela Belcaster
<gbelcas@charter.net> wrote:
>Anyone know where I might find #24 enameled wire for winding toroids for
>the 'Tandem Match' project ? Thanks in advance.
>
>Gary
I think Mouser carries enameled magnet wire.

73,
Dr. G.

1998. Re: Wanted: VERY Long Whips

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-01 23:47:21 UTC
From: Paul N3EOP <n3eop@arrl.or.callsign.net>
Message-ID: <Xns927CAACA4E618n3eophotmailcom@64.164.98.29>
Source record: 41761

"Dana Hoggatt (KB9SSS)" wrote:

> I've seen plenty of whips at about 100" or so,
> but I'm looking for whips in excess of 200".
> Does anyone know where I can find some?

Check your local marine store. Shakespeare makes some marine SSB
fiberglass whips that are 23' long.

1999. Re: Professional circuit boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-02 00:15:29 UTC
From: ogrowup@webtv.net
Message-ID: <19859-3D72ADA1-125@storefull-2236.public.lawson.webtv.net>
Source record: 41762

Just started at a company that makes PCBs. The green is indeed one of the last steps; it requires a pass-through oven to get it on right. VERY difficult to do at home! :)

"Eagles may soar but weasels aren't sucked into jets."

2000. WTB

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-02 03:43:20 UTC
From: Paul Cooper <plcooper@starband.net>
Message-ID: <3D72DE7E.4020003@starband.net>
Source record: 41763

WTB Heath VTVM.

Paul, K6PY

2001. Electronic surplus in Northern San Diego

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-02 04:39:16 UTC
From: "Clyde R. Shappee" <clydes@world.std.com>
Message-ID: <3D72EB74.756420A4@world.std.com>
Source record: 41764

Could anyone here advise as to the good parts places in Northern SD when I visit there?

I am not looking for the "Jameco" type store, we have them where I live.

I am looking for the "out of control" surplus crazy store like Halted Specialties and Mikes in Oakland.

Clyde

KA1CRV

2002. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-02 05:31:24 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d72f781.1225525@news.cantech.net.au>
Source record: 41765

On Sun, 1 Sep 2002 07:30:20 -0400, "Bob Lewis \(AA4PB\)"
<rlewis@staffnet.com> wrote:

>> you learn how to maintain flow
>> while inserting a second artery.
>
>Good, well I elect you to be the one to tell the multiple thousands of
>small private pilots that the are going to have to install both FM and
>AM radios in their planes while you do the switchover.

You have obviously missed the point. The only duplication necessary
during a changeover period is ON THE GROUND.

2003. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-02 05:34:09 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d72f838.1407817@news.cantech.net.au>
Source record: 41766

On Sun, 01 Sep 2002 09:54:07 -0700, Jim Weir <jim@rst-engr.com> wrote:

>
>Nice of you to keep the conversation at a constructive level. One more addition
>to the tarverfile.

Whatever, if you can't accept criticism it says a lot about you.

2004. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-02 05:36:25 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d72f875.1469202@news.cantech.net.au>
Source record: 41767

On Sun, 1 Sep 2002 10:54:21 +0200, pkg@algieba.com (pkg) wrote:

>budgie <budgie@nowhere.cantech.net.au> wrote:
>
>> On Sat, 31 Aug 2002 14:46:09 -0400, "Bob Lewis \(AA4PB\)"
>> <rlewis@staffnet.com> wrote:
>>
>> >The "primary" reason it is still AM is
>> >because it would cost so much to make the switch to FM (aircraft would
>> >have to carry two radio systems, one AM and one FM until everyone was
>> >able to make the change over).
>>
>> Garbage!
>
>Why is that garbage?
>Suppose there is a switch over from am to fm. It is not possible to it
>all at once. So for a certain time (years) airlines need to have am and
>fm radio's on board.

Explain why. All the duplication is in the on-ground equipment.

> further more it will cost millions of dollars for
>the airlines. one vhf radio will cost about $ 30.000 to $40.000 when an
>airline has say 200 aircraft (3 vhf per aircraft) it will cost them 600
>times $ 30.000 = $ 18.000.000 and when there is no bennefit for fm over
>am it's all down the drain.

I never argued that there are compelling reasons to migrate to FM,
only that the changeover doesn't require in-craft duplication.

>On the other hand they have to change over to vhf data radio anyway.
>with 2 modes of operation voice (AM) and data (D8PSK).
>These radio's are dsp, so it will be not much effort to have fm mode
>added to them.
>Again the change over will take years.
>
>--
>.pkg

2005. Re: Home Brew Paddles

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-02 06:26:20 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0209012226.5a9a29e4@posting.google.com>
Source record: 41768

Hi,
look at http://www.antennex.com/hws/ws0702/paddle.html .

73 de Ivan

2006. Re: Home Brew Paddles

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-02 08:08:10 UTC
From: Paolo Cravero <fake.address@asdrubale.net>
Message-ID: <3d73134d@news.opennet.it>
Source record: 41769

"R. Scott" <washingtonham@yahoo.com> ha scritto nel messaggio
news:3D6FC042.30504C20@yahoo.com...
> Want to play around with the keyer that came with my 706. I don't have
> my paddles any more and was wondering about home brewing some. I find

Hi!
Got in the same "trouble" when I bought the 706, so I built a couple of
paddles from scratch (wood, 2 microswitches and a few other junk parts):

http://www.qsl.net/ik1zyw/hardware/key/index.html

They're ugly looking and don't allow fast keying, but worth a try for 2$.

Then upgraded to NB6M's design, but I'm lacking of the proper tools to
cut/shape the PC board.

73!
Paolo ik1zyw

2007. Biconic antenna ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-02 09:00:08 UTC
From: fred bartoli <toto@hotmail.toto>
Message-ID: <3d732856$0$502$626a54ce@news.free.fr>
Source record: 41770

Hello all,

I'm thinking, for EMC prequalification purposes, of building my antennas.

I've found a good page for the logperiodic one, but can't manage to find
anything usfull for the biconic. (30MHz-200/300MHz)

Anyone can point me to good sites ?

Thank you in advance .

Fred.

2008. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-02 12:59:27 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <un6o63cevro651@corp.supernews.com>
Source record: 41771

> The only duplication necessary
> during a changeover period is ON THE GROUND.

That means that in an emergency one pilot cannot talk to another (one is using AM and one has changed over to FM). It also means that some will not be able to hear instructions from the tower or ATC to others or their responses (a dangerous situation). Unless frequency assignments are changed, you will also have a terrible QRM problem trying to run AM and FM on the same channel. I don't think you understand the complexity of the situation - it is far more complex than cutting over a power system.

2009. Re: Biconic antenna ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-02 13:32:37 UTC
From: n7ws@nowhere.com
Message-ID: <3d7367e1.1857044@news.triconet.org>
Source record: 41772

On Mon, 2 Sep 2002 11:00:08 +0200, "fred bartoli" <toto@hotmail.toto>
wrote:

|Hello all,
|
|I'm thinking, for EMC prequalification purposes, of building my antennas.

How will you determine the antenna factors?
|
|I've found a good page for the logperiodic one, but can't manage to find
|anything usfull for the biconic. (30MHz-200/300MHz)
|
|Anyone can point me to good sites ?

Offhand, no. But try your question in rec.radio.amateur.antenna.

2010. Re: WTB

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-02 14:17:16 UTC
From: Walter Treftz <penguino@atlantic.net>
Message-ID: <3D7372EC.58D14C21@atlantic.net>
Source record: 41773

What model you looking for? I have an older one (would have to go to my storeroom to get the exact model numbers).
73 Walt (N4GL)

Paul Cooper wrote:

> WTB Heath VTVM.
>
> Paul, K6PY

2011. LOOKING FOR 500PF AIR VARIABLE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-02 14:22:10 UTC
From: NI4L <ni4l@charter.net>
Message-ID: <3D737412.30100@charter.net>
Source record: 41774
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Anyone have a 500pf air cap with air gap 1/2" or more between plates 5kw
or higher rated?
Thanks for looking.

--
NI4L CUSTOM RESONANT DIPOLE
LEGAL LIMIT ++ CUSTOM MADE CENTER FED DIPOLE
Made with the same components used by our military forces today
Custom made to YOUR FREQUENCY of operation
Let me take the hassle out of making a RESONANT DIPOLE for you.
Click here for more info... http://www.angelfire.com/nb/ni4l/

2012. Re: Electronic surplus in Northern San Diego

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-02 14:28:43 UTC
From: Roger Leone <arleoneSPAMBLOCK@inreach.com>
Message-ID: <XzKc9.497$N13.129065074@news.inreach.com>
Source record: 41775

Murphy's should be on your list.

Roger K6XQ

2013. Re: Electronic surplus in Northern San Diego

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-02 17:50:21 UTC
From: Bruce Lane <feedspammerstosharks.4.spamvac@spamgourmet.com>
Message-ID: <MPG.17dd44bdb744ccac9899be@news.drizzle.com>
Source record: 41776

In article <3D72EB74.756420A4@world.std.com>, clydes@world.std.com
says...

<snip>

> I am looking for the "out of control" surplus crazy store like Halted
> Specialties and Mikes in Oakland.

Murphy's Surplus Warehouse, El Cajon. Don't miss it!

http://www.murphyjunk.com

Oh, FYI: Halted/HSC has become, IMO, a most poor value for the
scrounger. Overpricing and cherry-picking (on the part of the staff) are
rampant, and they do not appear to have done anything to correct the
situation.

http://www.bluefeathertech.com/technoid/calswap.html and scroll
down to Halted's listing for details.

Keep the peace(es).

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

2014. Re: AO40 el cheapo ..... OZ style. Read this.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-02 18:41:10 UTC
From: Andreu <afreixas@terra.es>
Message-ID: <ahOc9.108603$6K3.1040359@telenews.teleline.es>
Source record: 41777

Website not found here ...

Andreu. EA3CQY

"Brian" <houge@smart-tech.dk> wrote in message
news:3d7240bd$0$190$edfadb0f@dspool01.news.tele.dk...
> The link works fine here.
>
> Regards Brian OZ1SKY
>
> "JC" <jacques.culot@skynet.be> wrote in message
> news:3d723477$0$191$ba620e4c@news.skynet.be...
> > Here is the nice message I got in trying your links
> >
> >
> > Microsoft OLE DB Provider for ODBC Drivers error '80004005'
> >
> > [Microsoft][ODBC Microsoft Access Driver] Operation must use an updateable
> > query.
> >
> > /links/redir.asp, line 23
> >
> >
> >
> > 73 de Jacques - ON5MJ
> >
> >
> >
>
>

2015. microwave diode test ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-02 20:10:22 UTC
From: Henry Kolesnik <kolesnik@sbcglobal.net>
Message-ID: <NAPc9.629$ex4.298@newssvr19.news.prodigy.com>
Source record: 41778

Is there a homebrewers way to test microwave diode rings? I have an
Advantest 4113AL Spectrum Analyzer and I suspect the mixer has been blown.
I found an NEC ND587R-3C mixer diode ring. This device is smaller than a
match head with 4 leads. I don't want to take a chance on burning out these
devices if they're good so any tips on how test would be appreciated.
tnx
hank wd5jfr

2016. Connecting circuit boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-02 20:39:36 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3D73CD62.285B895B@alma.demon.co.uk>
Source record: 41779

I wonder if anyone has a good solution to the problems of connecting power, pots and variable capacitors to circuit boards, and interconnect between circuit boards?

It's really useful to be able to totally disconnect a circuit board from all the wires in order to remove it. For example for potentiometers I put a 3 pin header on the circuit board and then have a 3 pin plug on the leads from the pot. It's a bit of a pain to wire up the plug and leads.

A lot of RF circuits can be broken down into sub-circuits and each built on their own circuit board, possible for re-use in a later project. I have no idea what to do for the RF/VHF connections. I could use SMA/SMB/SMC sockets on both baords and short wires with plugs to make the connection, but these parts appear to be expensive and not readily available from the usual hobbiest suppliers. Apparently making the SMA/B/C plugs and leads is quite tricky.

regards...

--Gary

2017. Re: Connecting circuit boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-02 21:54:00 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <J1HoCOL439c9EAuy@ifwtech.co.uk>
Source record: 41780

Gary Morton wrote:
>I wonder if anyone has a good solution to the problems of connecting
>power, pots and variable capacitors to circuit boards, and interconnect
>between circuit boards?
>
>It's really useful to be able to totally disconnect a circuit board from
>all the wires in order to remove it. For example for potentiometers I
>put a 3 pin header on the circuit board and then have a 3 pin plug on
>the leads from the pot. It's a bit of a pain to wire up the plug and
>leads.
>
>A lot of RF circuits can be broken down into sub-circuits and each built
>on their own circuit board, possible for re-use in a later project. I
>have no idea what to do for the RF/VHF connections. I could use
>SMA/SMB/SMC sockets on both baords and short wires with plugs to make
>the connection, but these parts appear to be expensive and not readily
>available from the usual hobbiest suppliers. Apparently making the
>SMA/B/C plugs and leads is quite tricky.

I wrote several short articles about this in my column around 1996.
There is a searchable cumulative index at
www.ifwtech.co.uk/g3sek/in-prac

Agreed about the miniature coax connectors - these are best bought as
surplus jumper leads with connectors on at least one end.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2018. Re: Connecting circuit boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-02 22:14:16 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D73E2EF.3652@pop.removethistomailme.net>
Source record: 41781

Gary Morton wrote:
> A lot of RF circuits can be broken down into sub-circuits and each built
> on their own circuit board, possible for re-use in a later project. I
> have no idea what to do for the RF/VHF connections. I could use
> SMA/SMB/SMC sockets on both baords and short wires with plugs to make
> the connection, but these parts appear to be expensive and not readily
> available from the usual hobbiest suppliers. Apparently making the
> SMA/B/C plugs and leads is quite tricky.

I buy pre-fabbed SMA (male-male) cables on eBay. They're very common,
in many different lengths. Stay away from the hardline stuff, unless
you (unlike me) know how to bend it without breaking it.

SMA jacks are also very common on eBay. The project on my bench now has
ten Hammond subassemblies and counting, all with SMA interconnects (and
D-sub jacks for digital control). I've never had to make up a cable by
hand, because they're so easy to find.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2019. Wanted: RF Ammeters - Low Current

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-03 01:23:06 UTC
From: N6IN@arrl.netNOSPAM
Message-ID: <3D740EF9.1DE1A38A@arrl.netNOSPAM>
Source record: 41782

Looking for RF Ammeters, thermocouple type. 0 to 1 AMP and less.

Thanks.
Gordon
N6IN

Please remove NOSPAM to respond directly

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2020. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-03 03:24:15 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D742B5F.6EED90AA@clifto.com>
Source record: 41783

Roy Lewallen wrote:
> Yes, an interesting effect is that at poor S/N ratios, the modulation on
> an FM signal ends up getting approximately multiplied by the noise,
> rather than added as in AM. So extreme distortion occurs when the S/N
> ratio of an FM signal deteriorates. I've been told that this is the
> reason that aircraft radio is still AM -- so a person can still be
> understood even when the signal is marginal.

I've been told it's because of the FM capture effect; i.e. two signals on
top of each other can be heard with AM, where only the stronger prevails
most of the time on FM. Ergo, no distress call goes completely unnoticed.

--
.signature in flux

2021. Re: Use GFI *KISS**

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-03 03:33:32 UTC
From: Tazanator <KB9YMX@hotmail.com>
Message-ID: <g4Wc9.114733$_91.169133@rwcrnsc51.ops.asp.att.net>
Source record: 41784

well the kiss method would be a second sump pump set to go on at the high mark of the first and keep it at that level while the alarm is ringing on the first sump (Murphy will tell you the first pump will fail Friday night while you are out drinking and it will be a holiday weekend ... no pumps to buy till Tuesday.) This gives you enough time to get a paycheck to replace the failed pump...without the extra lost money.

"Myron A Calhoun" <mcalhoun@ksu.edu> wrote in message
news:akobad$5aa@unix2.cc.ksu.edu...
> I've been convinced to put a bathroom in our soon-to-be-built basement.
> Unfortunately, the floor of the basement is 4-5 feet BELOW the entrance
> to our sewer line, so we'll also have to install a "sump" for sewage,
> and that, of course, necessitates the use of a sewage-capable sump pump.
> (This is all in addition to the usual sump and pump for water that makes
> its way down to the basement footings after a rain.) FWIW, the sewage
> sump supposedly will have a capacity of about 25 gallons, although I've
> not yet seen it.
>
> My plumber says that, although it may last 15 years, that sewage-capable
> pump WILL eventually fail, so I intend to also install an extra float-
> activated switch to trigger an alarm when the level in the sump pit rises
> above the maximum level that it should. I have no idea at what level
> the sewage pump should normally engage, but, for the sake of the following
> example, let's assume the "normal" maximum level is 10 gallons and my
> "emergency" monitor triggers at 15 gallons.
>
> Years of experience have convinced me that Murphy's first law ("Whatever
> can go wrong will!") applies in my household, so I can forsee the
> following failure mode:
>
> Suppose it is laundry day. According to the manual, our washing machine
> uses 38 gallons of water for a regular load. Also suppose that, at the
> instant the aforementioned sewage pump quits, a bit of "stuff" is caught
> in the one-way valve which normally keeps "stuff" from the upstairs
> floors from making its way to the basement instead of going out the
> sewer line as it should. The pump probably quit at start-up time, so
> the pit now contains about 10 gallons of stuff.
>
> Add the washer's 38 gallons, and, even if a VERY LOUD alarm is
triggered,
> by the time someone realizes what's happening, there's going to be LOTS
> of water (and other "stuff") overflowing onto the basement floor!
>
> Obviously the sump alarm needs to turn the washing machine off

automagically.
> I've never looked inside a GFI (Ground Fault Interrupter), but I wonder
> if one can be homebrewed into a shut-off relay triggered in some way by
> the sump alarm. Do any of you electrical homebrewers know just what's
> in one of those GFI boxes often seen in bathrooms? (I'd go buy one and
> disect it, but my workshop and all of its tools are currently packed
> away waiting for the new basement!)
>
> --Myron, W0PBV.
> --
> Five boxes preserve our freedoms: soap, ballot, witness, jury, and
cartridge
> PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785)
539-4448
> NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle,
Pistol)

2022. Re: Wanted: RF Ammeters - Low Current

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-03 05:02:58 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <6oXc9.49588$Ke2.3470172@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41785

http://www.halls.com/rebuilt.html

--
If first you don't succeed, do the same thing again...see what happens

2023. Re: Wanted: RF Ammeters - Low Current

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-03 05:33:01 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <hQXc9.49631$Ke2.3474891@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41786

http://www.deltaelectronics.com/data/dtcaamm.htm

--
If first you don't succeed, do the same thing again...see what happens

2024. Re: Wanted: RF Ammeters - Low Current

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-03 05:39:12 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <4WXc9.49635$Ke2.3475773@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41787

http://www.leedselect.com/parts.html

--
If first you don't succeed, do the same thing again...see what happens

2025. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-03 06:01:56 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d744e67.1401527@news.cantech.net.au>
Source record: 41788

On Mon, 2 Sep 2002 08:59:27 -0400, "Bob Lewis \(AA4PB\)"
<rlewis@staffnet.com> wrote:

>> The only duplication necessary
>> during a changeover period is ON THE GROUND.
>
>That means that in an emergency one pilot cannot talk to another (one
>is using AM and one has changed over to FM). It also means that some
>will not be able to hear instructions from the tower or ATC to others
>or their responses (a dangerous situation). Unless frequency
>assignments are changed, you will also have a terrible QRM problem
>trying to run AM and FM on the same channel. I don't think you
>understand the complexity of the situation - it is far more complex
>than cutting over a power system.

doh - REALLY?

Years back I saw a paper on how the transition could be implemented
with minimum pain, and as an experienced comms engineer I couldn't
fault it.

Unfortunately, the bits or resonse to various posts in this thread
need to be assembled in one place for better understanding. I'll do
what I can.

New FM ground services are installed on a 1:1 basis with existing AM,
with cross-linking. Ground controllers fire up both in parallel, an
air-side service activating the ground FM receiver causes the ground
AM Tx to repeat the transmiision, and vice versa. Simple example of
cross-band linking except here it is cross-mode within the same band.
And no, they don't put AM and FM on the same frequency. So a single
role (e.g. ATIS) might be 120.9AM and 128.9FM at a particular
location. I think you fellas are smart enough to fill in most of the
blanks.

There was far more in that paper, but I didn't bother to commit it all
to memory because much related to the politics and to entrenched
interests rather than technical considerations.

2026. Re: FM Deviation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-03 06:05:13 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d74509c.1966117@news.cantech.net.au>
Source record: 41789

On Mon, 2 Sep 2002 13:45:26 +0200, pkg@algieba.com (pkg) wrote:

>budgie <budgie@nowhere.cantech.net.au> wrote:
>
>> I never argued that there are compelling reasons to migrate to FM,
>> only that the changeover doesn't require in-craft duplication.
>
>Ok, now you have a point. All 3 am-vhf boxes could be replaced by 3
>fm-boxes and control panels during C-Check.
>In this situation there are still aircraft flying with am boxes only.
>So, there are aircraft with am and others with fm. This makes
>communication with atc more difficult, i think.

No. Please read my reply to Bob Lewis.

>Or you could only replace vhf 3 with fm and then you fly mixed with fm
>and am boxes. This still makes comm with atc difficult.

I could see that causing some issues :-(

>Or with the vhf data radio with am, data and fm selection. The selection
>of frequency could then be coupled to the modulation mode.
>i.e. when one selects 118.1 MHz it is automatically set to am, and when
>one selects 132.725 it is automatically set to fm.
>
>--
>.pkg

2027. Re: Connecting circuit boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-03 06:48:21 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <peFQoiE1sFd9EAAC@ifwtech.co.uk>
Source record: 41790

John Miles wrote:
>Gary Morton wrote:
>> A lot of RF circuits can be broken down into sub-circuits and each built
>> on their own circuit board, possible for re-use in a later project. I
>> have no idea what to do for the RF/VHF connections. I could use
>> SMA/SMB/SMC sockets on both baords and short wires with plugs to make
>> the connection, but these parts appear to be expensive and not readily
>> available from the usual hobbiest suppliers. Apparently making the
>> SMA/B/C plugs and leads is quite tricky.
>
>I buy pre-fabbed SMA (male-male) cables on eBay. They're very common,
>in many different lengths.

Agreed - there are lots of nice microwave units around that consist of modular boxes with jumpers made of SMB/flexible and SMA/hardline. If you go to a microwave meeting such units may be expensive, but when they turn up at an HF/QRP event they're practically given away.

>Stay away from the hardline stuff, unless
>you (unlike me) know how to bend it without breaking it.
>
In a word, gradually. The professionals use a miniature version of the plumber's pipe-bending jig, but you can also roll it between the bench and a cylindrical former (aka electrolytic capacitor). The trick is to press down hard and keep the semi-rigid very firmly trapped so it can't kink.

Also the copper work-hardens. The first bend is easy, but the second in the same place is much harder and the third is darn near impossible... so don't ever straighten any pre-formed jumpers until you're ready to use them, and try as much as possible to use the bends that already exist.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2028. MAX2650, any design?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-03 07:55:40 UTC
From: Paolo Cravero <fake.address@asdrubale.net>
Message-ID: <3d7461da$1@news.opennet.it>
Source record: 41791

Hi.
I have ran across the way of Maxim's MAX2650 datasheet (DC-to-uwave, +18dB, 3.9dB NF amplifier), and started wondering if such a chip could have any use for HAM purposes.

It features 50ohm IN and OUT ports, and a simple +5V supply. The sample circuit from datasheet (http://www.maxim-ic.com/quick_view2.cfm?qv_pk=1521) shows only 3 bypass capacitors: would that be enough? I am afraid that it would output lots of intermodulation products given the ultra-wide operating range, if used without input filters (am thinking of a 144MHz preamp generating 88-108MHz splatters everywhere in the RX).

Has anyone seen a HAM design somewhere with MAX2650? A google search didn't return anything.

Am I on the right way to build a simple preamp?!

73s!
Paolo IK1ZYW

2029. Re: Connecting circuit boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-03 11:02:22 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <al24s2$1mbgum$1@ID-61331.news.dfncis.de>
Source record: 41792

I recently had the same problem. My cost-effective solution is the "F-series" satellite connectors from Farnell http://www.farnell.com, e.g. Order code 150684 (plug), 150686 (bulk-head socket). The plugs can be purchased to suit cable such as RG6, RG59, RG62 etc. The great advantage is they're a small fraction of the cost of SMA connectors. For example this plug is GBP 0.27 and the bulkhead socket is GBP 0.35 (equiv. US$ 18 cents and 23 cents respectively). I bought 10 of each for when I put my HF receiver (http://www.hanssummers.com/radio/polyphase/index.htm) into separate nicely screened modular boxes.

Next problem - what do you do about power/digital connections to screened boxes if you don't want to buy those expensive feedthrough capacitors?

Hans Summers
http://www.HansSummers.Com

"Gary Morton" <gary@alma.demon.co.uk> wrote in message news:3D73CD62.285B895B@alma.demon.co.uk...
> I wonder if anyone has a good solution to the problems of connecting
> power, pots and variable capacitors to circuit boards, and interconnect
> between circuit boards?
>
> It's really useful to be able to totally disconnect a circuit board from
> all the wires in order to remove it. For example for potentiometers I
> put a 3 pin header on the circuit board and then have a 3 pin plug on
> the leads from the pot. It's a bit of a pain to wire up the plug and
> leads.
>
> A lot of RF circuits can be broken down into sub-circuits and each built
> on their own circuit board, possible for re-use in a later project. I
> have no idea what to do for the RF/VHF connections. I could use
> SMA/SMB/SMC sockets on both baords and short wires with plugs to make
> the connection, but these parts appear to be expensive and not readily
> available from the usual hobbiest suppliers. Apparently making the
> SMA/B/C plugs and leads is quite tricky.
>
> regards...
>
> --Gary

2030. Re: Connecting circuit boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-03 11:36:56 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <s91d9.343485$UU1.59289@sccrnsc03>
Source record: 41793

> Next problem - what do you do about power/digital connections to screened
> boxes if you don't want to buy those expensive feedthrough capacitors?
>
> ------------------
> Hans Summers

Hi Hans, nice web page I think.

You bite the bullet and buy the feedthrus. NOTHING else works as well. And, be careful about how you install them, particularly if you're using PCBoard stock for your boxes.

W4ZCB

2031. US source of tin plate boxes?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-03 14:48:56 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3D74CBD8.6E1E67DD@ix.netcom.com>
Source record: 41794

Does anyone know of a source of the Eurocard size (100 x 160 mm) tin plate screening boxes in the US? I need about 6 or 8 for a project.

Failing that, does anyone know a UK or European supplier that will export?

73
Dan
ac6ao g3ncr

2032. FS: Ballast & NIXIE TUBES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-03 15:39:08 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <wl4d9.54394$Fb.2175785@news1.west.cox.net>
Source record: 41795
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Email w6krc@arrl.net for a detailed list.

2033. Re: Home Brew Paddles

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-03 16:26:12 UTC
From: "R. Scott" <washingtonham@yahoo.com>
Message-ID: <3D74E2A4.3FEB85EB@yahoo.com>
Source record: 41796

Thanks all, I've looked at all your suggestions and will report back on what I wham together. Im also looking at the MFJ Paddles for 39 bucks or so I think.

Scotty N7HJ

2034. Re: US source of tin plate boxes?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-03 20:03:49 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <_C8d9.4225$sy.130297@newsfep1-win.server.ntli.net>
Source record: 41697

> Does anyone know of a source of the Eurocard size (100 x 160 mm) tin
> plate screening boxes in the US? I need about 6 or 8 for a project.
>
> Failing that, does anyone know a UK or European supplier that will
> export?
==========
Instead of using ready made tin plate screening boxes ,you could make them
from (double sided) printed circuit board scraps which ,at least in Europe,
can be found on most ham radio fleamarkets . Some time ago I bought 3kgs
=6.6 lbs of the stuff for equiv US $ 8.-
The trick is before soldering the sides together to include a copper wire
at the seams.
4 soldered nuts near the corners allow for a removable cover.

Frank , gm0csz.kn6wh@ntlworld.com

2035. audio help for yaesu ft7100m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-03 20:52:44 UTC
From: STEVE G TROOK <STROOK@OPTONLINE.NET>
Message-ID: <Xk9d9.20941$0u4.385458@news4.srv.hcvlny.cv.net>
Source record: 41698

I need a way to do 1 of 2 things. Either boost the mic sensitivity inside the radio or find a way to wire an amplified mic to the radio. I need to compensate for the xyl's soft voice. Other than deviation I cannot find any adjustment.

2036. Re: Use GFI *KISS**

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-03 22:09:29 UTC
From: k7itm@aol.com
Message-ID: <3200347.0209031409.30e3258f@posting.google.com>
Source record: 41699

(Didn't see Myron's original post here yet...)
> "Myron A Calhoun" <mcalhoun@ksu.edu> wrote in message
> news:akobad$5aa@unix2.cc.ksu.edu...
...
> > I've never looked inside a GFI (Ground Fault Interrupter), but I wonder
> > if one can be homebrewed into a shut-off relay triggered in some way by
> > the sump alarm. Do any of you electrical homebrewers know just what's
> > in one of those GFI boxes often seen in bathrooms? (I'd go buy one and
> > disect it, but my workshop and all of its tools are currently packed
> > away waiting for the new basement!)

(Please call them "Ground Fault Circuit Interrupters". They do NOT
interrupt ground faults, only the circuit...) It's pretty simple, as
you'd expect for such a low price. It's basically a latching relay
that's tripped when an imbalance in current between the output leads
is detected. The way it's arranged, you can trip it by dropping a
resistor from output "hot" back to either ground or to the _input_
neutral. Draw about 10mA or more and it should trip. OR... you will
also find that they will detect and trip on a connection between the
neutral output and either ground or the neutral input, but that
connection must be much lower resistance, of course. You should be
able to use one "as is", armed with that knowledge. Just have your
switch generate a ground fault, and let the interrupter interrupt the
circuit. BUT...beware of nuisance trips from the washing machine!

Cheers,
Tom

2037. Re: Connecting circuit boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-03 22:47:13 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3D753CCB.100AE433@alma.demon.co.uk>
Source record: 41700

John Miles wrote:
>
> Gary Morton wrote:
> > A lot of RF circuits can be broken down into sub-circuits and each built
> > on their own circuit board, possible for re-use in a later project. I
> > have no idea what to do for the RF/VHF connections. I could use
> > SMA/SMB/SMC sockets on both baords and short wires with plugs to make
> > the connection, but these parts appear to be expensive and not readily
> > available from the usual hobbiest suppliers. Apparently making the
> > SMA/B/C plugs and leads is quite tricky.
>
> I buy pre-fabbed SMA (male-male) cables on eBay. They're very common,
> in many different lengths. Stay away from the hardline stuff, unless
> you (unlike me) know how to bend it without breaking it.
>
> SMA jacks are also very common on eBay. The project on my bench now has
> ten Hammond subassemblies and counting, all with SMA interconnects (and
> D-sub jacks for digital control). I've never had to make up a cable by
> hand, because they're so easy to find.
>
Hi John,

I went to ebay.COM and indeed did see several lots of SMA/B/C cables.
I went to ebay.CO.UK and there was nothing.

regards...

--Gary

2038. Re: Home Brew Paddles

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-03 23:50:54 UTC
From: donrm@soco.agilent.com
Message-ID: <1031097054.446248@cswreg.cos.agilent.com>
Source record: 41701

R. Scott <washingtonham@yahoo.com> wrote:
> Want to play around with the keyer that came with my 706. I don't have
> my paddles any more and was wondering about home brewing some. I find
> lots of references but don't have tool and die machinery around.

Some homebrew paddles are very innovative. Probably the best commercial paddle was the Brown Brothers - why someone never picked up their tooling is surprising - anyone know? Unless today's cost to manufacture would be prohibitive.

73 Don K6LTS
donrm@soco.agilent.com

2039. Re: US source of tin plate boxes?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 00:06:21 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <unajkgbm6j4da5@corp.supernews.com>
Source record: 41702

The Altoids tin has become the standard enclosure for QRP rigs. The standard Altoids tin is a little small, but the larger size tin is about 190 x 105 mm, a little large perhaps, but not too far off.

However, they do contain a significant number of Altoids so you would need to develop a serious addiction!

..

2040. WTB:Parts or project S-40

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 00:10:09 UTC
From: KC0EH <okiemansc@yahoo.com>
Message-ID: <Bbcd9.6155$6i4.475148@newsread1.prod.itd.earthlink.net>
Source record: 41703
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I am looking to buy a non working or parts Hallicrafters S-40 series radio.I have a straight S-40 I am restoring and could use some spare parts.
KC0EH

2041. silly soldering iron question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 00:39:39 UTC
From: WavyDave <nowaynowhere@yahoo.com>
Message-ID: <al3kpr02i48@enews2.newsguy.com>
Source record: 41705

Ok this is mildly embarassing, but I am intending to build a tentec as my first radio, so thought I had better start practicing construction. bought a RS soldering station, and a desolder iron. desolder is working great, I am taking apart an old radio. Soldering parts back is proving impossible, the dang work wont heat up!! I remember I need to tin the tip, only it wont tin, just get puffs of smoke and solder balls up, and to even get it to do that I have to run it halfway up the tip, in other words the point of the tip is not getting too hot. Now for what may be the silly part. Is it possible that the 'tip' that came with that iron is not really a tip, but a mounting point for a real tip? Or is the iron defective? It s been years since I learned to solder, and cant remember the details. Will a new tip solve my problem? thank you so much for any help.

2042. Re: US source of tin plate boxes?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 00:57:29 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <7hmanug64amamnbu49n52m59uo771pso0m@4ax.com>
Source record: 41704

The only place I've ever found them is at Sescom in Nevada.

Just checked their web page and found that they are dropping the
tinned box line, but have a close-out on existing stock.

http://www.sescom.com/special/special.html

Jack K8ZOA

On Tue, 03 Sep 2002 07:48:56 -0700, Dan Rae <rae4@ix.netcom.com>
wrote:

>Does anyone know of a source of the Eurocard size (100 x 160 mm) tin
>plate screening boxes in the US? I need about 6 or 8 for a project.
>
>Failing that, does anyone know a UK or European supplier that will
>export?
>
>73
>Dan
>ac6ao g3ncr
>

2043. Re: silly soldering iron question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 01:27:52 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D756198.2070202@eznec.com>
Source record: 41706

A typical tip looks like a blunt chisel at the end, usually around 3/16" or so wide. (The width can be more or less depending on the tip's main purpose.) Modern tips are plated to accept solder readily. However, if it's dirty or first being used, you might have to clean it first. What you need to do this is a damp sponge -- a lot of soldering stations include a sponge for this purpose. With the tip hot, firmly wipe the tip on the sponge several times, then immediately try melting some solder on the tip. (Your solder, by the way, should be 63/37 or 60/40 tin/lead, with rosin flux, and nothing else. If you have any other kind of solder, put it away and get the right thing. 63/37 is a bit easier to use than 60/40, since it goes directly from liquid to solid without an intermediate plastic stage.) After a few wipe/tin cycles at most, the solder should freely melt and flow on the tip, wetting it. If it doesn't, you need a new tip.

When you heat a new tip for the first time, melt solder on it to tin it as it comes up to temperature. And later on, re-tin it by wiping on the sponge and melting solder on it whenever it gets cruddy or whenever solder balls up on it instead of flowing and wetting it.

In ye olden tymes, soldering tips were made of copper, and had to be filed to expose fresh copper from time to time. Filing or any other kind of abrasion will ruin a modern tip, so don't take any advice to file or sandpaper it. The one exception might be in an emergency if the tip is shot anyway -- you might be able to get a couple of hours use out of it by filing before tossing it out.

Roy Lewallen, W7EL

WavyDave wrote:
> Ok this is mildly embarassing, but I am intending to build a tentec as my
> first radio, so thought I had better start practicing construction. bought
> a RS soldering station, and a desolder iron. desolder is working great, I
> am taking apart an old radio. Soldering parts back is proving impossible,
> the dang work wont heat up!! I remember I need to tin the tip, only it wont
> tin, just get puffs of smoke and solder balls up, and to even get it to do
> that I have to run it halfway up the tip, in other words the point of the
> tip is not getting too hot. Now for what may be the silly part. Is it
> possible that the 'tip' that came with that iron is not really a tip, but a
> mounting point for a real tip? Or is the iron defective? It s been years
> since I learned to solder, and cant remember the details. Will a new tip
> solve my problem? thank you so much for any help.
>
>

2044. Re: silly soldering iron question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 01:29:05 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <3D7561B1.FD262F1D@flash.net>
Source record: 41707

Hi,
It sounds very much like your original tip has the plating worn off it from desoldering parts. Desoldering is hard on any tip, even the expensive Weller temperature-controlled tips can lose their plating in several hours of desoldering components from a board. I do this frequently at work over the years, with the nice Weller WTCP setup, and tips just don't last very long if you're doing a lot of desoldering.
The tip is your comment that solder won't tin the tip anymore on the end, that only farther down the tip will it tin and conduct heat. The plating is most likely gone from the tip's tip :).
I bet a new tip will solve your problem. Buy several if you plan to do much desoldering. Tin the tip with fresh solder before and after every desolder operation--that will help prolong tip life.
If you eventually do a lot of soldering, consider investing in a temperature-controlled iron; it costs more but will last longer in the long run. Weller used to be the top of the line but now other companies offer temperature-controlled solder stations (at lower prices)--but the tips are still relatively expensive, no matter who you buy.
Steve

WavyDave wrote:
>
> Ok this is mildly embarassing, but I am intending to build a tentec as my
> first radio, so thought I had better start practicing construction. bought
> a RS soldering station, and a desolder iron. desolder is working great, I
> am taking apart an old radio. Soldering parts back is proving impossible,
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> tin, just get puffs of smoke and solder balls up, and to even get it to do
> that I have to run it halfway up the tip, in other words the point of the
> tip is not getting too hot. Now for what may be the silly part. Is it
> possible that the 'tip' that came with that iron is not really a tip, but a
> mounting point for a real tip? Or is the iron defective? It s been years
> since I learned to solder, and cant remember the details. Will a new tip
> solve my problem? thank you so much for any help.

2045. Re: Wanted: VERY Long Whips

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 02:35:11 UTC
From: Jerry Oxendine <joxendi@bellsouth.net>
Message-ID: <thed9.72172$vY2.1689753@e3500-atl2.usenetserver.com>
Source record: 41709

Dana Hoggatt (KB9SSS) <kb9sss@arrl.net> wrote in message
news:3D6993F4.DE8E922F@arrl.net...
> I've seen plenty of whips at about 100" or so,
> but I'm looking for whips in excess of 200".
> Does anyone know where I can find some?
>
> Thanks.
>
> Dana, KB9SSS

Failing in finding anything commercial that will fill the bill, you could purchase two 102" whips and
cut off the ball at the top of one. Then put one of those after-market ferrules on and tighten. Then screw a collet nut on the 3/8" threads. Then screw the other whip into this. No doubt you will have to guy the thing, but you'll have your 200".

73

Jerry
K4KWH

2046. Re: Biconic antenna ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 02:37:24 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d7571e2.4915014@news.peakpeak.com>
Source record: 41708

On Mon, 02 Sep 2002 13:32:37 GMT, n7ws@nowhere.com (Wes Stewart)
wrote:
>How will you determine the antenna factors?

Granted this is a bit o/t for *amateur*, but it is radio and
homebrew--so here goes!

Since this is for pre-qualification testing (not acceptance testing),
NIST-traceable calibration isn't essential. You can determine the
antenna factors by:

- A/B comparison (at multiple frequencies) to known reference antennas
(half wave dipoles for each calibration frequency)
- Using the same antenna and test source positions
- On the same OATS or in the same semi-anechoic chamber
- Measuring the levels with a calibrated spectrum analyzer or EMI
receiver (which you already have/need for the precompliance tests)
- Adding the dB difference to the (known from theory) antenna factor
of the reference dipole.

This is the same general way commercial EMC antennas are calibrated,
less the certified antenna range and NIST tracability.

If you find a particular emission is close to the limit, use a
half-wave dipole and repeat the measurement. The dipole is arguably
the most repeatable home-made antenna, and is the reference antenna
used by most EMC standards. And if the emission is close to the limit
(within your estimated test accuracy, using the dipole), you'll want
to reduce it (or at least, know HOW to reduce it) before spending
serious money on the formal acceptance tests.

--KR0U

2047. Re: silly soldering iron question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 02:46:55 UTC
From: "r.crowley" <rcrowley7@xprt.net>
Message-ID: <unat19pv24cia6@corp.supernews.com>
Source record: 41710

"WavyDave" wrote
> Is it
> possible that the 'tip' that came with that iron is not really a tip, but
a
> mounting point for a real tip? Or is the iron defective? It s been
years
> since I learned to solder, and cant remember the details. Will a new tip
> solve my problem? thank you so much for any help.

If the part farther up is melting solder properly, then it is most likely that the tip is not properly contacting the heating element. Check to be sure that the tip is screwed in tight. The tips on new irons frequently come loose during shipping (or were never properly tightened during assembly). Even during normal use, I find I have to re-tighten the retaining sleeve on my Wellers a few times a year.

Exactly how to tighten the tip depends on the exact contruction of your unit, but it should be pretty obvious. The advice about the moist foam sponge and initial cleaning and tinning should be observed also.

rc

2048. Re: silly soldering iron question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 02:59:30 UTC
From: WavyDave <nowaynowhere@yahoo.com>
Message-ID: <al3suv030ui@enews2.newsguy.com>
Source record: 41711

Thank you both, I think Roy nailed it for me, this thing came 'tipless', it looks nothing like what he described, and I need to go buy one to put on the iron.
As for desoldering, I have a separate gizmo for that, a heater and suction bulb all in one, works like a charm.

"Steve Ratzlaff" <sratzlaf@flash.net> wrote in message news:3D7561B1.FD262F1D@flash.net...
> Hi,
> It sounds very much like your original tip has the plating worn off it
> from desoldering parts. Desoldering is hard on any tip, even the
> expensive Weller temperature-controlled tips can lose their plating in
> several hours of desoldering components from a board. I do this
> frequently at work over the years, with the nice Weller WTCP setup, and
> tips just don't last very long if you're doing a lot of desoldering.
> The tip is your comment that solder won't tin the tip anymore on the
> end, that only farther down the tip will it tin and conduct heat. The
> plating is most likely gone from the tip's tip :).
> I bet a new tip will solve your problem. Buy several if you plan to do
> much desoldering. Tin the tip with fresh solder before and after every
> desolder operation--that will help prolong tip life.
> If you eventually do a lot of soldering, consider investing in a
> temperature-controlled iron; it costs more but will last longer in the
> long run. Weller used to be the top of the line but now other companies
> offer temperature-controlled solder stations (at lower prices)--but the
> tips are still relatively expensive, no matter who you buy.
> Steve
>
> WavyDave wrote:
> >
> > Ok this is mildly embarassing, but I am intending to build a tentec as
my
> > first radio, so thought I had better start practicing construction.
bought
> > a RS soldering station, and a desolder iron. desolder is working
great, I
> > am taking apart an old radio. Soldering parts back is proving
impossible,
> > the dang work wont heat up!! I remember I need to tin the tip, only it
wont
> > tin, just get puffs of smoke and solder balls up, and to even get it to
do
> > that I have to run it halfway up the tip, in other words the point of
the

> > tip is not getting too hot. Now for what may be the silly part. Is it
> > possible that the 'tip' that came with that iron is not really a tip,
but a
> > mounting point for a real tip? Or is the iron defective? It s been
years
> > since I learned to solder, and cant remember the details. Will a new
tip
> > solve my problem? thank you so much for any help.

2049. Trade for Rolleiflex

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 04:32:18 UTC
From: Butch Magee <lynyrd@cableone.net>
Message-ID: <3D758CD2.6030706@cableone.net>
Source record: 41712
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Will trade a never used chromed screwdriver antenna w/wired up-down
switch for Rolleiflex 2.8E or 3.5F or what havy you? No junk.

Butch Magee KF5DE
228-255-6900

2050. Is this a homebrew discussion group?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 04:33:52 UTC
From: janaeanddoug@netzero.net
Message-ID: <360a820d.0209032033.404416fb@posting.google.com>
Source record: 41713

Just found this board while searching for a hombrew discussion group.
I noticed there were a mix of items for sale and discussion threads.
Am I in the right place to discuss my homebrew hobby? Tnx, Doug

2051. Re: silly soldering iron question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 05:24:37 UTC
From: Bruce Lane <feedspammerstosharks.4.spamvac@spamgourmet.com>
Message-ID: <MPG.17df38f44c5f7a4d9899c2@news.drizzle.com>
Source record: 41715

In article <al3kpr02i48@enews2.newsguy.com>, nowaynowhere@yahoo.com says...

> Ok this is mildly embarassing, but I am intending to build a tentec as my
> first radio, so thought I had better start practicing construction. bought
> a RS soldering station, and a desolder iron. desolder is working great, I

<snip>

Suggestion (and no, there's nothing at all embarassing about putting together a TenTec):

Soldering equipment, like any quality tool, is an investment. You get exactly what you pay for. Radio Shack would be far from my first choice for any sort of tool that I'd use the word 'quality' in the same sentence with.

I would, for the sake of both your upcoming kit and your sanity, strongly recommend investing in a good temperature-controlled grounded-tip soldering station from Weller, Edsyn, or Loner. Yes, they'll cost quite a bit more than the basic plug-in-and-go units you'll find at RS (between $125-$250), but they'll last a heck of a lot longer and you gain the versatility of interchangeable tips and far more accurate temperature control than you have now.

If you don't want to buy new, you can poke around on Ebay or at ham swap meets. Don't ever sell yourself short on equipment like this, though.

Good luck.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to what I have now..." (Taki Kogoma)

2052. Re: Is this a homebrew discussion group?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 05:25:38 UTC
From: Bruce Lane <feedspammerstosharks.4.spamvac@spamgourmet.com>
Message-ID: <MPG.17df39322532a6969899c3@news.drizzle.com>
Source record: 41716

In article <360a820d.0209032033.404416fb@posting.google.com>,
janaeanddoug@netzero.net says...

> Just found this board while searching for a hombrew discussion group.
> I noticed there were a mix of items for sale and discussion threads.
> Am I in the right place to discuss my homebrew hobby? Tnx, Doug

If, by "homebrew," you're referring to the design, construction,
and modification of electronic equipment pertinent to the ham radio
community, then yes, you've found the right place.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

2053. Re: WTB:Parts or project S-40

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 06:15:34 UTC
From: "Gary C." <radiobier@dslextreme.com>
Message-ID: <unb5lkjv533r0c@corp.supernews.com>
Source record: 41714
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

If no one responded I have one...All tubes complete except for the
bandswitch knob. Make me an offer to get it off my hands.

Thanks,

Gary
Reply to bierbier@dslextreme.com and
bierbier@yahoo.com

"KC0EH" <okiemansc@yahoo.com> wrote in message
news:Bbcd9.6155$6i4.475148@newsread1.prod.itd.earthlink.net...
> I am looking to buy a non working or parts Hallicrafters S-40 series
radio.I
> have a straight S-40 I am restoring and could use some spare parts.
> KC0EH
>
>

2054. Re: Evaluating ATU efficiency

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 07:03:12 UTC
From: Owen Duffy <owen@oda.com.au>
Message-ID: <3D75B030.8817E40E@oda.com.au>
Source record: 41717

John Fletcher wrote:
>
> Hi all!
>
> When I get the time... I want to home-brew an ATU for QRP use, probably
> of the Z-match type. Because it's for QRP I want it to be efficient. It
> will be used with short or random wires from temporary locations
> (campsites, hotel rooms and such). I want to do some comparisons of ATUs
> using different components, different core mixes, air-spaced and
> polyvaricon tuning caps. Is the following a good approach to comparing
> efficiency?

Just a thought:

If you have enough parts to make two of the tuners, you could adjust one up on a real antenna (or equivalent dummy load if you wish), then back to back it with the second tuner terminated in a 50 ohm load and adjust the second tuner for match and measure the power delivered to the 50 ohm load and the power out of the transceiver to calculate an efficiency. If the second tuner was truly a copy of the first, you could share the dB loss equally between the two boxes.

I haven't done this, but I think it would be a suitable test setup that depends on power measurement only at 50 ohms.

I have been thinking of this as a method of measureing the loss of some commercial tuners, but while I have two Might Fine Junk tuners, they aren't the same model, and I am not inclined to buy any more.

Owen

2055. Re: silly soldering iron question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 08:08:15 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <al4f1k$1mecog$1@ID-61331.news.dfncis.de>
Source record: 41718

I agree with Roy, it's about initially tinning the bit. I have always used Antex irons and find them great, and the tips last for ages (even desoldering!). But always when you use a new tip you have a little trouble.

I recently replaced the tip and until it is tinned it does seem as though the iron isn't hot. This is because the contract between the iron and the subject is only a point, which doesn't provide much heat flow into the subject. Don't touch the tip or you'll find out it is really as hot as it should be even if it doesn't seem like it.

I have also heard about this business of holding solder on the tip while the iron heats up, and find it often helps but not always. I didn't bother with it this time and found that after enduring the first few joints / wipe cycles the tip wetted nicely and now there's no problem.

--

Hans Summers
http://www.HansSummers.Com

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D756198.2070202@eznec.com...
> A typical tip looks like a blunt chisel at the end, usually around 3/16"
> or so wide. (The width can be more or less depending on the tip's main
> purpose.) Modern tips are plated to accept solder readily. However, if
> it's dirty or first being used, you might have to clean it first. What
> you need to do this is a damp sponge -- a lot of soldering stations
> include a sponge for this purpose. With the tip hot, firmly wipe the tip
> on the sponge several times, then immediately try melting some solder on
> the tip. (Your solder, by the way, should be 63/37 or 60/40 tin/lead,
> with rosin flux, and nothing else. If you have any other kind of solder,
> put it away and get the right thing. 63/37 is a bit easier to use than
> 60/40, since it goes directly from liquid to solid without an
> intermediate plastic stage.) After a few wipe/tin cycles at most, the
> solder should freely melt and flow on the tip, wetting it. If it
> doesn't, you need a new tip.
>
> When you heat a new tip for the first time, melt solder on it to tin it
> as it comes up to temperature. And later on, re-tin it by wiping on the
> sponge and melting solder on it whenever it gets cruddy or whenever
> solder balls up on it instead of flowing and wetting it.
>
> In ye olden tymes, soldering tips were made of copper, and had to be
> filed to expose fresh copper from time to time. Filing or any other kind
> of abrasion will ruin a modern tip, so don't take any advice to file or

> sandpaper it. The one exception might be in an emergency if the tip is
> shot anyway -- you might be able to get a couple of hours use out of it
> by filing before tossing it out.
>
> Roy Lewallen, W7EL
>
> WavyDave wrote:
> > Ok this is mildly embarassing, but I am intending to build a tentec as
my
> > first radio, so thought I had better start practicing construction.
bought
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> > mounting point for a real tip? Or is the iron defective? It s been
years
> > since I learned to solder, and cant remember the details. Will a new
tip
> > solve my problem? thank you so much for any help.
> >
> >
>

2056. Honeywell HLC 2705 IC's

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 09:23:31 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <nikd9.141131$_91.208513@rwcrnsc51.ops.asp.att.net>
Source record: 41719

I'm in the search mode for some of the above chips. They are a small infrared detector and decode direction from an optical shaft encoder with a single source. I NEED a couple. Would buy a sleeve if available.

Thanks

W4ZCB

2057. Re: silly soldering iron question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 11:35:33 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <9emd9.143090$_91.208875@rwcrnsc51.ops.asp.att.net>
Source record: 41720

"Bruce Lane" <feedspammerstosharks.4.spamvac@spamgourmet.com> wrote in
message news:MPG.17df38f44c5f7a4d9899c2@news.drizzle.com...
> In article <al3kpr02i48@enews2.newsguy.com>, nowaynowhere@yahoo.com
> says...
>
> Soldering equipment, like any quality tool, is an investment. You
> get exactly what you pay for. Radio Shack would be far from my first
> choice for any sort of tool that I'd use the word 'quality' in the same
> sentence with.
>
> I would, for the sake of both your upcoming kit and your sanity,
> strongly recommend investing in a good temperature-controlled grounded-
> tip soldering station from Weller, Edsyn, or Loner. Yes, they'll cost
> quite a bit more than the basic plug-in-and-go units you'll find at RS
> (between $125-$250), but they'll last a heck of a lot longer and you gain
> the versatility of interchangeable tips and far more accurate temperature
> control than you have now.

I have been rebuilding, restroing and repairing Weller WTCP solder station
since 1975 (my first 4 repaired were Collins surplus TCP stations [original
black bakelite] when Weller was in eastern PA).

Bruce is correct, this is an excellent time to find high quality stations
(e.g. Weller, Haako, Edsyn Pace) being given away - largely due to the
bankruptcies in the telcom and "dot.com" industries.
I recommend the TCP series for any new kit builder because of its longevity
in the marketplace, wide availability of parts and ease of service.
In my experience the failure rates are with the SW60 temperature switch and
the EC234 heater (in that order).

Ask questions and purchase used based on very good to excellent cosmetic
condition.

Greg
w9gb

2058. Re: Is this a homebrew discussion group?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 11:40:23 UTC
From: Scott <acepilot@bloomer.net>
Message-ID: <3D75F127.BBFAFADB@bloomer.net>
Source record: 41721

Radio homebrew, yes, Beer/Wine homebrew, no.

Scott

Doug wrote:
>
> Just found this board while searching for a hombrew discussion group.
> I noticed there were a mix of items for sale and discussion threads.
> Am I in the right place to discuss my homebrew hobby? Tnx, Doug

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

2059. Re: silly soldering iron question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 11:45:13 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <Aumd9.3420$Z12.49086@newsfep1-win.server.ntli.net>
Source record: 41722

Since it has not been mentioned in this thread , when tinning a new or used soldering tip , I allow the tip to heat up before dipping it into solder cream . This is made by Multicore Solders Ltd ,Hemel Hempstead , Herts -UK
The solder cream contains lead and rosin or modified rosin (as it says on the label)
Followed by a swipe over a moist sponge the tip is clean and ready for use.
Use of the cream is more frequent when unsoldering than when soldering a new board.

To prevent inhalation of the vapour when dipping the tip into the cream a nearby small 12 V computer fan takes care of dispersion. The fan is also used when soldering.
I know ,ideally it should be a full blown extraction system ,which I definitely would have when soldering for a living .
However when soldering infrequently (as a hobby) I consider a dispersion fan as adequate.

Frank gm0csz.kn6wh@ntlworld.com

2060. Re: silly soldering iron question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 12:53:38 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <al4voi$32e$1@helle.btinternet.com>
Source record: 41723

"Hans Summers" <Hans.Summers@Tudor.Com> wrote in message
news:al4f1k$1mecog$1@ID-61331.news.dfncis.de...
>
> I agree with Roy, it's about initially tinning the bit. I have always used
> Antex irons and find them great, and the tips last for ages (even
> desoldering!). But always when you use a new tip you have a little
trouble.

Multicore makes a little tin with a sort of hard solder paste for tinning
irons. I think the flux is more aggressive than that in the solder. I find
it very useful.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2061. Re: silly soldering iron question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 13:00:10 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <JLOIdsEaPgd9EA1F@ifwtech.co.uk>
Source record: 41727

w9gb wrote:
>I have been rebuilding, restroing and repairing Weller WTCP solder
>station since 1975 (my first 4 repaired were Collins surplus TCP
>stations [original black bakelite] when Weller was in eastern PA).
>
>Bruce is correct, this is an excellent time to find high quality
>stations (e.g. Weller, Haako, Edsyn Pace) being given away - largely
>due to the bankruptcies in the telcom and "dot.com" industries. I
>recommend the TCP series for any new kit builder because of its
>longevity in the marketplace, wide availability of parts and ease of
>service. In my experience the failure rates are with the SW60
>temperature switch and the EC234 heater (in that order).
>

I strongly agree. When you change to an iron with a choice of both tip size and temperature, you wonder how you ever managed before!

I've been recommending the TCP or similar in my magazine column for some time. The same iron handles everything from PL259s and tin boxes all the way down to SMD. To give an extra boost for very heavy work, use a hot-air paint stripper gun as a pre-heat.

People who have made the change are writing in to say "I wish I'd done it years ago!"

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2062. ATV video overlay with atmel avr

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 14:28:52 UTC
From: HB9TLK <me@privacy.net>
Message-ID: <3d76189f$0$23622$4d4ef98e@read.news.ch.uu.net>
Source record: 41724

only in german, but i think its not complicated.

http://www.hb9tlk.com/picgen/overlay.html

2063. Re: silly soldering iron question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 14:33:47 UTC
From: SeeSignature@below.com
Message-ID: <3d76182a.226887401@news.ga.comcast.giganews.com>
Source record: 41725

Nobody seems to have asked: Why do we no longer get copper tips for
our soldering irons? When I first started soldering, all were copper
and easy to use/repair as Roy states. Now (except for "gun" tips) all
that I come across seem to require a new tip, and cannot(?) be
repaired after loss of the plating. Did this change somehow benefit
the soldering iron user?

Jerry

On Tue, 03 Sep 2002 18:27:52 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

<SNIP>
>In ye olden tymes, soldering tips were made of copper, and had to be
>filed to expose fresh copper from time to time. Filing or any other kind
>of abrasion will ruin a modern tip, so don't take any advice to file or
>sandpaper it. The one exception might be in an emergency if the tip is
>shot anyway -- you might be able to get a couple of hours use out of it
>by filing before tossing it out.
>
>Roy Lewallen, W7EL
>
>WavyDave wrote:
>> Ok this is mildly embarassing, but I am intending to build a tentec as my
>> first radio, so thought I had better start practicing construction. bought
>> a RS soldering station, and a desolder iron. desolder is working great, I
>> am taking apart an old radio. Soldering parts back is proving impossible,
>> the dang work wont heat up!! I remember I need to tin the tip, only it wont
>> tin, just get puffs of smoke and solder balls up,<SNIP>

--
To reply, remove space in je flanders@comcast.net

2064. Re: silly soldering iron question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 15:04:42 UTC
From: Fulano de Tal <exray@caribe.netxx>
Message-ID: <3D76210A.BAE74322@caribe.netxx>
Source record: 41726

SeeSignature@below.com wrote:
>
> Nobody seems to have asked: Why do we no longer get copper tips for
> our soldering irons? When I first started soldering, all were copper
> and easy to use/repair as Roy states. Now (except for "gun" tips) all
> that I come across seem to require a new tip, and cannot(?) be
> repaired after loss of the plating. Did this change somehow benefit
> the soldering iron user?
>
> Jerry

All is not lost. I use a Weller SP-40 pencil for most of my work (tube stuff). The tip is 1/4" solid copper with enough length for filing down for renewal to your hearts content.
It stays on several hours a day and I can get a year out of the tip, soldering and desoldering and have a fresh clean surface with a few swipes of a file.

-Bill

2065. Re: US source of tin plate boxes?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 15:48:48 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0209040748.28f08cda@posting.google.com>
Source record: 41728

Dan Rae <rae4@ix.netcom.com> wrote in message news:<3D74CBD8.6E1E67DD@ix.netcom.com>...
> Does anyone know of a source of the Eurocard size (100 x 160 mm) tin
> plate screening boxes in the US? I need about 6 or 8 for a project.
>
> Failing that, does anyone know a UK or European supplier that will
> export?

Don't they all? Every supplier I've ever approached in
Europe has been happy to take my money and ship me whatever
I wanted. I cannot say the same for the U.S.

The first place I looked (Barend Hendriksen) had Eurocard
size boxes for 7 Euros a pop. Dunno about the U.S., but
they certainly export to Canada - I have goodies (and
credit card bills, alas) to prove it.

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

2066. Re: silly soldering iron question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 17:06:33 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D763D99.10402@eznec.com>
Source record: 41729

SeeSignature@below.com wrote:
> Nobody seems to have asked: Why do we no longer get copper tips for
> our soldering irons? When I first started soldering, all were copper
> and easy to use/repair as Roy states. Now (except for "gun" tips) all
> that I come across seem to require a new tip, and cannot(?) be
> repaired after loss of the plating. Did this change somehow benefit
> the soldering iron user?

You betcha! The old copper tips would crud up in a short time (an hour or two as I recall), and would require filing and re-tinning each time it did. And you could only file it so many times before it was too short to use. A secondary effect was that the oxide coating would deteriorate the thermal contact between the tip and iron, so you'd frequently have to tighten the tip. In contrast, a single modern tip will last for years of hobby soldering, with nothing more than an occasional swipe on the sponge to keep it as good as a freshly filed and tinned copper tip. I have absolutely no desire to go back to copper tips.

If you lose the plating often enough for it to be a problem, you're either treating the tips badly (e.g., abrading them, or cooking them for long periods at very high temperature) or you've found some tips of much poorer quality than I've ever seen.

Roy Lewallen, W7EL

2067. Re: silly soldering iron question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-04 23:10:14 UTC
From: bjorn890@aol.com4232534
Message-ID: <20020904191014.07996.00001659@mb-cj.aol.com>
Source record: 41730

>
>Ok this is mildly embarassing, but I am intending to build a tentec as my
>first radio, so thought I had better start practicing construction. bought
>a RS soldering station, and a desolder iron. desolder is working great, I
>am taking apart an old radio. Soldering parts back is proving impossible,
>the dang work wont heat up!! I remember I need to tin the tip, only it wont
>tin, just get puffs of smoke and solder balls up, and to even get it to do
>that I have to run it halfway up the tip, in other words the point of the
>tip is not getting too hot. Now for what may be the silly part. Is it
>possible that the 'tip' that came with that iron is not really a tip, but a
>mounting point for a real tip? Or is the iron defective? It s been years
>since I learned to solder, and cant remember the details. Will a new tip
>solve my problem? thank you so much for any help.
>

Which iron is it? I have an RS iron that works great. BTW do you mean RS to
mean Radio Shack?

There is plenty of DOS left in Windows, just make a boot disk!

2068. Re: Is this a homebrew discussion group?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-05 01:35:54 UTC
From: w4pqwhs@aol.com
Message-ID: <20020904213554.25451.00001382@mb-mh.aol.com>
Source record: 41731

Thats what we do here , get it on ,lets see if any one runs us off hi hi .
Harold W4PQW

2069. Re: silly soldering iron question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-05 10:06:17 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <al7aap$b22$1@knossos.btinternet.com>
Source record: 41732

<SeeSignature@below.com> wrote in message
news:3d76182a.226887401@news.ga.comcast.giganews.com...
> Nobody seems to have asked: Why do we no longer get copper tips for
> our soldering irons? When I first started soldering, all were copper
> and easy to use/repair as Roy states. Now (except for "gun" tips) all
> that I come across seem to require a new tip, and cannot(?) be
> repaired after loss of the plating. Did this change somehow benefit
> the soldering iron user?

I find that the (plated) tips on my earlier Ungar and current Weller iron
last for years.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2070. Re: silly soldering iron question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-05 14:08:36 UTC
From: ram <rmilne@aa.mbn.or.jp>
Message-ID: <al7vufbhu2@news.mbn.or.jp>
Source record: 41733

Bruce Lane wrote in message ...
>In article <al3kpr02i48@enews2.newsguy.com>, nowaynowhere@yahoo.com
>says...
>
>> Ok this is mildly embarassing, but I am intending to build a tentec as my
>> first radio, so thought I had better start practicing construction.
bought
>> a RS soldering station, and a desolder iron. desolder is working great,
I
>
> <snip>
>

Just a couple of points from my own experience:

1. I like using the Antex irons for circuit board work. If you look closely at the design, the tip is a sleeve which goes over the heating element and is then secured by a collet. I have never seen this written in any documentation, but I always assumed that the purpose of this design was to allow you to make fine-tuning adjustments to the temperature by sliding the sleeve further up/down the heating element before securing the position with the collet. Once when the iron seemed to be too cool, I noticed that the collet had worked loose and the sleeve had moved 'up' the heating element. Moving it back down slightly restored the temperature to ideal.

2. Something I noted very recently. I set up a fan system (old PC fan powered by gel lead-acid battery) on the workbench just in front of where I solder. This works fine and blows the flux-fumes away from the work area before I can breathe them. The air flow was aimed directly at the work in progress. Unfortunely I then found that this made soldering very difficult because the solder would not 'flow' as usual. I traced the problem to the reduction in temperature from the fan's air flow. I did not measure the temperature drop but you could feel the difference with your skin and I suspect it was at least a couple of degrees.

3. When you are soldering to boards the amount of heat absorbed/dissipated by the underlying circuit impacts on your ability to heat the joint. For example, I find that large pools of ground planes sometimes make it very difficult to solder a simple part to a pigeon-eye within the ground plane. I assume this is because the heat is lost more easily through larger area of the ground plane.

best regards, ram

2071. Re: Evaluating ATU efficiency

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-05 17:47:18 UTC
From: KA9CAR <nospam@nospam.usa>
Message-ID: <al854h$5o0$1@news1.tribune.com>
Source record: 41734

If you are an ARRL member you can read the article about how to test antenna tuners on that site. It went over my head, but did draw some conclusions about various configurations of tuners.
KA9CAR

John Fletcher <John@kanga.demon.co.uk> wrote in message news:nGrg3AAjZHc9Ew52@kanga.demon.co.uk...
> Hi all!
>
> When I get the time... I want to home-brew an ATU for QRP use, probably
> of the Z-match type. Because it's for QRP I want it to be efficient. It
> will be used with short or random wires from temporary locations
> (campsites, hotel rooms and such). I want to do some comparisons of ATUs
> using different components, different core mixes, air-spaced and
> polyvaricon tuning caps. Is the following a good approach to comparing
> efficiency?
>
> Transmitter connected to calibrated bi-directional wattmeter connected
> to ATU-under-test connected to complex load made from R and C or R and L
> representing a random wire.
>
> Set transmitter output power to a reference level (say, 1 watt).
>
> Adjust ATU to give best match.
>
> Measure voltage across resistive part of load using a 'scope. Record it.
>
> Repeat this with different values in the load and different components
> in the ATU. Highest voltage across the resistive part of the load equals
> highest efficiency.
>
> Am I on the right lines or is there more to it than this?
>
> Thanks for any comments,
>
> John G4EDX
> --
> John Fletcher

2072. Re: Biconic antenna ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-05 20:19:39 UTC
From: ryeg <ryeg@sitestar.net>
Message-ID: <3D77BCEE.7050801@sitestar.net>
Source record: 41735

Seems to me that one of the old MIL-STD 462 (Rational for 461) either
had a drawing of how to build one or referenced where to find the dwg.
K9LCJ

fred bartoli wrote:

> Hello all,
>
> I'm thinking, for EMC prequalification purposes, of building my antennas.
>
> I've found a good page for the logperiodic one, but can't manage to find
> anything usfull for the biconic. (30MHz-200/300MHz)
>
> Anyone can point me to good sites ?
>
> Thank you in advance .
>
> Fred.
>
>
>

2073. Re: Is this a homebrew discussion group?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-05 23:21:23 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <unfpqvfn9lkj47@corp.supernews.com>
Source record: 41736

One would think that it is, but the level of discussion has so far, been
very disappointing for me.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"pkg" <pkg@algieba.com> wrote in message
news:1fi18yj.19lqc812k4fxmN%pkg@algieba.com...
> Doug <janaeanddoug@netzero.net> wrote:
>
> > Just found this board while searching for a hombrew discussion group.
>
> If you want to brew hom, no ;-)
>
> > I noticed there were a mix of items for sale and discussion threads.
> > Am I in the right place to discuss my homebrew hobby? Tnx, Doug
>
> for radio amateur projects, yes.
>
> --
> .pkg

2074. single transistor transciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-05 23:26:19 UTC
From: janaeanddoug@netzero.net
Message-ID: <360a820d.0209051526.2e01550f@posting.google.com>
Source record: 41737

Been fooling around with a single transistor (2N3904)crystal controlled transciever. The transmitter works fine, but the reciever is not very good. Thinking I could reduce the amount of current drawn, I introduced resistors in the emitter leg. No improvement in signal strength. Even added a transistor for audio, worked ok, but not as good as a direct conversion rig. I just dont think crystal oscillators are cut out for the job of autodyne detection. But, the stability and simplicity sure would be nice. Anyone out there ever tried this? All my circuit amounts to is a basic crystal controlled c.w. transmitter. There has to be some way of getting a decent recieved signal out of this thing. I tried taking the audio out of the emitter and collector leads, but performance is not acceptable, I only hear the strongest ones. Tnx Doug

2075. Surplus Parts for sale - September 2002

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-06 00:48:29 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <1LSd9.1443$I4.262687@news.iquest.net>
Source record: 41738
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap,rec.radio.amateur.misc

```
Junkbox Surplus Parts for Sale as of 09/05/2002
===============================================

Odd Items
============
9.8304 Mhz Crystals, 1/4 in tall - 20 for $5.00
27mH inductors with radial leads - 25 for $3.50

Caps - All new, old stock. No pulls.
====================================
All caps now 50/$3 or 100/$5
====================================
8pf NPO Ceramic - Loose
11pf NPO Ceramic - Loose
12pf NPO ceramics on tape
22pf Kemet Ceramic Caps, 200v, 10%
100pf Axial Mono Caps, 100v, 10%
150pf ceramics, 100v, 10%
470pf Ceramics on paper tape, rated 5% (NPO)
560pf Kemet Ceramic Caps, 200v, 10%
1000pf blue mono caps, 10% 100v
3300pf Kemet Ceramic Caps, 100v, 10%
.01 uF ceramic caps, 10% 100v brand new by Kyocera
and
.01 uF ceramic caps, 20% 50v, new old stock, not used
50/2.50 100/$4

Voltage Regulators
==================
L7805ACV voltage regulators TO220 case. 7/$4 or 15/$7
LM7812 voltage regulators. TO220 case. 5/$4
LM317T Adjust. Positive Voltage Regulator TO220. 6/$5.00 or 12/$8.50
LM78L62ACZ Volt(6.2)regulators, TO92 format 5/$3.00 10/$5.00

Transistors - New Parts - No Pulls
==========
TP2222 plastic TO92 NPN (House brand 2N2222)50/$4 100/$7
2N3906's plastic TO92. PNP - 50/$4 100/$7
2N3904's plastic TO92. NPN - 50/$4 100/$7
2N3704's plastic TO92, NPN - 50/$4 100/$7
MRF517 - Motorola Part - Metal Can - 5 for $5

Op AMPS, Comparators
====================
LM386N-1 - Audio Amps 5 for $2.25
```

LM741CN - Single Op Amp, 8 Pin Dip, 6 for $2.00
http://www.hep.ph.ic.ac.uk/~hallg/Instrumentation/Data/LM741.pdf

BA10324 - LM324 equiv Quad Ground Sense Op Amp 14 pin, 4 for $2.00
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

Diodes
======
1N4148 - You always need these. 100 for $2.50 These are NEW.

Let me know if you're interested. All prices are post paid to the
USA, unless otherwise noted. I will ship to non USA addresses but we
need to discuss the shipping charges first.

--

==
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57
==

2076. Re: Is this a homebrew discussion group?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-06 02:19:39 UTC
From: James Skalski <jskalski@bellatlantic.net>
Message-ID: <3D7810D6.30109@bellatlantic.net>
Source record: 41739

M.E. wrote:

> One would think that it is, but the level of discussion has so far, been
> very disappointing for me.
>
> --
> Respond to my "real" e-mail;
> kk5dr@ev1.net
> "pkg" <pkg@algieba.com> wrote in message
> news:1fi18yj.19lqc812k4fxmN%pkg@algieba.com...
>
>>Doug <janaeanddoug@netzero.net> wrote:
>>
>>
>>>Just found this board while searching for a hombrew discussion group.
>>>
>>If you want to brew hom, no ;-)
>>
>>
>>>I noticed there were a mix of items for sale and discussion threads.
>>>Am I in the right place to discuss my homebrew hobby? Tnx, Doug
>>>
>>for radio amateur projects, yes.
>>
>>--
>>.pkg
>>
>
>

Why not have a constructive post? Wouldn't it make more sense to start a
thread about construction? Whining about it, is worse than any FS
post. Just a thought.
Jim n2go

2077. Re: silly soldering iron question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-06 03:01:59 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <HUUd9.12845$jG2.973055@bgtnsc05-news.ops.worldnet.att.net>
Source record: 41740

i forgot what yall were talking about, oh yeah, soldering tip...
clean it, buy afew spares, tin it, have a nice day...

--
If first you don't succeed, do the same thing again...see what happens

2078. Re: Connecting circuit boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-06 03:06:22 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <OYUd9.12854$jG2.973536@bgtnsc05-news.ops.worldnet.att.net>
Source record: 41741

good solutions and cost usually dont make for a good idea. We could do it,
on individual projects and such. Bout the only thing that even resembles
your thought is the modern home computer, just plug and go..from parts to
upgrades, replacements, dont get no easier than that.

--
If first you don't succeed, do the same thing again...see what happens

2079. Re: Is this a homebrew discussion group?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-06 03:51:46 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <0h9gnuo64ijk0i9tl356vcocgs79bftn65@4ax.com>
Source record: 41742

Even worse than that is not learning how to snip when you post to a message.

jim

James Skalski <jskalski@bellatlantic.net>
shared these priceless pearls of wisdom:

->Why not have a constructive post? Wouldn't it make more sense to start a
->thread about construction? Whining about it, is worse than any FS
->post.
Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

2080. Re: electronic australia mags for sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-06 05:42:01 UTC
From: Fulano de Tal <exray@caribe.netxx>
Message-ID: <3D784029.C4AB588C@caribe.netxx>
Source record: 41744
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

harry wrote:
>
> make me an offer .harry

How many of what?

-WX4A

2081. Re: single transistor transciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-06 08:40:04 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <kPSDc7MknGe9EAIS@ifwtech.co.uk>
Source record: 41745

Doug wrote:
>Been fooling around with a single transistor (2N3904)crystal controlled
>transciever. The transmitter works fine, but the reciever is not very
>good. Thinking I could reduce the amount of current drawn, I introduced
>resistors in the emitter leg. No improvement in signal strength. Even
>added a transistor for audio, worked ok, but not as good as a direct
>conversion rig. I just dont think crystal oscillators are cut out for
>the job of autodyne detection. But, the stability and simplicity sure
>would be nice.

This raises an interesting question: how do you define "simple"?

On the one hand, the whole transceiver contains just one transistor, so that's got to be simple, hasn't it?

On the other hand, that one device is trying to do several things at once, so it's much more difficult to understand, and much more difficult to optimize the circuit in every respect at the same time. You have so few components and variables to play with, and what's good for one function is probably bad for another.

I've never quite understood the urge to make circuit elements do more than one thing at a time, except perhaps as a kind of "party trick" to show that - far from being simple - you're actually being very clever.

Measured by the time needed to get it working well, it's generally simpler to give each device only one thing to do, and then use as many components as it takes.

Opinions?

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2082. Re: MAX2650, any design?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-06 10:06:02 UTC
From: Fabio Morsani <fabio.morsani@pi.infn.it>
Message-ID: <3D787E0A.2090505@pi.infn.it>
Source record: 41746

Ciao Paolo.
Try instead the GALI-xx family,
http://www.minicircuits.com/amplifie.html

--> monolithic, page 2

Fabio - I5LHY

2083. Surplus synthesizer board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-06 10:54:22 UTC
From: tk <tk1932ga@speedfactory.net>
Message-ID: <3D7888D6.8F5346B6@speedfactory.net>
Source record: 41647

I bought a surplus synthesizer board that has a Z80 MCU with a 2716 EPROM.... can someone recommend a Z80 dis-assembler ??

Thanks

Ted in Atlanta KD4EE

2084. electronic australia mags for sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-06 14:58:00 UTC
From: harry <haroldachatz@iprimus.com.au>
Message-ID: <3d7836c1_1@news.iprimus.com.au>
Source record: 41743
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

make me an offer .harry

2085. 603 FS 10 meter beam & tower

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-06 16:12:28 UTC
From: Me <j.dauphinais@worldnet.att.net>
Message-ID: <Mt4e9.14324$jG2.1042380@bgtnsc05-news.ops.worldnet.att.net>
Source record: 41648
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.homebrew

I have for sale 1 full size "HY-Gain" beam 10 meters. fully assembled for your inspection. 13' Boom and longest element is 22' $75.00 I also have a steel tower totaling 25'. this is in 3 sections 1 10 foot st8 and 1 5foot st8 and 1 10 foot top section. I don't not have a rotator. $50.00. pickup only from Nashua,NewHampshire. I am selling these because they are to big for my new QTH. This beam has spent a large portion of its life in storage. 73's Jeff AA1GR

2086. Re: Surplus synthesizer board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-06 16:47:36 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d78dbe3.337933@news.freeserve.net>
Source record: 41649

I think I have something suitable running under DOS, if you'd like a
copy.
Mike W, G8NXD aka M3MSM qthr
--
On Fri, 06 Sep 2002 10:54:22 GMT, tk <tk1932ga@speedfactory.net>
wrote:

>I bought a surplus synthesizer board that has a Z80 MCU with a 2716
>EPROM.... can someone recommend a Z80 dis-assembler ??
>
>Thanks
>
>Ted in Atlanta KD4EE
>

2087. Re: single transistor transciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-06 16:48:24 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0209060848.17fe5bc4@posting.google.com>
Source record: 41650

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:<kPSDc7MknGe9EAIS@ifwtech.co.uk>...
> Doug wrote:
> >Been fooling around with a single transistor (2N3904)crystal controlled
> >transciever. The transmitter works fine, but the reciever is not very
> >good. Thinking I could reduce the amount of current drawn, I introduced
> >resistors in the emitter leg. No improvement in signal strength. Even
> >added a transistor for audio, worked ok, but not as good as a direct
> >conversion rig. I just dont think crystal oscillators are cut out for
> >the job of autodyne detection. But, the stability and simplicity sure
> >would be nice.
>
> This raises an interesting question: how do you define "simple"?
>
> On the one hand, the whole transceiver contains just one transistor, so
> that's got to be simple, hasn't it?
>
> On the other hand, that one device is trying to do several things at
> once, so it's much more difficult to understand, and much more difficult
> to optimize the circuit in every respect at the same time. You have so
> few components and variables to play with, and what's good for one
> function is probably bad for another.
>
> I've never quite understood the urge to make circuit elements do more
> than one thing at a time, except perhaps as a kind of "party trick" to
> show that - far from being simple - you're actually being very clever.
>
> Measured by the time needed to get it working well, it's generally
> simpler to give each device only one thing to do, and then use as many
> components as it takes.
>
> Opinions?

I think there may be a few reasons for this "as simple as you can get"
line of thinking.

One is a holdover from the old days, when parts were expensive, big
and added a lot of current to the drain.

Commercial design may have some impact, because there you can spread
development cost over many units, and saving a stage or even capacitor
in each unit may be quite a saving. When people were getting ideas
from commercial equipment, remember the days when the product reviews
in the ham magazines routinely included snippets of the schematic?,
that's what they saw, and undoubtedly there were those who copied

such streamlining.

People starting out make the assumption that as few components as possible is the best choice. They don't know enough yet, so they can't know the tradeoffs of the simple design. All they know is that there will be less soldering (and hence less chance for mistakes), and one or two stages is much easier to follow than a big schematic with lots of stages. They also may need to buy all the parts, rather than scrounge or use junk box parts, so the fewer parts the circuit uses, the less it will cost.

And then there are the people interested in the idea as a goal. How simple can I make this? How few components can I use? The game is to reduce component count, rather than best performance.

One of the neat things about solid-state components is that active component cost, both monetary and size, have pretty much been eliminated. In the old days, you'd rarely see voltage regulation, and virtually only for oscillator stages. Now, voltage regulators are routine, even when it's not necessarily needed, and those small regulators mean you can use them to isolate stages if necessary.

If you can pull dozens of transistors off some scrap circuit board, there really isn't any need to cut out one stage, so you need the other amplifiers in the chain to provide higher gain.

I'm not sure enough people grasp overall design. So they'd rather have a vfo with a dial readout (and the associated calibration and linearization issues), than a digital readout that may add more soldering to the building but which is relatively straightforward and makes the VFO design easier. Or use a single conversion to 455KHz, and the associated issues of tracking, than a conversion to the HF range or even double conversion, where you add stages but do away with image rejection problems.

You look at some computer board, and it's almost shocking to see 3 or 4 crystals (or metal-canned oscillators) on it. "Why didn't they use one single crystal and derive everything from it?" But if they add an "extra" crystal or two, maybe it cuts out other stages or avoids issues of long traces with those clock frequencies. It looks messy, but sometimes the easiest path between two points is not the most direct.

I keep thinking of direct conversion receivers. When that article by Hayward was published in QST in 1968, it was a relatively novel concept. But for a long time, the concept was never particularly developed. The changes were over the type of mixer, rather than dealing with other points. The concept supplanted regen receivers, and a lot of simple superhets, in the magazines for simple receivers. (Simple superhets made a comeback when ladder filters got introduced into the ham vocabulary, at which point it seemed like the faults of the direct conversion receiver became intolerable.) But

it wasn't until the mid- to late- eighties that anything really changed with DC receivers; when the concept of proper loading of the mixer came along. It added complexity to the receivers, but it improved performance. Now, at least in some cases, DC receivers, by adding some complexity, have become fairly high performance.

I look at all the junk I've accumulated over the years, and I realize I'm pretty rich in terms of parts (though, there always seems to be one elusive part always missing). From that standpoint, there really isn't any reason to make something simple in parts count.

Michael VE2BVW

2088. Re: Surplus synthesizer board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-06 16:54:17 UTC
From: donrm@soco.agilent.com
Message-ID: <1031331257.668158@cswreg.cos.agilent.com>
Source record: 41651

tk <tk1932ga@speedfactory.net> wrote:
> I bought a surplus synthesizer board that has a Z80 MCU with a 2716
> EPROM.... can someone recommend a Z80 dis-assembler ??

I think I have one on paper tape somewhere :^) Seriously,
ask someone over on comp.os.cpm - they should be able to help.

I recall downloading one from a BBS back in my CP/M days,
but don't know where it is now - somewhere in my hundreds
of 5.25" disks. It wasn't very smart, one had to have a
pretty good clue what was data and what was instruction.

73 Don K6LTS
donrm@soco.agilent.com

2089. Re: US source of tin plate boxes?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-06 17:10:00 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D777828.485F65BB@clifto.com>
Source record: 41652

xpyttl wrote:
> The Altoids tin has become the standard enclosure for QRP rigs. The
> standard Altoids tin is a little small, but the larger size tin is about 190
> x 105 mm, a little large perhaps, but not too far off.
>
> However, they do contain a significant number of Altoids so you would need
> to develop a serious addiction!

Bring 'em to work or a club meeting, put 'em in a dish. Usually you can
get rid of near any kind of food at work that way. One day I'm going to
experiment with stuff like broccoli with prune jelly and peanut butter
to see just how far that goes.

--
.signature in flux

2090. Re: single transistor transciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-06 17:26:38 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D78E47C.5E4DD7C7@clifto.com>
Source record: 41653

Ian White, G3SEK wrote:
> I've never quite understood the urge to make circuit elements do more
> than one thing at a time, except perhaps as a kind of "party trick" to
> show that - far from being simple - you're actually being very clever.
>
> Measured by the time needed to get it working well, it's generally
> simpler to give each device only one thing to do, and then use as many
> components as it takes.

I think it's important to see designs like this. They're great exercise
for the mind.

Different venue, same concept: there was a site I saw that used to show
coding for very small, simple computers used in spacecraft. The 'puters
were chosen because of their record of reliable space use, over more
modern 'puters that were much more powerful but not necessarily sane to
send up on a rocket. Lots of the things that the coders came up with were
useless for the average programmer because of self-modifying code and
other taboo enterprises. But meandering through the code and imagining
the thought process involved was a great way to kick-start the brain.

Lots of tricks that are common today were once "party tricks". Take the
use of the Miller effect in oscillators; in the sixties, it was interesting
but impractical because of manufacturing variances, but by the seventies
it was in use in production TV sets.

--
.signature in flux

2091. Re: Surplus synthesizer board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-06 17:31:51 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D78E586.3A31E808@clifto.com>
Source record: 41654

tk wrote:
> I bought a surplus synthesizer board that has a Z80 MCU with a 2716
> EPROM.... can someone recommend a Z80 dis-assembler ??

Find a Simtel archive. I seem to remember at least a few contained in the
collection.

--
.signature in flux

2092. Re: Surplus synthesizer board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-06 17:47:52 UTC
From: john graesser <graesser@tca.net>
Message-ID: <unhqg2osaihn6f@corp.supernews.com>
Source record: 41655

"tk" <tk1932ga@speedfactory.net> wrote in message
news:3D7888D6.8F5346B6@speedfactory.net...
> I bought a surplus synthesizer board that has a Z80 MCU with a 2716
> EPROM.... can someone recommend a Z80 dis-assembler ??
>
> Thanks
>
> Ted in Atlanta KD4EE

Do you have a cp/m machine or a Radio shack 1/3/4 to run it on?

I have options for either of those, but as far as running on x86 hardware, I don't have a native mode dissassembler for the z80. If you really want to go that route, there is still Myz80 that emulates a cp/m machine on an x86 dos machine, then you get access to most of the cp/m software available including the zcpr stuff (excellent tools).

Do you even have the hardware to dump the 2716? Finding an eprom programmer that also reads nowdays is probobly more difficult than finding a z80 disassembler.
thanks, John.
KC5DWD

2093. Excitment and Experience

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-06 18:37:59 UTC
From: Jason <kc7eip_nospam@shaw.ca>
Message-ID: <bC6e9.275877$f05.14726719@news1.calgary.shaw.ca>
Source record: 41656

Well after a few months (about 6hours total) I have completed my first project.. The small txcver Pixie II... WHat a wonderfull feeling to complete a rig and have it work. Granted it did not function at first i had a few parts that were not exactly the right values but a little help from some friends and they were replaced.. I Proudly fliped my on swith to the tune of a local bc station... Not really the fault of the radio itself but my choice of antenna designs (a distributive capacitance loop).. After much frustration i added a nice filter from the QRPp-i group worked wonders but so did changing to a 1/4 verticl :)... after frustration on 80 meters..(I guess it was a bad choice for time of year i got the components and crystals to switch to 40... With the new torid and crystals a nice verticle antenna well not nice but simple 33 feet of speaker wire tied to a tennise ball tossed into a tree.. i began to hear my first sound other then am radio. :)... it has been a fun experience and it sure was great to hear some cw... The knowledge i picked up has been invaluable. I can't thank everyone here and on the other lists enough for the help and assistance provided during my quest for fire (so to speak). It has really made my rebirth into the hobby a great one. Thanks for the bandwidth and hope to hear you all soon.

2094. FA: Function Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-06 21:46:37 UTC
From: Function Generator <sp@m.me.not>
Message-ID: <3D792277.D89AEDDD@m.me.not>
Source record: 41657

Nice sine, triangle, square wave generator.

Auction ends this weekend.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1762833462

or
Funciton Generator

Thank you for looking.

2095. Re: Excitment and Experience

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-07 01:11:23 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <unikii1ng031b8@corp.supernews.com>
Source record: 41658

Well Congratulations!!

And yes, 40 is a lot more Pixie-friendly any time of year!

If you are good at your email filters, you may want to subscribe to the QRP mailing list, QRP-L. It's a pretty high volume list, about 100 messages a day, so unless you are a maestro at the email filters it can take a bit of time.

But from time to time there are Pixie nights where others with Pixies and variants get on and chat. It can sometimes be pretty tough making QSO with a Pixie, not only the low power, but the crystal control makes it a little tough, but there are a bunch of them out there. And most of them belong to QRP-L'ers.

I just hunted through last year's archives (I couldn't quickly check this year) and came up with 249 hits on Pixie, so there a few of them out there.

I doubt I can reach Alberta this time of year, but maybe when it gets a little colder and the band lengthens out we can try a 2-way Pixie QSO. Of course, even now, if we pick a day where the A index is low, we might manage it in the wee hours.

..

"Jason" <kc7eip_nospam@shaw.ca> wrote in message
news:bC6e9.275877$f05.14726719@news1.calgary.shaw.ca...
> Well after a few months (about 6hours total) I have completed my first
> project.. The small txcver Pixie II... WHat a wonderfull feeling to
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> a rig and have it work. Granted it did not function at first i had a few
> parts that were not exactly the right values but a little help from some
> friends and they were replaced.. I Proudly fliped my on swith to the tune
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> a local bc station... Not really the fault of the radio itself but my
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> of antenna designs (a distributive capacitance loop).. After much
> frustration i added a nice filter from the QRPp-i group worked wonders
but
> so did changing to a 1/4 verticl :)... after frustration on 80 meters..(I
> guess it was a bad choice for time of year i got the components and
crystals
> to switch to 40... With the new torid and crystals a nice verticle antenna
> well not nice but simple 33 feet of speaker wire tied to a tennise ball
> tossed into a tree.. i began to hear my first sound other then am radio.
> :)... it has been a fun experience and it sure was great to hear some

cw...
> The knowledge i picked up has been invaluable. I can't thank everyone here
> and on the other lists enough for the help and assistance provided during
my
> quest for fire (so to speak). It has really made my rebirth into the
hobby
> a great one. Thanks for the bandwidth and hope to hear you all soon.
>
>

2096. Re: Surplus synthesizer board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-07 02:50:57 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <lQde9.222638$aA.39870@sccrnsc02>
Source record: 41659

Ted -

Check software houses for embedded processors (e.g. Micromint, Zilog). The
Z80 is still alive and kicking

http://www.zilog.com/products/

There is even a eZ80 Web server

w9gb

"tk" <tk1932ga@speedfactory.net> wrote in message
news:3D7888D6.8F5346B6@speedfactory.net...
> I bought a surplus synthesizer board that has a Z80 MCU with a 2716
> EPROM.... can someone recommend a Z80 dis-assembler ??
>
> Thanks
>
> Ted in Atlanta KD4EE
>

2097. FT901D and H-mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-07 05:47:03 UTC
From: UnTale <i@i.com>
Message-ID: <rpge9.11989$AW6.247632@twister2.libero.it>
Source record: 41660

Hi,
i'm looking for YAESU FT901D schematics (NO manual)
can you help me?
thanks

--

73 de iz7ath, Talino

Homebrew, RF projects and digital tecniques on
http://www.qsl.net/iz7ath
IZ7ATH Talino +39 338 5029196

2098. Re: Surplus synthesizer board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-07 13:11:59 UTC
From: tk <tk1932ga@speedfactory.net>
Message-ID: <3D79FAC0.475C9B55@speedfactory.net>
Source record: 41661

Thanks for all the replies to my query on the Z80. I do know PICS , 8051, 2764, etc... have an eprom burner/reader/eraser and lots of 27xx . The board I got (Alltronics) has a socketed eprom
and supposedly covers 50-100 mhz. Hope to have some fun with it once I dump the eprom and find out what's going on.

Thanks again

Ted In Atlanta KD4EE

w9gb wrote:

> Ted -
>
> Check software houses for embedded processors (e.g. Micromint, Zilog). The
> Z80 is still alive and kicking
>
> http://www.zilog.com/products/
>
> There is even a eZ80 Web server
>
> w9gb
>
> "tk" <tk1932ga@speedfactory.net> wrote in message
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> > I bought a surplus synthesizer board that has a Z80 MCU with a 2716
> > EPROM.... can someone recommend a Z80 dis-assembler ??
> >
> > Thanks
> >
> > Ted in Atlanta KD4EE
> >

2099. MC145170 production status?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-07 14:52:29 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <7ZqNnTLtKhe9EwrS@fslife.co.uk>
Source record: 41662

Can someone tell me if the DIL version of the above synth chip is still
in current production?

An engineer colleague does not wish to work on a PLL design if component
sourcing will become a problem in the near future.

Best pricing so far is $6.50 but that's the 100 off price.

Any other suggested sources for same?
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

2100. Re: Excitment and Experience

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-07 15:51:45 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D7A1FA6.6E02CB2B@clifto.com>
Source record: 41663

Jason wrote:
> :)... it has been a fun experience and it sure was great to hear some cw...
> The knowledge i picked up has been invaluable. I can't thank everyone here
> and on the other lists enough for the help and assistance provided during my
> quest for fire (so to speak). It has really made my rebirth into the hobby
> a great one. Thanks for the bandwidth and hope to hear you all soon.

It's a great feeling, isn't it? I wanna hear about your first QSO.

--
.signature in flux

2101. Re: MC145170 production status?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-07 16:06:31 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <unk90rd0ski8ea@corp.supernews.com>
Source record: 41664

Take a peek at:

http://e-www.motorola.com/webapp/sps/site/prod_summary.jsp?code=MC145170-2&n
odeId=01M939843136070

They still make the part (and it's two bucks in 1000's) but they don't
recommend using the DIP part: "Orders and shipments permitted. Product not
recommended for new designs."

Even the SO-16 and TSSOP-16 carry the note: "Sales and capacity have leveled
out. Orders and shipments permitted."

..

"Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message
news:7ZqNnTLtKhe9EwrS@fslife.co.uk...
> Can someone tell me if the DIL version of the above synth chip is still
> in current production?
>
> An engineer colleague does not wish to work on a PLL design if component
> sourcing will become a problem in the near future.
>
> Best pricing so far is $6.50 but that's the 100 off price.
>
> Any other suggested sources for same?
> --
> Philip de Cadenet G4ZOW
> Transmitters 'R' Us
> http://www.transmittersrus.com

2102. Re: FT901D and H-mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-07 16:50:10 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d7a2e4d$0$200$ba620e4c@news.skynet.be>
Source record: 41665

I have an FT901DM, is it equivalent ?

Parlo francese un po l'italiano.

73 de Jacques, ON5MJ
Ci@o

2103. Re: MC145170 production status?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-07 16:59:45 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <5gqe9.2529$1C2.249756@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41666

Newark Electronics was selling them a few years ago for 38 cents each, until the items were sold out. In quantities of 1000, they were 19 cents each. I picked up a batch of them, but they are long gone. A good sub might be the 145220.

Pete

xpyttl <xpyttl_nospam@earthling.net> wrote in message news:unk90rd0ski8ea@corp.supernews.com...
> Take a peek at:
>
>
http://e-www.motorola.com/webapp/sps/site/prod_summary.jsp?code=MC145170-2&n
> odeId=01M939843136070
>
> They still make the part (and it's two bucks in 1000's) but they don't
> recommend using the DIP part: "Orders and shipments permitted. Product not
> recommended for new designs."
>
> Even the SO-16 and TSSOP-16 carry the note: "Sales and capacity have
leveled
> out. Orders and shipments permitted."
>
> ..
>
> "Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message
> news:7ZqNnTLtKhe9EwrS@fslife.co.uk...
> > Can someone tell me if the DIL version of the above synth chip is still
> > in current production?
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> > An engineer colleague does not wish to work on a PLL design if component
> > sourcing will become a problem in the near future.
> >
> > Best pricing so far is $6.50 but that's the 100 off price.
> >
> > Any other suggested sources for same?
> > --
> > Philip de Cadenet G4ZOW
> > Transmitters 'R' Us
> > http://www.transmittersrus.com
>
>

2104. Re: FT901D and H-mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-07 18:09:30 UTC
From: UnTale <i@i.com>
Message-ID: <uhre9.15266$%z1.310417@twister1.libero.it>
Source record: 41667

> I have an FT901DM, is it equivalent ?
> Parlo francese un po l'italiano.
> 73 de Jacques, ON5MJ

Hi Jacques,
thanks very much for answering...
FT901DM is OK,
I just need schematics (the full manual is not necessary);
Tell me what's the best way for you (e-mail, SASE ecc.)
my e-mail is
iz7ath AT libero.it
Thanks!

Ciao Jacques
grazie mille per la risposta..
l'FT901 e' OK,
mi servono solamente gli schemi elettrici (non
e' necessario l'intero manuale);
dimmi come preferisci fare (e-mail, SASE ecc.)
la mia e-mail e'
iz7ath AT libero.it
Grazie!

--

73 de iz7ath, Talino

Homebrew, RF projects and digital tecniques on
http://www.qsl.net/iz7ath
IZ7ATH Talino +39 338 5029196

2105. Re: MC145170 production status?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-07 18:21:56 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3D7A43C4.CBA39ECF@mfi.net>
Source record: 41668

Philip de Cadenet wrote:
>
> Can someone tell me if the DIL version of the above synth chip is still
> in current production?
>
> An engineer colleague does not wish to work on a PLL design if component
> sourcing will become a problem in the near future.
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> Best pricing so far is $6.50 but that's the 100 off price.
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> Any other suggested sources for same?
> --
> Philip de Cadenet G4ZOW
> Transmitters 'R' Us
> http://www.transmittersrus.com

It isn't on the ON Semiconductor website, so it looks like its
already out of production in all packages.
--

An old fart since August 5th, 2002!
Michael A. Terrell
Central Florida

Check out my web site and tell me what you think.
I'm up to 160 pages, and still working on it.

http://www.terrell.150m.com

2106. Re: MC145170 production status?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-07 18:44:43 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <v7no$4Ubkke9Ew7Q@fslife.co.uk>
Source record: 41669

Hello,

>http://e-www.motorola.com/webapp/sps/site/prod_summary.jsp?code=MC145170-2&n
>odeId=01M939843136070
>
>They still make the part (and it's two bucks in 1000's) but they don't
>recommend using the DIP part: "Orders and shipments permitted. Product not
>recommended for new designs."
>
>Even the SO-16 and TSSOP-16 carry the note: "Sales and capacity have leveled
>out. Orders and shipments permitted."
Thanks for that link.

I think I scoured most of the web other than the obvious!

I also checked out a couple of other Motorola DIP PLL chips but they all
seem to be nearing the end of their life.

What's going to happen to the small non-SMD manufacturers?

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

2107. Re: MC145170 production status?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-07 18:46:27 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <37hufRVDmke9Ew4P@fslife.co.uk>
Source record: 41670

Hi Pete,

>Newark Electronics was selling them a few years ago for 38 cents each, until
>the items were sold out. In quantities of 1000, they were 19 cents each. I
>picked up a batch of them, but they are long gone. A good sub might be the
>145220.
That's sad.

There's I looking in the sub $3.00 price bracket.

I'll give all their UK distributors a call on Monday and see who's got
what.

Thanks.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

2108. Re: FT901D and H-mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-07 18:58:31 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d7a4c5b$0$188$ba620e4c@news.skynet.be>
Source record: 41671

Preferisco per email ma penso che non e possibile perche lo schema a una dimenzione un po grande (A3). Che pensa di una copia su la carta ... ma in questo caso mi da il suo indirezzo postale.

73 de Giacomo. ON5MJ

I prefer through email but I think this is not possible because the schematic is too huge. What do you think about a xerox copy ... but in this case give me your home address.

73 de Jacques. ON5MJ

2109. Re: Excitment and Experience

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-07 19:48:27 UTC
From: Jason <kc7eip_nospam@shaw.ca>
Message-ID: <fKse9.285534$f05.15047131@news1.calgary.shaw.ca>
Source record: 41672

I think you might have to go a little further then alberta :) I live on Vancover Island inVictoria, British Columbia.. And would be more then happy to try a qso. I am on most sundaynights but i am planning on switching to saturdays from 7:30 until about 10. Operating on 7.122 and then 7.040. Last night was really active i heard quite a few sigs some i might actually have been able to copy except for my slow speed :(... I'm trying to figure out how to set up some sort of rit so that i can be a little bit more flexable.. i know there are a few mods out there for the pixie so i am going to work one out shortly hopefully... that and more practice with the code generator as my proficiency is not as good as it could be.
"xpyttl" <xpyttl_nospam@earthling.net> wrote in message news:unikii1ng031b8@corp.supernews.com...
> Well Congratulations!!
>
> And yes, 40 is a lot more Pixie-friendly any time of year!
>
> If you are good at your email filters, you may want to subscribe to the QRP
> mailing list, QRP-L. It's a pretty high volume list, about 100 messages a
> day, so unless you are a maestro at the email filters it can take a bit of
> time.
>
> But from time to time there are Pixie nights where others with Pixies and
> variants get on and chat. It can sometimes be pretty tough making QSO with
> a Pixie, not only the low power, but the crystal control makes it a little
> tough, but there are a bunch of them out there. And most of them belong to
> QRP-L'ers.
>
> I just hunted through last year's archives (I couldn't quickly check this
> year) and came up with 249 hits on Pixie, so there a few of them out there.
>
> I doubt I can reach Alberta this time of year, but maybe when it gets a
> little colder and the band lengthens out we can try a 2-way Pixie QSO. Of
> course, even now, if we pick a day where the A index is low, we might manage
> it in the wee hours.
>
> ..
>
> "Jason" <kc7eip_nospam@shaw.ca> wrote in message

> news:bC6e9.275877$f05.14726719@news1.calgary.shaw.ca...
> > Well after a few months (about 6hours total) I have completed my first
> > project.. The small txcver Pixie II... WHat a wonderfull feeling to
> complete
> > a rig and have it work. Granted it did not function at first i had a
few
> > parts that were not exactly the right values but a little help from some
> > friends and they were replaced.. I Proudly fliped my on swith to the
tune
> of
> > a local bc station... Not really the fault of the radio itself but my
> choice
> > of antenna designs (a distributive capacitance loop).. After much
> > frustration i added a nice filter from the QRPp-i group worked wonders
> but
> > so did changing to a 1/4 verticl :)... after frustration on 80
meters..(I
> > guess it was a bad choice for time of year i got the components and
> crystals
> > to switch to 40... With the new torid and crystals a nice verticle
antenna
> > well not nice but simple 33 feet of speaker wire tied to a tennise ball
> > tossed into a tree.. i began to hear my first sound other then am radio.
> > :)... it has been a fun experience and it sure was great to hear some
> cw...
> > The knowledge i picked up has been invaluable. I can't thank everyone
here
> > and on the other lists enough for the help and assistance provided
during
> my
> > quest for fire (so to speak). It has really made my rebirth into the
> hobby
> > a great one. Thanks for the bandwidth and hope to hear you all soon.
> >
> >
>
>

2110. Re: Excitment and Experience

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-07 19:51:50 UTC
From: Jason <kc7eip_nospam@shaw.ca>
Message-ID: <qNse9.281762$Ag2.13820539@news2.calgary.shaw.ca>
Source record: 41673

Will definitely post about my first qso today i am working on moving my antenna to a more vertical location... I have a tree in the front that should provide a high enough hold for it... I'm sure it will work better then the current setup about 15 feet up and 15 feet horizontal.. Will have to see. Definitely keep you posted.
"Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message news:3D7A1FA6.6E02CB2B@clifto.com...
> Jason wrote:
> > :)... it has been a fun experience and it sure was great to hear some cw...
> > The knowledge i picked up has been invaluable. I can't thank everyone here
> > and on the other lists enough for the help and assistance provided during my
> > quest for fire (so to speak). It has really made my rebirth into the hobby
> > a great one. Thanks for the bandwidth and hope to hear you all soon.
>
> It's a great feeling, isn't it? I wanna hear about your first QSO.
>
> --
> .signature in flux

2111. Re: MC145170 production status?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-08 00:19:02 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D7A96F1.189D@pop.removethistomailme.net>
Source record: 41674

Philip de Cadenet wrote:
>
> I think I scoured most of the web other than the obvious!
>
> I also checked out a couple of other Motorola DIP PLL chips but they all
> seem to be nearing the end of their life.
>
> What's going to happen to the small non-SMD manufacturers?
>

No new designs, either homebrew or commercial, should be using those old MC-series parts. Look into the Analog Devices (http://www.analog.com/technology/RFComms/rfif/phase.html) and National Semiconductor (http://www.national.com/appinfo/wireless/) lines instead -- they are way cool.

Because these chips have only 16 pins, they can be (very carefully!) hand-soldered if you can't find a prototyping adapter for them.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2112. Re: Excitment and Experience

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-08 00:22:41 UTC
From: Walter <walter@accessus.net>
Message-ID: <lLwe9.371909$Aw4.15701172@bin2.nnrp.aus1.giganews.com>
Source record: 41675

Congrats, Jason. The Pixie II is a minimalist transceiver but is a fun radio
for almost no money invested. Several years ago the gang on the QRP-L got into the Pixie's pretty heavy. There are seemingly endless websites
and discussions on this little $9.95 transceiver.

If you would like to read the QRP-L and not have to put up with a massive amount of emails, you can read the QRP-L on this URL
http://listserv.lehigh.edu/lists/Archives/qrp-l/date.html

This one is by date but you can select date, author, or subject. To be able to post to the reflector then you will have to subscribe to the reflector. This web version is updated about 10 minutes after each hour.

72/73...Walter, AG5P

"Jason" <kc7eip_nospam@shaw.ca> wrote in message
news:bC6e9.275877$f05.14726719@news1.calgary.shaw.ca...
> Well after a few months (about 6hours total) I have completed my first
> project.. The small txcver Pixie II... WHat a wonderfull feeling to complete
> a rig and have it work. Granted it did not function at first i had a few
> parts that were not exactly the right values but a little help from some
> friends and they were replaced.. I Proudly fliped my on swith to the tune of
> a local bc station... Not really the fault of the radio itself but my choice
> of antenna designs (a distributive capacitance loop).. After much
> frustration i added a nice filter from the QRPp-i group worked wonders but
> so did changing to a 1/4 verticl :)... after frustration on 80 meters..(I
> guess it was a bad choice for time of year i got the components and crystals
> to switch to 40... With the new torid and crystals a nice verticle antenna
> well not nice but simple 33 feet of speaker wire tied to a tennise ball
> tossed into a tree.. i began to hear my first sound other then am radio.

> :)... it has been a fun experience and it sure was great to hear
some cw...
> The knowledge i picked up has been invaluable. I can't thank
everyone here
> and on the other lists enough for the help and assistance provided d
uring my
> quest for fire (so to speak). It has really made my rebirth into
the hobby
> a great one. Thanks for the bandwidth and hope to hear you all soon.
>
>
>

2113. HP 5342A part needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-08 02:54:13 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <unleune5ns0bf9@corp.supernews.com>
Source record: 41676

My HP 5342A counter doesn't work on hi band. I think I need to buy diode CR1 HP part No. 1901-0796 or a complete A26 SAMPLER DRIVER ASSY. If anyone knows where I can purcahse either I'd sure like to know.
tnx
Hank wd5jfr

2114. Easy AO40 reception .... more

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-08 10:00:10 UTC
From: feralmet@dodo.com.au
Message-ID: <3d7b1bd3.6830477@news.dodo.com.au>
Source record: 41677

Hello again Scroungers

Just letting you know that the article on Easy AO40 Rx has been
updated with more detailed pictures.

It can be found on the front page of Central Goldfields Club at:

http://www.cgfar.com

For those who wanted PDF, I'm sorry.... I just couldn't
package the thing properly, so I'll ask the Webmaster to make
the original raw pix of the circuit boards available for download.
Next time, I'll do better.

I'm fiddling with the Pacific Monolithics (Hills) downconverters
at the moment. I found some interesting related stuff on the
US patent server (see article).....

When I learn how to re-tune them, I'll post it on our website.

Keep fiddling !..... 73 de Chris

2115. UHF transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-08 10:49:11 UTC
From: tele.elias@freemail.absa.co.za
Message-ID: <3d7b2b37$0$18850@hades.is.co.za>
Source record: 41678
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Guys do you know any site that can help me with the design of a voice transmitter (using FM) at 420MHz

Regards,
Toks

2116. FS: Old Radio Related Books (1937-1977)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-08 14:52:49 UTC
From: oldbooks78@aol.com
Message-ID: <20020908105249.20741.00002638@mb-mo.aol.com>
Source record: 41679

I currently have for sale the following old radio-related books. Postage is $2 for the first book and $1 for each additional item (Media Mail within the US, at cost elsewhere). The books are:

ARRL "The ARRL Antenna Book, 13th Edition" American Radio Relay League, 1977. The 336 page softbound book is in about very good condition. Clean with no page tears or pen marks. The covers show a bit of wear from previous use, but not bad at all.A comprehensive treatment of radio antennas. Available for $7.

Jordan, Edward C.; Paul H. Nelson; William Carl Osterbrook; Fred H. Pumphrey; Lynne C. Smeby; and W.L. Everitt (editor) "Fundamentals of Radio" Prentice-Hall, 1944. The 400 page hardbound book is in good+ condition, clean with no page tears or pen marks except for a previous owners name inside the front cover. Gray cloth covers with some minor spotting on the front cover, otherwise nice. A nice early radio related text. Available for $10.

Siegel, Hy "All About CB Two-Way Radio" Radio Shack, 1976 Soft Cover. The 112 page softbound book is in very good condition, clean with no page tears or pen marks. Nicely illustrated. Available for $5.

US War Department "Technical Manual - Radio Fundamentals, TM 11-455" U.S. GPO, 1941. The 140 page softbound book is in fine condition, fresh and clean inside and out except for a previous owners name on the front cover. A nice WWII vintage radio manual. Available for $10.

Federal Telephone and Radio Corporation "Reference Data for Radio Engineers, Second Edition" Federal Telephone and Radio Corporation, 1947. The 322 page hardbound book is in good+ condition. Clean with no page tears or pen marks except for a previous owners name and address inside the front cover. "The present edition has been greatly enlarged and a subject index included. Chapters on transformers and room acoutics have been added. The material on radio propagatiion and radio noise has been revised. The data on cathode-ray tubes have been considerably expanded." Available for $8.

Everitt, William Littell "Communication Engineering" McGraw-Hill, 1937. The 727 page hardbound book is in about very good condition. Clean with no page tears or pen marks except for a previous owners name and address inside the front cover, and a few passages underlined in pencil. A nice early text on the science of the radio. Available for $9.

Measurements Development Laboratory of the Sperry Gyroscope Company "Microwave Transmission Design Data" Sperry Gyroscope Company, 1944. Publication No. 23-80. The 215 page hardbound book is in very good condition, clean with no page tears or pen marks, and a strong binding. Originally issued during WWII as a "confidential" document. Chapter topics include General formulae for concentric lines; Attenuation in concentric lines; Reflections and impedance

matching; General formulae for wave guides; Attenuation in wave guides; Reflections and impedance matching in wave guides; Wave guide tees and bends; Wave guides filled with dielectric material; Dielectric material: Cavity resonators; and Measurement techniques. A neat early book on ultra-high frequency radio waves. Available for $10.

If interested in any of the above, please email to "Oldbooks78@aol.com" to reserve. Thanks.

Dave

2117. Re: Excitment and Experience

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-08 19:23:14 UTC
From: "Sverre Holm (LA3ZA)" <0junk4me@qsl.net>
Message-ID: <CsNe9.15494$0p1.279777@news2.ulv.nextra.no>
Source record: 41680

"Jason" <kc7eip_nospam@shaw.ca> wrote in message
news:bC6e9.275877$f05.14726719@news1.calgary.shaw.ca...
> Well after a few months (about 6hours total) I have completed my first
> project.. The small txcver Pixie II... WHat a wonderfull feeling to
complete
> a rig and have it work.

It's a great little transceiver and very fun to use. I made one with a ceramic oscillator so I could pull it all over the 80 m band and have actually worked 15 different DXCC entities with it from Oslo, Norway. I realize that I have countries closer to me than most North America readers of this group, but anyway it is amazing how much you can do with it. I did most of my countries in a contest this spring. I don't remember which one, but suddenly the 80 m was full of exotic stations! See http://www.qsl.net/la3za/QRPp.html It takes some getting used to to put the rx frequency on the right sideband and at the correct offset, and it is always much better to reply to a CQ rather than to try one yourself.

73 and good luck!

Sverre LA3ZA

2118. 432MHz xvtr with tube EC8020 - pse help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-08 20:13:59 UTC
From: Richard J <nospam@mah.se>
Message-ID: <algb1vrih1@news.lth.se>
Source record: 41681

Hi group -

have "inherited" an old 144>432 MHz transverter from (probably) the early-mid 70:s. It was built by someone in Sweden after some design that was published at the time, in SM, DL or someplace else in EU.

It is modular (LO/Mixer module, RX/TX module in small alu boxes abt 2x10x19cm, looks like a VHF Communications or similar design and has a separate module built with epoxy/fiberglass PCB containing a tube-equipped low-power PA, using a single EC8020. Havent opened the boxes yet, but I bet it's an early stripline design inside all modules.

It drifts like hell, is reasonably sensitive on RX, is vy low-power, but WORKS and I'd like to dust it off and use it for fun and to show the youngsters that things can be simple and still do the job.

Now, who remembers such a device these days? Any bells ringing, especially with you EU hams?
I'd be happy to know the following:

a) there has to be an article or a description for this thing somewhere.
b) the EC8020 tube is an old Telefunken with diamond...I'd need a replacement or a substitute - either direct sub or sub after modification of cct - in case this one fails or gets weak. Ideas?
c) I cud use some application data for the tube when used for VHF/UHF, failing all else. I'd like to know max input, max anode dissipation plus max anode voltage etc etc..

I know you guys, you have the answers to this one :-) If necessary, I'll mail you some digital pics of this dusty beast and its innards.

TIA for your time and replies /cheers /Rick, SM7SCJ

2119. Re: 432MHz xvtr with tube EC8020 - pse help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-08 21:26:33 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <XsPe9.5785$Co2.246785@newsfep2-win.server.ntli.net>
Source record: 41682

> b) the EC8020 tube is an old Telefunken with diamond...I�d need a
> replacement or a substitute - either direct sub or sub after modification
of
> cct - in case this one fails or gets weak. Ideas?
==========
The EC8020 is indeed a Telefunken triode used in grounded grid config for
VHF/UHF amplifiers

P(anode) = 8 W

Specsheet : http://frank.pocnet.net/sheets/117/e/EC8020.pdf

This is a spec sheet which can be found through a very elaborate Valve site
showing more than 15000 valves :
http://home.wxs.nl/~frank.philipse/frank/frank.html

Here you also can find other European and US equivalents

Frank gm0csz.kn6wh@ntlworld.com

2120. WTB:Winter Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-08 21:36:28 UTC
From: KC0EH <okiemansc@yahoo.com>
Message-ID: <wpPe9.15757$6i4.1294954@newsread1.prod.itd.earthlink.net>
Source record: 41683
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Due to being pretty much homebound from a neuro-muscular disease I am look
for winter project or parts rigs.
Prefer tube type or transistor due to component size.Anything considered if
the price is right.
Please state condition and price.
Thanks
...KC0EH...OKLA.

2121. Re: Excitment and Experience

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-09 03:28:49 UTC
From: "Dana H. Myers" <dana@dioxine.net>
Message-ID: <3D7C1576.5050306@dioxine.net>
Source record: 41684

Jason wrote:
> Well after a few months (about 6hours total) I have completed my first
> project.. The small txcver Pixie II... WHat a wonderfull feeling to complete
> a rig and have it work.

Yea Jason! Dude! It's always cool to glom together a bunch of parts
and have it work... and the feeling never goes away, not even when there are
a lot of other people in the chain -

Like, have you seen the latest Sprint PCS ads for PCS Vision? I archicted
one of the most innovative features in the Java-equipped phones (long story,
just go with the punchline) and it gives me the same kind of kick to seem the
new phones on TV that I helped create.

The feeling, be it a box of components or a new way to deliver cool
services to people, it's always the same! This isn't meant as a brag,
I was a 14-year old with a homebrew transmitter once, and the feeling
is much the same 25+ years later on a much larger scale... it never
goes away.

Great job!

Dana K6JQ
dana@dioxine.net

2122. Re: HP 5342A part needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-09 04:26:51 UTC
From: Rick Karlquist <richard@karlquist.remove.this.com>
Message-ID: <fqVe9.252040$aA.44153@sccrnsc02>
Source record: 41685

Have you tried Agilent Technologies Service Center?

"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:unleune5ns0bf9@corp.supernews.com...
> My HP 5342A counter doesn't work on hi band. I think I need to buy
diode
> CR1 HP part No. 1901-0796 or a complete A26 SAMPLER DRIVER ASSY. If
anyone
> knows where I can purcahse either I'd sure like to know.
> tnx
> Hank wd5jfr
>
>

2123. HP 141T Spectrum Analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-09 10:01:27 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.000001d1.003908ae@btinternet.com>
Source record: 41686

Hi,

I've just acquired the subject unit and would like to ask a couple of questions from any fellow owners out there before I attempt surgery. I'm using this 141T with a 8552B and an 8553B/8555A combo. It is a long time since I've used a 'boat-anchor' SA having had more experience with the later HP85nn series.

Firstly, when setup according to the manual, does the bottom of the noise floor normally move upwards? If so how much at the minimum attenuator setting. Mine seems to have a DC shift of up to two divisions although the signal peak tracks the graticule OK. I also visually lose the signal at about -100dBm which would still be audible on the bands.

Switching to storage doesn't seem to show any negative going noise peaks that might be charging the detector time constants and so moving it up. Of course the 'vertical thickness' of the noise increases just as one would expect when the 'Log Ref Level' is reduced.

Secondly, I get a good bright display but am concerned that the variable persistence display is too bright when I reduce its setting and the screen floods completely (blooming though is not a problem). I know that this is a subjective question, but how bright is normal? Reducing persistence is achieved by varying the flood gun current so one would expect an increase in brightness but this seems over the top.

TIA - 73 de Joe, G3LLV

2124. FYI: Homebrew Antennas & Stealth Antenna Roundup

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-09 14:26:27 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <nc2f9.67830$lc7.5065064@news2.west.cox.net>
Source record: 41687

Hundreds -- New and updated at URL:
http://www.ac6v.com/antprojects.htm

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com

2125. Large dummyload antenna NEEDED

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-09 15:16:27 UTC
From: gspubl@tca.net
Message-ID: <3d7cbb39.231577741@news.tamu.edu>
Source record: 41690

I need to buy a dummyload for HF that is capable of 3KW or more. I am perfectly willing to pay a fair price. What do you have? Commercial quality is preferred but homebrew is okay if it is well thought out and of quality construction.

2126. FA: LUXTROL VARIABLE AUTOTRANSFORMER 2500W 120VAC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-09 15:17:13 UTC
From: nospamthanks@this.org
Message-ID: <ZX2f9.3249$oT6.502523@news2.telusplanet.net>
Source record: 41688
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Use this in your homebrew amplifier.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1379884837

$10 No Reserve

2127. Narrow Bandwidth TeleVision

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-09 15:25:27 UTC
From: Erwin <erwin.meyvaert@pandora.be>
Message-ID: <H33f9.109584$8o4.15371@afrodite.telenet-ops.be>
Source record: 41689

Hello OM

A experiment with ATV and SSTV together
http://users.pandora.be/ON1AIJ

Kind regards
ON1AIJ
Erwin

2128. Re: FYI: Homebrew Antennas & Stealth Antenna Roundup

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-09 17:21:29 UTC
From: Mike G <me@nowheresville.man>
Message-ID: <fplpnu883qc4ssaaltd4ptc8hdskp92kb8@4ax.com>
Source record: 41691

Nice job! Certainly earned a bookmark from me.

2129. FA: Tektronix Scopes..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-09 17:27:35 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <bS4f9.60484$Or1.3941230@news2.east.cox.net>
Source record: 41692
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment,sci.electronics.repair

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1766078118

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1766099562

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1766106908

Thanks for looking..

73,

Larry, KQ4BY

2130. Re: FYI: Homebrew Antennas & Stealth Antenna Roundup

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-09 18:19:07 UTC
From: "R. Scott" <washingtonham@yahoo.com>
Message-ID: <3D7CE61B.3BA45E12@yahoo.com>
Source record: 41693

Mike G wrote:
>
> Nice job! Certainly earned a bookmark from me.

Ditto, another AC6V success

N7HJ

2131. Re: FYI: Homebrew Antennas & Stealth Antenna Roundup

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-09 18:51:56 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <g56f9.68842$lc7.5115734@news2.west.cox.net>
Source record: 41694

Blush blush -- tnx guys
Hope the page reveals a new antenna or two.

I'm intrigued by the 2M Quadix - guess I'll get out the homebrewer stuff
http://home.attbi.com/~ross_anderson/quadix.htm

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com
"R. Scott" <washingtonham@yahoo.com> wrote in message
news:3D7CE61B.3BA45E12@yahoo.com...
> Mike G wrote:
> >
> > Nice job! Certainly earned a bookmark from me.
>
> Ditto, another AC6V success
>
> N7HJ

2132. Re: WTB:Winter Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-09 19:27:48 UTC
From: l.levy@worldnet.att.net
Message-ID: <1f08bc6f.0209091127.16952e96@posting.google.com>
Source record: 41695
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

"KC0EH" <okiemansc@yahoo.com> wrote in message
news:<wpPe9.15757$6i4.1294954@newsread1.prod.itd.earthlink.net>...
> Due to being pretty much homebound from a neuro-muscular disease I am look
> for winter project or parts rigs.
> Prefer tube type or transistor due to component size.Anything considered if
> the price is right.
> Please state condition and price.
> Thanks
> ...KC0EH...OKLA.

I have the Following Transistor radios; G,E, P745, 3-G.E. P807
series, Crown TR610,Zenith Royal 20.
I am asking $120.00 Plus shipping for all 6.
The radios are complete including correct knobs.
I have a lot so if you need anything let me know.
Regards
Louis

2133. Re: FYI: Homebrew Antennas & Stealth Antenna Roundup

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-09 19:48:14 UTC
From: "R. Scott" <washingtonham@yahoo.com>
Message-ID: <3D7CFAFE.DF442AA9@yahoo.com>
Source record: 41696

> I'm intrigued by the 2M Quadix - guess I'll get out the homebrewer stuff
> http://home.attbi.com/~ross_anderson/quadix.htm

Gadzooks thats ugly.

Gotta build it

N7HJ

2134. Re: MC145170 production status?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-09 20:25:27 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <unq0umqb24j1da@corp.supernews.com>
Source record: 41597

"Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message news:v7no$4Ubkke9Ew7Q@fslife.co.uk...

> What's going to happen to the small non-SMD manufacturers?

Obviously, they're eventually going to have to get out of the non-SMD business. An SO-16 isn't all that tough to hand solder. Even the TSSOP's are manageable if you have a good solder mask on the board. And just think of all the drill bits you'll save!

..

2135. Re: Excitment and Experience

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-09 20:36:16 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <unq1jnl09m8cd2@corp.supernews.com>
Source record: 41598

"Jason" <kc7eip_nospam@shaw.ca> wrote in message
news:fKse9.285534$f05.15047131@news1.calgary.shaw.ca...

> I think you might have to go a little further then alberta :) I live on
> Vancover Island inVictoria, British Columbia..

Ah well ... I leapt to a conclusion based on your ISP.

> trying to figure out how to set up some sort of rit so that i can be a
> little bit more flexable.. i know there are a few mods out there for the

This is one of the biggest problems with the Pixie. If the other station carefully zero beats you (as he should) you won't hear him! The most common workaround is to put a switched capacitor across the crystal. You now have to manually switch between transmit and receive, but at least you can hear the other station.

..

2136. new irc chat channel..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-09 21:02:35 UTC
From: Chuck <k8cpachuck@yahoo.com>
Message-ID: <333qnu8gpvcisvtn5n4u3p3erm89ba04uv@4ax.com>
Source record: 41599

[No readable article body recovered]

2137. Re: HP 141T Spectrum Analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-09 23:00:27 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D7D278A.7574@pop.removethistomailme.net>
Source record: 41600

Joe McElvenney wrote:
>
> Hi,
>
> I've just acquired the subject unit and would like to
> ask a couple of questions from any fellow owners out there
> before I attempt surgery. I'm using this 141T with a 8552B
> and an 8553B/8555A combo. It is a long time since I've used
> a 'boat-anchor' SA having had more experience with the
> later HP85nn series.
>
> Firstly, when setup according to the manual, does the
> bottom of the noise floor normally move upwards? If so how
> much at the minimum attenuator setting. Mine seems to have
> a DC shift of up to two divisions although the signal peak
> tracks the graticule OK. I also visually lose the signal at
> about -100dBm which would still be audible on the bands.

On what band and with what plugin? The higher microwave bands with the 8555A will probably exhibit some baseline lift, to compensate for increased conversion loss due to mixer loss and a weaker harmonic signal from the YIG.

-100 dBm at what center frequency and resolution bandwidth? That might be appropriate at high RBWs. Remember that your SSB receiver runs at an effective "resolution bandwidth" of 2 or 3 kHz, while the 8552B maxes out at 1 MHz. Neglecting receiver-generated noise, the noise floor in a spectrum analyzer at 1 MHz would normally be 25 dB higher than the noise floor in a receiver with a 3 kHz filter (=10*log(1 MHz/3 kHz)).

My guess is that you're in good shape if the analyzer reads the correct signal amplitude (+/- 2 or 3 dB) at several points across the band.

> Switching to storage doesn't seem to show any negative
> going noise peaks that might be charging the detector time
> constants and so moving it up. Of course the 'vertical
> thickness' of the noise increases just as one would expect
> when the 'Log Ref Level' is reduced.
>
> Secondly, I get a good bright display but am concerned
> that the variable persistence display is too bright when I
> reduce its setting and the screen floods completely
> (blooming though is not a problem). I know that this is a
> subjective question, but how bright is normal? Reducing
> persistence is achieved by varying the flood gun current so

> one would expect an increase in brightness but this seems
> over the top.

I don't remember how the 141T display works in particular, but it's probably OK. Just don't leave a bright trace on the screen for longer than necessary. Fortunately, spare tubes for the 141T are both common and inexpensive...

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2138. Re: UHF transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 00:32:08 UTC
From: fstop@ispchannel.com
Message-ID: <174453a8.0209091632.41d85b95@posting.google.com>
Source record: 41601
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Toks, wil jy dit bou? Dis goedkoop in Amerika, en jy kan een in die pos koop.

Andre VSA

2139. Re: UHF transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 01:22:30 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d7d495f$0$215$ba620e4c@news.skynet.be>
Source record: 41602
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I am not south african but I was surprised to understand your reply (because it is not so far from Dutch). BTW my own language is French.

73 de ON5MJ

2140. Re: HP 141T Spectrum Analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 01:26:43 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <ifiqnu0tr2gba1lrb1jknnaudddasodhdl@4ax.com>
Source record: 41603

On Mon, 09 Sep 2002 23:00:27 GMT, John Miles
<jmiles@pop.removethistomailme.net> wrote:

>-100 dBm at what center frequency and resolution bandwidth? That might
>be appropriate at high RBWs. Remember that your SSB receiver runs at an
>effective "resolution bandwidth" of 2 or 3 kHz, while the 8552B maxes
>out at 1 MHz. Neglecting receiver-generated noise, the noise floor in a
>spectrum analyzer at 1 MHz would normally be 25 dB higher than the noise
>floor in a receiver with a 3 kHz filter (=10*log(1 MHz/3 kHz)).

And, the noise figure for the SSB receiver is probably well under 10
dB, whilst the 8552B is likely 20 dB or more.

Jack K8ZOA

2141. Re: MC145170 production status?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 04:56:28 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3d7d79ae$0$15841@echo-01.iinet.net.au>
Source record: 41604

I agree that we will all have to get used to SM
I think the difficulty has been overstated. With a standard magnifying lamp costing about $100 and some fine instruments it is easy to solder these devices if you have a good quality PCB. Admittedly they are more difficult to breadboard. I would think few if any manufacturers are developing new components in a DIP package

Richard

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:unq0umqb24j1da@corp.supernews.com...
> "Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message
> news:v7no$4Ubkke9Ew7Q@fslife.co.uk...
>
> > What's going to happen to the small non-SMD manufacturers?
>
> Obviously, they're eventually going to have to get out of the non-SMD
> business. An SO-16 isn't all that tough to hand solder. Even the TSSOP's
> are manageable if you have a good solder mask on the board. And just
think
> of all the drill bits you'll save!
>
> ..
>
>

2142. Crystal ladder filters and crystal tester

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 10:59:08 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <alkj9s$i5j$1@venus.btinternet.com>
Source record: 41605

I've set up a web page describing a simple four-pole crystal ladder filter design procedure, and a link to G3PTO's web page with a circuit for matching the crystals. Included is PCB artwork for the filter and the crystal tester.

The URL is: http://www.geocities.com/leon_heller/ladder.html

The PCBs were designed to be made easily at home. Pics of my home-made prototypes are on the web site.

I''ve had a quotation for making a small batch of the PCBs. Price will be $8 each, including air mail postage. I'll only go ahead if I there is sufficient interest. Several QRP-L subscribers have already said that they want them.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2143. Free 6 metre preamp ... PROJECT

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 11:24:44 UTC
From: feralmet@dodo.com.au
Message-ID: <3d7dd564.29847929@news.dodo.com.au>
Source record: 41606

Me again scroungers

Here you will find an article on a good 50 mhz preamp/frontend
which you can build in an hour or so.

Cost = $0.00

http://www.cgfar.com

Enjoy!

73 de Chris VK3CJS

2144. Re: ATV video overlay with atmel avr

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 12:14:51 UTC
From: sfisher@cwcom.net
Message-ID: <953e41b4.0209100414.1918f95a@posting.google.com>
Source record: 41607

This is quite an elegant design, but may require careful adjustment of the potentiometer to assure correct video separation. Also the mixing levels may be all over the place.

You may want to take a look at the 'retro games console' project on the AVRFreaks website (www.avrfreaks.net). It has schematics and source code included. You could easily modify this project to produce video overlay (using a LM1881 sync separator for instance).

"HB9TLK" <me@privacy.net> wrote in message
news:<3d76189f$0$23622$4d4ef98e@read.news.ch.uu.net>...
> only in german, but i think its not complicated.
>
> http://www.hb9tlk.com/picgen/overlay.html

2145. Re: MC145170 production status?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 15:11:16 UTC
From: ronayling@hotmail.com
Message-ID: <3d7e0a20.28915673@news.freeserve.co.uk>
Source record: 41608

On Tue, 10 Sep 2002 12:56:28 +0800, "Richard Hosking"
<zaprichardh@iinet.net.au(remove the zap)> wrote:

>I agree that we will all have to get used to SM
>I think the difficulty has been overstated. With a standard magnifying lamp
>costing about $100 and some fine instruments it is easy to solder these
>devices if you have a good quality PCB. Admittedly they are more difficult
>to breadboard. I would think few if any manufacturers are developing new
>components in a DIP package
>
>Richard
>
I saw a good idea for breadboarding smds, you bought a pack of little
pcbs made up for different types of smd and the lines from the pins
were expanded out to dip size, these little pcbs were sticky backed
and placed then on a blank piece of pcb as a ground plane then
you could hard wire them up, admitted you still had to solder the
device to the little pcb but it did go some way to making breadboard
smd easier.

2146. Ya gotta love Pyramid

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 15:39:03 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D7E1217.FB24037@clifto.com>
Source record: 41609

My Pyramid 12A supply blew out the other day. I just got into it to fix it.

It's not awful; they use a separate power supply for the regulator
and driver transistor than they use for output. Transformer looks beefy
enough, wound with about #16 wire, separate winding for the low-current
regulator supply.

But when I found the shorted diode and looked it up... it's a 6A diode.
This is one of two diodes in a full-wave center-tap configuration, and
it's obviously not in parallel with anything. (PX6A02 for anyone who
wants to check.)

"FULLY REGULATED LOW RIPPLE", I'll bet. 2 x 4700 uF in parallel for a
12A supply doesn't seem sufficient to my mind.

All I can say is that I'm glad I never tried to pull more than a couple
of amps through this thing.

--
.signature in flux

2147. Re: MC145170 production status?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 15:41:17 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D7E129D.47057F7@clifto.com>
Source record: 41610

Richard Hosking wrote:
> I agree that we will all have to get used to SM
> I think the difficulty has been overstated. With a standard magnifying lamp
> costing about $100 and some fine instruments it is easy to solder these
> devices if you have a good quality PCB. Admittedly they are more difficult
> to breadboard. I would think few if any manufacturers are developing new
> components in a DIP package

Phooey.

--
.signature in flux

2148. ID diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 16:00:02 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D7E1702.55149968@clifto.com>
Source record: 41611

I've got what appears to be a twinax surge protector, a box with two twinax connectors and eight stud-mount diodes in series from each "center" lead to ground. Diodes are marked FMC7936 [diode symbol] 598476. Any guesses as to the diode ratings? No joy on web search.

--
.signature in flux

2149. Re: Ya gotta love Pyramid

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 16:39:42 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <Zhpf9.1232$%35.105988@newsfep1-win.server.ntli.net>
Source record: 41612

"> But when I found the shorted diode and looked it up... it's a 6A diode.
> This is one of two diodes in a full-wave center-tap configuration, and
> it's obviously not in parallel with anything. (PX6A02 for anyone who
> wants to check.)
>
> "FULLY REGULATED LOW RIPPLE", I'll bet. 2 x 4700 uF in parallel for a
> 12A supply doesn't seem sufficient to my mind.
=========
Indeed above components seem to be rather marginal.
Perhaps it's a bit overdone but for the above power diodes I would suggest
stud mounted 40 A diodes .
Had a look in my junkbox and found a few 1N6097 made by TRW and some 40HF40
made by IR (International Rectifier)

In 1999 on this NG Roy , W7EL gave some useful advice on sizing ripple
reducing capacitors.
I kept the info in a paper file . In it he gave an example for a 1.5 Ampere
PSU resulting in a 12,500 microFarad capacitor
In another design from a mag. for a 20 Amperes PSU the said capacitor is
120,000 microFarad.
So for your 12 Amperes PSU 100,000 microFarad would seem fine. Upon
switch-on the resulting inrush current can be readily handled by the 40 Amp
diodes.

Frank gm0csz.kn6wh@ntlworld.com

2150. Re: UHF transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 16:44:37 UTC
From: Itsme <antwoord_mij@hotmail.com>
Message-ID: <3d7e217c$0$194$ba620e4c@news.skynet.be>
Source record: 41613
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Dit is natuulijk "out of topic", maar als Vlaming heb ik er geen enkel
probleem mee om de reply te verstaan.

To the point: Think buying a small UHF portable is cheapest way

cheers,

Jos (on7jq)
"JC" <jacques.culot@skynet.be> schreef in bericht
news:3d7d495f$0$215$ba620e4c@news.skynet.be...
> I am not south african but I was surprised to understand your reply
(because
> it is not so far from Dutch). BTW my own language is French.
>
> 73 de ON5MJ
>
>

2151. NEW HAM RADIO PORTAL ONLINE!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 17:42:26 UTC
From: AV <avaupel@web.de>
Message-ID: <6aqf9.303616$aK5.21257@post-02.news.easynews.com>
Source record: 41614
Cross-posted to:
rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.swap,rec.radio.noncomm

There is a new Ham Radio Portal online at

http://www.hamradio-portal.com

This Portal contains news, Information and

special topics like Echolink software and many more.

It has a Weblink and download database.

A new Webboard to discuss topics is also there.

You can also submit news and topics what

comes available on the top of the page!

It should not to be in compete with other Portals.

Just a new one with a new look and nice features.

We hope to see you there!

Andre

2152. Re: ID diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 18:30:55 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1009021431460001@c-66-176-144-254.se.client2.attbi.com>
Source record: 41615

In article <3D7E1702.55149968@clifto.com>, "Clifton T. Sharp Jr."
<clifto@clifto.com> wrote:

> I've got what appears to be a twinax surge protector, a box with two
> twinax connectors and eight stud-mount diodes in series from each "center"
> lead to ground. Diodes are marked FMC7936 [diode symbol] 598476. Any
> guesses as to the diode ratings? No joy on web search.

Are there any manufacturing logos on the critters?

Steve WB4CZR

2153. Re: Ya gotta love Pyramid

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 19:31:15 UTC
From: Roger Leone <arleoneSPAMBLOCK@inreach.com>
Message-ID: <VLrf9.848$zK6.239189050@news.inreach.com>
Source record: 41616

Clifton:

I am guessing that the 12A rating on the supply is not intended for continuous operation. Perhaps it is 12 amps intermittent and 6 or 8 amps continuous. Keep in mind that with a center tapped secondary, each diode only conducts 1/2 the time (on alternate halves of the AC cycle), so they do share the load as if they were in parallel, but a 6 amp rating on the diodes seems too optimistic. I would suggest a 12 amp diode, maybe 15 amps, since then they will be running at about half of their rating.

The amount of filter capacitance you need is not simply a function of the current drawn from the supply. It also depends on the rectified, unregulated DC voltage on the capacitor(s). If the unregulated DC is only 15 or 16 volts, then you need more capacitance than you would if the unreg DC was 18 or 20 volts (or higher). You didn't state what that voltage was.

The capacitor(s) don't have to remove all ripple...they only need to hold the voltage up in between the 120 Hz pulses from the diodes so the regulator can do its job. If you have an oscilloscope you can put it across the capacitors and measure the minimum value of the varying DC when the supply is furnishing its rated current load...as long as the voltage across the caps stays above the minimum needed by the regulator, you have enough capacitance. You can have lots of ripple on the caps as long as the minimum value of voltage allows the regulator to work correctly.

If you don't have a scope, you can get a fair idea by measuring the value of DC voltage across the caps when the supply is putting out its rated current. If the voltage across the cap(s) is at least 3 or 4 volts higher than the regulated output voltage, under full load, then you probably have enough capacitance. If not, then more capacitance is needed.

Roger K6XQ

2154. Re: Ya gotta love Pyramid

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 21:20:26 UTC
From: Bill & Suzie Whatley <spud286@attbi.com>
Message-ID: <umtf9.222918$kp.807329@rwcrnsc52.ops.asp.att.net>
Source record: 41617

2 x 4700 uF is not a problem if you can tolerate 10 percent ripple or intend
to attach more caps externally..... (HAR HAR HAR !)

73

WA5VRL
Willis

2155. help interpreting toroid schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 21:21:54 UTC
From: Bill Johnson <electricguy30nospam@hotmail.com>
Message-ID: <allnug$9n2$1@nntp9.atl.mindspring.net>
Source record: 41618
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

I am attempting to build a project that uses a quadfilar wound FT50-43 toroid. I am having trouble interpreting the schematic and I'm not sure if the actual wiring of the toroid is correct. Can someone confirm whether or not my wiring scheme is correct? The toroid schematic and my wiring interpretation are at http://www.mindspring.com/~elecman/helpschematic.jpg

Thanks in advance for responses.

Bill

2156. Re: help interpreting toroid schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 21:58:49 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <8tpsnu8d3ojirbie2ltg9fv4ofkbilhgau@4ax.com>
Source record: 41619
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

On Tue, 10 Sep 2002 17:21:54 -0400, "Bill Johnson"
<electricguy30nospam@hotmail.com> wrote:

>I am attempting to build a project that uses a quadfilar wound FT50-43
>toroid. I am having trouble interpreting the schematic and I'm not sure if
>the actual wiring of the toroid is correct. Can someone confirm whether or
>not my wiring scheme is correct? The toroid schematic and my wiring
>interpretation are at http://www.mindspring.com/~elecman/helpschematic.jpg
>
>Thanks in advance for responses.
>
>Bill
>

Hi Bill,

Quadfilar means that four (4) wires are wound together, in parallel.
Your drawing needs color for each winding to clearly answer your
question, also, it needs phase dots on the schematic to correlate
correct connections. 1 & 3 appear to be backwards, as do 5 & 7; but
without the individual windings visible, or phase information, it is
difficult to say.

What you have in your mind, and what you have posted may well work,
but without these details, I for one, could not respond in the
affirmative. Reasons for my saying 1 & 3 appear to be backwards is
due to all windings starting at the same end (presumably 1,4,5,8)
would not find 1 & 3 in proximity with 2 & 4 connected unless there is
a phase inversion not shown. [Same goes for 5,7 and 6,8.]

73's
Richard Clark, KB7QHC

2157. Re: help interpreting toroid schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 22:26:40 UTC
From: Bill Johnson <electricguy30nospam@hotmail.com>
Message-ID: <allrku$164$1@slb4.atl.mindspring.net>
Source record: 41620
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

Hi Richard,

Thanks for the quick response. Perhaps I posted this a bit too soon and maybe should have contacted the designer of the circuit first, which I have now done. Thanks for your input and sorry for the inconvenience.

Bill

> Hi Bill,
>
> Quadfilar means that four (4) wires are wound together, in parallel.
> Your drawing needs color for each winding to clearly answer your
> question, also, it needs phase dots on the schematic to correlate
> correct connections. 1 & 3 appear to be backwards, as do 5 & 7; but
> without the individual windings visible, or phase information, it is
> difficult to say.
>
> What you have in your mind, and what you have posted may well work,
> but without these details, I for one, could not respond in the
> affirmative. Reasons for my saying 1 & 3 appear to be backwards is
> due to all windings starting at the same end (presumably 1,4,5,8)
> would not find 1 & 3 in proximity with 2 & 4 connected unless there is
> a phase inversion not shown. [Same goes for 5,7 and 6,8.]
>
> 73's
> Richard Clark, KB7QHC

2158. Re: help interpreting toroid schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 23:35:06 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <qtvsnuk2b8r7le6qumjgfqjq08jiohq96b@4ax.com>
Source record: 41621
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

On Tue, 10 Sep 2002 18:26:40 -0400, "Bill Johnson"
<electricguy30nospam@hotmail.com> wrote:

>Hi Richard,
>
>Thanks for the quick response. Perhaps I posted this a bit too soon and
>maybe should have contacted the designer of the circuit first, which I have
>now done. Thanks for your input and sorry for the inconvenience.
>
>Bill

Hi Bill,

No inconvenience at all, you came more prepared than most who have
grand designs of naming an antenna after themselves. You might also
include what you are going to use this for - it could be significant
to consider in light of that application. And you never know, someone
else might chime right in with a less equivocal (and still correct)
answer than mine.

73's
Richard Clark, KB7QHC

2159. Re: Ya gotta love Pyramid

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 23:39:46 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <unt0gvkb60i0e3@corp.supernews.com>
Source record: 41622

I have had a few Pyramid PS's in the past, pretty awful, even compared to Astrons.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message news:3D7E1217.FB24037@clifto.com...
> My Pyramid 12A supply blew out the other day. I just got into it to fix it.
>
> It's not awful; they use a separate power supply for the regulator
> and driver transistor than they use for output. Transformer looks beefy
> enough, wound with about #16 wire, separate winding for the low-current
> regulator supply.
>
> But when I found the shorted diode and looked it up... it's a 6A diode.
> This is one of two diodes in a full-wave center-tap configuration, and
> it's obviously not in parallel with anything. (PX6A02 for anyone who
> wants to check.)
>
> "FULLY REGULATED LOW RIPPLE", I'll bet. 2 x 4700 uF in parallel for a
> 12A supply doesn't seem sufficient to my mind.
>
> All I can say is that I'm glad I never tried to pull more than a couple
> of amps through this thing.
>
> --
> .signature in flux

2160. Re: Ya gotta love Pyramid

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-10 23:56:44 UTC
From: Lou <tech@dp.net>
Message-ID: <alm2p8$1uce$1@news.dp.net>
Source record: 41625

I had 2 Astrons 20 A PS go out on me in a week... Both blew out the Bridge rectifiers in a brown out. Nothing else, including a computer (all on at the time) was harmed. Just the two Astrons. Weird! But then that week was weird, 2 brown outs. We usually get blackouts or nothing at all.

Lou/Tech@DP.NET

"M.E." <bogus@nospam.com> wrote in message
news:unt0gvkb60i0e3@corp.supernews.com...
> I have had a few Pyramid PS's in the past, pretty awful, even compared to
> Astrons.
>
> --
> Respond to my "real" e-mail;
> kk5dr@ev1.net
> "Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message
> news:3D7E1217.FB24037@clifto.com...
> > My Pyramid 12A supply blew out the other day. I just got into it to fix
> it.
> >
> > It's not awful; they use a separate power supply for the regulator
> > and driver transistor than they use for output. Transformer looks beefy
> > enough, wound with about #16 wire, separate winding for the low-current
> > regulator supply.
> >
> > But when I found the shorted diode and looked it up... it's a 6A diode.
> > This is one of two diodes in a full-wave center-tap configuration, and
> > it's obviously not in parallel with anything. (PX6A02 for anyone who
> > wants to check.)
> >
> > "FULLY REGULATED LOW RIPPLE", I'll bet. 2 x 4700 uF in parallel for a
> > 12A supply doesn't seem sufficient to my mind.
> >
> > All I can say is that I'm glad I never tried to pull more than a couple
> > of amps through this thing.
> >
> > --
> > .signature in flux
>
>

2161. Re: Ya gotta love Pyramid

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 00:07:32 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D7E88C5.73EC@pop.removethistomailme.net>
Source record: 41623

Frank Dinger wrote:

> In 1999 on this NG Roy , W7EL gave some useful advice on sizing ripple
> reducing capacitors.
> I kept the info in a paper file . In it he gave an example for a 1.5 Ampere
> PSU resulting in a 12,500 microFarad capacitor
> In another design from a mag. for a 20 Amperes PSU the said capacitor is
> 120,000 microFarad.

Well, wait a minute. In a linear-regulated supply, there's no point in using larger filter capacitors than necessary to keep the ripple troughs higher than the regulator's dropout voltage, with perhaps a few volts of safety margin. If the regulator's input voltage is 25V on a 12V supply, for instance, then 10,000 microfarads is probably plenty. Such a regulator would need to dissipate a lot of heat with a 6A load, of course, but the supply designer may have seen that as a reasonable tradeoff.

Generally, regulated supplies don't need as much input filtering as non-regulated ones.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2162. Re: MC145170 production status?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 00:10:39 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D7E8980.5D83@pop.removethistomailme.net>
Source record: 41624

```
Clifton T. Sharp Jr. wrote:
>
> Richard Hosking wrote:
> > I agree that we will all have to get used to SM
> > I think the difficulty has been overstated. With a standard magnifying lamp
> > costing about $100 and some fine instruments it is easy to solder these
> > devices if you have a good quality PCB. Admittedly they are more difficult
> > to breadboard. I would think few if any manufacturers are developing new
> > components in a DIP package
>
> Phooey.

Funny, I used to hear that line from my dad a lot in the early Seventies
when the fate of the vacuum tube became clear for all to see.

He got past it. You will, too.

-- jm

------------------------------------------------------
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
------------------------------------------------------
```

2163. Re: Ya gotta love Pyramid

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 00:52:49 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D7E93E1.8060504@eznec.com>
Source record: 41626

That's absolutely correct. The information I posted allows you to
calculate the amount of capacitance you need for a given amount of
ripple at a given current. But it doesn't address the amount of ripple
you can tolerate -- that's up to you to decide. And as jm says, there
are tradeoffs involved. The 12,500 uF value was an example calculation
for a specific amount of ripple, which might not be anything like the
amount you can tolerate in a given application. First decide how much
ripple you can tolerate and how much current you'll be drawing. Then
calculate the amount of capacitance it'll take to get that amount of ripple.

Roy Lewallen, W7EL

John Miles wrote:
> Frank Dinger wrote:
>
>
>>In 1999 on this NG Roy , W7EL gave some useful advice on sizing ripple
>>reducing capacitors.
>>I kept the info in a paper file . In it he gave an example for a 1.5 Ampere
>>PSU resulting in a 12,500 microFarad capacitor
>>In another design from a mag. for a 20 Amperes PSU the said capacitor is
>>120,000 microFarad.
>
>
> Well, wait a minute. In a linear-regulated supply, there's no point in
> using larger filter capacitors than necessary to keep the ripple troughs
> higher than the regulator's dropout voltage, with perhaps a few volts of
> safety margin. If the regulator's input voltage is 25V on a 12V supply,
> for instance, then 10,000 microfarads is probably plenty. Such a
> regulator would need to dissipate a lot of heat with a 6A load, of
> course, but the supply designer may have seen that as a reasonable
> tradeoff.
>
> Generally, regulated supplies don't need as much input filtering as
> non-regulated ones.
>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --

2164. Re: UHF transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 00:59:08 UTC
From: fstop@ispchannel.com
Message-ID: <174453a8.0209101659.2b9b78ef@posting.google.com>
Source record: 41627
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Goeden Avond,

I'm sorry, I assumed so from your ISP. Funny how close the two languages are. I have a very easy time whenever I'm in Holland to get around, though not so in France. The only French I know might very well be dangerous.

Hope you find the plans.

Dag

2165. Re: help interpreting toroid schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 01:21:31 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <3D7E9A69.F0BD7D78@flash.net>
Source record: 41628
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

I get a "404 error/page not found" when I try to access the .jpg.
Steve

Bill Johnson wrote:
>
> I am attempting to build a project that uses a quadfilar wound FT50-43
> toroid. I am having trouble interpreting the schematic and I'm not sure if
> the actual wiring of the toroid is correct. Can someone confirm whether or
> not my wiring scheme is correct? The toroid schematic and my wiring
> interpretation are at http://www.mindspring.com/~elecman/helpschematic.jpg
>
> Thanks in advance for responses.
>
> Bill

2166. Re: help interpreting toroid schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 02:02:43 UTC
From: "r.crowley" <rcrowley7@xprt.net>
Message-ID: <unt9234bu39978@corp.supernews.com>
Source record: 41629
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

> Bill Johnson wrote:
> > The toroid schematic and my wiring
> > interpretation are at
http://www.mindspring.com/~elecman/helpschematic.jpg

"Steve Ratzlaff" wrote ...
> I get a "404 error/page not found" when I try to access the .jpg.

The "~elecman" account/directory isn't even present.

2167. Re: help interpreting toroid schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 03:21:00 UTC
From: Bill Johnson <electricguy30nospam@hotmail.com>
Message-ID: <almcsl$pc7$1@slb7.atl.mindspring.net>
Source record: 41630
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

Thanks for looking guys. Perhaps I will repost it sometime over the next couple of days (I removed the URL until I hear from the designer).

Thanks again,
Bill

"r.crowley" <rcrowley7@xprt.net> wrote in message news:unt9234bu39978@corp.supernews.com...
> > Bill Johnson wrote:
> > > The toroid schematic and my wiring
> > > interpretation are at
> http://www.mindspring.com/~elecman/helpschematic.jpg
>
>
> "Steve Ratzlaff" wrote ...
> > I get a "404 error/page not found" when I try to access the .jpg.
>
> The "~elecman" account/directory isn't even present.
>
>

2168. Parts Lot 3 Amp/Radio Parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 03:49:36 UTC
From: ni4l@msn.com
Message-ID: <d4a0748e.0209101949.702cadbc@posting.google.com>
Source record: 41631
Cross-posted to:
rec.radio.amateur,rec.ham-radio.swap,rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Hello All
I have listed this lot of parts for auction.... here is the link.
http://page.auctions.shopping.yahoo.com/auction/69316027?aucview=0x10
thanks for looking.

2169. Re: Ya gotta love Pyramid

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 05:01:35 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D7ECE2F.1FD3AEDE@clifto.com>
Source record: 41632

Roger Leone wrote:
> I am guessing that the 12A rating on the supply is not intended for
> continuous operation. Perhaps it is 12 amps intermittent and 6 or 8 amps
> continuous.

Everything on the front panel suggests they mean 12A continuous. There's
no mention of a smaller current.

> Keep in mind that with a center tapped secondary, each diode
> only conducts 1/2 the time (on alternate halves of the AC cycle), so they do
> share the load as if they were in parallel, but a 6 amp rating on the
> diodes seems too optimistic. I would suggest a 12 amp diode, maybe 15 amps,
> since then they will be running at about half of their rating.

You betcha. I never underrate when replacing, even if the designer did.

> The amount of filter capacitance you need is not simply a function of the
> current drawn from the supply. It also depends on the rectified,
> unregulated DC voltage on the capacitor(s). If the unregulated DC is only
> 15 or 16 volts, then you need more capacitance than you would if the unreg
> DC was 18 or 20 volts (or higher). You didn't state what that voltage was.

I didn't measure it. They're 25V caps, and I was going to make a guess
based on that, but considering they advertise 12A through 6A diodes... :)

> The capacitor(s) don't have to remove all ripple...they only need to hold
> the voltage up in between the 120 Hz pulses from the diodes so the regulator
> can do its job. If you have an oscilloscope you can put it across the
> capacitors and measure the minimum value of the varying DC when the supply
> is furnishing its rated current load...as long as the voltage across the
> caps stays above the minimum needed by the regulator, you have enough
> capacitance. You can have lots of ripple on the caps as long as the
> minimum value of voltage allows the regulator to work correctly.

Right. I just suspect 12A would run the charge down on 9400 uF of caps
pretty fast. (Headache precludes any calculations at this time.)

> If you don't have a scope, you can get a fair idea by measuring the value of
> DC voltage across the caps when the supply is putting out its rated current.
> If the voltage across the cap(s) is at least 3 or 4 volts higher than the
> regulated output voltage, under full load, then you probably have enough
> capacitance. If not, then more capacitance is needed.

The real fun is that extra regulator supply. If the main voltage drops
low enough, it could forward bias the base-collector junction on the
pass transistors. In any event, the smaller supply could end up with a
10A load on it when the main supply drops low enough. That could let

all the smoke out of the teeny rectifiers in the small supply.

--
.signature in flux

2170. Re: Ya gotta love Pyramid

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 05:03:40 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D7ECEAC.5FCFB4D7@clifto.com>
Source record: 41633

M.E. wrote:
> I have had a few Pyramid PS's in the past, pretty awful, even compared to
> Astrons.

For what I've used it for, it hasn't been bad. I don't think I've ever drawn more than about 5A out of it. (I said "a couple of amps", but I remembered later having powered an old 2M Sears-su from it for a few minutes.) I guess if you buy twice as much Pyramid power supply as you need, you're okay.

--
.signature in flux

2171. Re: ID diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 05:05:39 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D7ECF23.4667C6FD@clifto.com>
Source record: 41634

carltons wrote:
> <clifto@clifto.com> wrote:
> > I've got what appears to be a twinax surge protector, a box with two
> > twinax connectors and eight stud-mount diodes in series from each "center"
> > lead to ground. Diodes are marked FMC7936 [diode symbol] 598476. Any
> > guesses as to the diode ratings? No joy on web search.
>
> Are there any manufacturing logos on the critters?

Nope. I keep trying to attach "FMC" to a company, but no guesses there.

--
.signature in flux

2172. Re: Ya gotta love Pyramid

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 07:11:18 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <ubltnug2eof1ephqop769h8m60rvg8qffe@4ax.com>
Source record: 41635

On Tue, 10 Sep 2002 10:39:03 -0500, "Clifton T. Sharp Jr."
<clifto@clifto.com> wrote:

>"FULLY REGULATED LOW RIPPLE", I'll bet. 2 x 4700 uF in parallel for a
>12A supply doesn't seem sufficient to my mind.

The 12 A will discharge the 9.4 mF capacitance at 1300 V/s or 1,3
V/ms. The problem is how to determine for how long the capacitors
needs to supply the load without help from the rectifiers.

The theoretical worst case for 60 Hz full wave rectification would be
8.3 ms, thus, the voltage drop would be 11 V. Assuming 12 V regulated
output and 2 volt regulator voltage drop, the voltage at the end of
the discharge period would have to be 14 V and the initial voltage at
the beginning of the discharge period would have to be 25 V. This is
also the AC peak voltage (omitting any rectifier voltage drop and
copper losses), thus, the secondary voltage would have to be 18 Vrms.

Thus, I would not consider that the claim for 12 A output would be out
in the blue, however, the average capacitor voltage would be 19 V and
with a 12 V output, the voltage drop would be 7 V and with 12 A, the
power dissipation would be 84 W, requiring a few transistors with
realistic heat sinks.

Fortunately, the situation is not quite that bad, since the discharge
is less than the half cycle time, since the rectifiers are supplying
the load for a short time (less than a millisecond) after the peak
(until the AC waveform drops faster than the voltage drop rate in the
discharging capacitor). The next AC half cycle will reach considerable
levels quite quickly (e.g. 50 % of the peak value at 30 degrees from
the start of the half cycle).

Calculating the actual conduction angles can be best done with a
spreadsheet by trying out various values. The rectifier must start to
conduct before the capacitor drops below the drop-out voltage (in this
case 14 V). The start-of-conduction angle depends on the AC peak
voltage, so trying out various peak values will give the time when the
rectifier starts to conduct.

The rectifier stops to conduct, when the AC waveform drops faster than
the capacitor discharge rate, thus the angle can be calculated when
the rectifier stops to conduct and thus the AC peak voltage can be
calculated.

In practice, the rectifier voltage drop must be included and the
voltage losses in copper must be calculated. It should be noted that
the peak current is many times larger than the DC load current (and

hence voltage drop) and the peak current increases when the conduction angle is reduced, making it harder to determine, when the rectifiers stop to conduct. With a spreadsheet is easy to try to find a solution that does not contain any internal conflicts.

Paul OH3LWR

2173. biginer design question irt sa602an mixer.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 07:38:40 UTC
From: Jason <kc7eip_nospam@shaw.ca>
Message-ID: <4qCf9.302696$Ag2.14921218@news2.calgary.shaw.ca>
Source record: 41636

Well I'm attempting to design a receiver and came across some sa602 mixers i have checked the spec sheet and it
classifies them as a uhf/vhf mixer... I was wondering if these chips work well in the hf range specifically at 40m?..

2174. Re: Ya gotta love Pyramid

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 07:52:26 UTC
From: john graesser <graesser@tca.net>
Message-ID: <unttf9hrvrut9e@corp.supernews.com>
Source record: 41638

"Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message
news:3D7ECEAC.5FCFB4D7@clifto.com...
> M.E. wrote:
> > I have had a few Pyramid PS's in the past, pretty awful, even compared
to
> > Astrons.
>
> For what I've used it for, it hasn't been bad. I don't think I've ever
> drawn more than about 5A out of it. (I said "a couple of amps", but I
> remembered later having powered an old 2M Sears-su from it for a few
> minutes.) I guess if you buy twice as much Pyramid power supply as you
> need, you're okay.
>
> --
> .signature in flux

I don't know about the one you are talking about, but the pyramid that I use stated clearly on the box what the constant and peak ratings were. Pyramid like everyone else puts the peak rating as the number on the box. Mine is quite comfortable running an Icom 706mkIIg, htx242, 12 volt fan, charging the 12 volt battery pack for my handheld, powered speakers etc. all at once, though only one transmitter keyed at a time. Except for the time it was turned off to move to the new apt it has been on 24/7 since I got it over a year and half ago.
thanks, John.
KC5DWD

2175. Re: biginer design question irt sa602an mixer.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 07:53:56 UTC
From: UnTale <i@i.com>
Message-ID: <oECf9.9428$Oz2.191315@twister2.libero.it>
Source record: 41637

> Well I'm attempting to design a receiver and came across some sa602 mixers
i
> have checked the spec sheet and it
> classifies them as a uhf/vhf mixer... I was wondering if these chips work
> well in the hf range specifically at 40m?..

yes, it will work,
but dynanic performance will be very poor!
why don't you try a H-mode mixer using a
Fst3125 or 74HC4066?
take a look here
http://www.warc.org.uk/cdg2000%20files/frontend/frontend.htm
ciao!

--

73 de iz7ath, Talino

Homebrew, RF projects and digital tecniques on
http://www.qsl.net/iz7ath
IZ7ATH Talino +39 338 5029196

2176. Re: MC145170 production status?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 08:06:00 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <aK61jr$olvf9Ewmr@fslife.co.uk>
Source record: 41639

Thanks to everyone here that reflected on both the 145170 DIP package
and SMD status for the home-brewer.

While I have found a couple of outlets who specialise in discontinued
semiconductors with stock of the above at $4.50 I have looked at another
inexpensive VHF PLL layout using the following:

74HC4060

74HC4046

74F160

74HC4059

Cost under $10 US for the complete synth.

Beat that:-)
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

2177. Transceiver design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 09:17:45 UTC
From: Fred <frederic.chastellain@epfl.ch>
Message-ID: <3D7F0A39.5050302@epfl.ch>
Source record: 41640

Hi guys,
does anybody know where I can find a group discussing design of
transceivers and so on?
Thanx
Fred

2178. Re: Transceiver design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 09:21:12 UTC
From: Ralf Ballis <rballis@consult.m.uunet.de>
Message-ID: <20020911.9211200@viviana.santiagosoft.de>
Source record: 41641

Maybe rec.radio.amateur.equipment

2179. Re: help interpreting toroid schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 09:34:28 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d7f0e25$0$213$ba620e4c@news.skynet.be>
Source record: 41642
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

I got it yesterday but today no more.

73 de ON5MJ

2180. need schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 11:31:31 UTC
From: f6crp <f6crp@wanadoo.fr>
Message-ID: <aln9g5$s3b$1@wanadoo.fr>
Source record: 41643

```
Hi all
```

I look for for a friend not Internet QRV, the schematic of the 144 MHz
Da&#65533;wa LA2180h amplifier.
This unit had a problem with the vox and a scan will be welcome.
Thank you for your help.
73 Denis F6CRP

2181. Re: Transceiver design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 12:00:55 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3d7f2ea3$0$17910@echo-01.iinet.net.au>
Source record: 41644

This is it!

Richard

"Fred" <frederic.chastellain@epfl.ch> wrote in message
news:3D7F0A39.5050302@epfl.ch...
> Hi guys,
> does anybody know where I can find a group discussing design of
> transceivers and so on?
> Thanx
> Fred
>

2182. Re: Ya gotta love Pyramid

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 15:40:24 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D7F63E8.4F19B1FA@clifto.com>
Source record: 41645

john graesser wrote:
> I don't know about the one you are talking about, but the pyramid that I use
> stated clearly on the box what the constant and peak ratings were. Pyramid
> like everyone else puts the peak rating as the number on the box.

Mine didn't come in a box; it was new and unpacked at a hamfest, bought
from a dealer I knew. Can't find a picture on the web; it doesn't look
like the PS-12KX model, it's a PS-12 (no suffixes). The PS-12KX says on
its front panel, "10 AMP CONSTANT / 12 AMP SURGE". Mine says:

PYRAMID
PHASE III
by tenna
PRECISION REGULATED
DC POWER SUPPLY
* OUTPUT: 13.8 V. DC 12AMP. WITH SURGE PRO-
TECTION*FULLY REGULATED LOW RIPPLE
* ELECTRONIC OVERLOAD PROTECTION WITH
INSTANT AUTOMATIC RESET
* INPUT: 117V. AC 60 HZ * FUSE PROTECTED
MODEL NO. PS-12 13.8V 12AMP

The only other markings are next to the fuse, "USE 4AMP", and of course
"ON"/"OFF" by the on-off switch.

--
.signature in flux

2183. Re: Ya gotta love Pyramid

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 17:04:02 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D7F7782.95B2455@clifto.com>
Source record: 41646

Paul Keinanen wrote:
> <clifto@clifto.com> wrote:
> >"FULLY REGULATED LOW RIPPLE", I'll bet. 2 x 4700 uF in parallel for a
> >12A supply doesn't seem sufficient to my mind.
>
> The 12 A will discharge the 9.4 mF capacitance at 1300 V/s or 1,3
> V/ms. The problem is how to determine for how long the capacitors
> needs to supply the load without help from the rectifiers.

The current in the load is the applied voltage divided by the load resistance. Just past the peak of rectifier output, at 90 degrees phase, the capacitor becomes the power source because its voltage, not the lower rectifier output, is the applied voltage. So basically it's going to power the load from that time until the rectifier output rises to the amount needed to power the load.

The first spec sheet I find for the 2N3055 says the Vcesat at 10A is EIGHT VOLTS. Drop it in half because there are two in parallel and call it 4V. (Yeah, I know, but the whole thing is silly anyway; to get that we need 6.6A of base drive, which the smaller regulator power supply probably can't even get near with its one- or two-amp diodes.) The transistors are okay, because both the 12A and the 96W are within spec.

So from the 90-degree point to the next time the diode is putting out 17.8 volts, the capacitors are supplying all the power.

Let's assume 25.0V peak out of each diode, a maximum for 25V caps. The diode they use is specified at 1V drop at its rated 6A; let's be silly and keep that at 1.0V for the 12A output because it makes the PS look better than it really is.

The caps will drop from 25.0V to 17.8V in 5.5 milliseconds at 1.3V/ms. 4.16 ms of that time is spent with the transformer voltage going to zero, the rest on the rise again.

The transformer voltage will be at 18.8V (17.8V plus 1.0V) again in arcsin(18.8/26.0) degrees, or 46.31 degrees. (At that point the diode output will be 18.8V - 1.0V, or the 17.8V we need.) At 60 Hz it's 46.29 us per degree, so 2.14 ms after transformer zero, or 6.31 ms after the previous peak. But by that point, the caps had discharged to 16.8 volts, too low to sustain full output. With the 4V drop of the two pass transistors we've lost regulation and rippled by 1V peak.

At the point where the cap is no longer at or above 17.8V, we're into the next half-cycle by (5.5 - 4.1666) or 1.333 ms. At 46.29 us per degree that means we're 28.8 degrees into it. At 26V peak, we have

12.5V out of the transformer, not enough to even conduct yet because the diode cathode has just under 17.8V on it. So our ripple pulse time is roughly 17.5 degrees, or just under a millisecond for best-case assumptions.

To get this *good*, we had to make a lot of unreasonable assumptions, such as the small supply with the definitely-not-six-amp diodes supplying 6.6 amps; the big-supply 6A diodes dropping as little at 12A as at 6A; the Vcesat of the pass transistors having the 10A value at 12A, and paralleling pass transistors halving the Vcesat; and so on.

My conclusion: the design is marginal and expects more of its components than they can deliver. The 6A diodes will survive because their duty cycle at 12A is 25% each (NOT what my wild-a** guesses told me), but 12A or better diodes should have been used for lower barrier drop. The supply itself cannot deliver 12A with full regulation for more than 5.5 milliseconds, probably less with real-world values.

<http://www.halfin.com/semipp/2N3055.pdf> for the spec sheet I used.

--
.signature in flux

2184. Re: Ya gotta love Pyramid

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 17:35:52 UTC
From: "K.chattenton" <k.chattenton@btopenwold.com>
Message-ID: <alnutngim1@knossos.btinternet.com>
Source record: 41547

Hi Clifton,all,
"Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message
news:3D7E1217.FB24037@clifto.com...
> My Pyramid 12A supply blew out the other day. I just got into it to fix
it.
>
> It's not awful; they use a separate power supply for the regulator
> and driver transistor than they use for output. Transformer looks beefy
> enough, wound with about #16 wire, separate winding for the low-current
> regulator supply.
>
> But when I found the shorted diode and looked it up... it's a 6A diode.
> This is one of two diodes in a full-wave center-tap configuration, and
> it's obviously not in parallel with anything. (PX6A02 for anyone who
> wants to check.)
>
> "FULLY REGULATED LOW RIPPLE", I'll bet. 2 x 4700 uF in parallel for a
> 12A supply doesn't seem sufficient to my mind.
>
> All I can say is that I'm glad I never tried to pull more than a couple
> of amps through this thing.
>
> --
> .signature in flux

Your right, you should have at least 2.000uF per amp in a well regulated
power supply.

It beats me why a lot of Radio Amateurs pay thousands for their transceivers
and then go and spend
as little as possible on their power supply.
To my mind the power supply should be the most respected piece of equipment
in your shack
(OK, earthing should be joint number one).
If your power supply develops a short circuit on the pass transistors
there's a good chance you will end up with around 25-30 Volts on your output
terminals and guess what that does for your shiny new 2.000 plus rig...!!
When it comes to power supplies, get the best FULLY protected unit you can
find. Better still Build
Your Own.....Cheers to all, Ken, G4KIR.

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.386 / Virus Database: 218 - Release Date: 09/09/2002

2185. Re: Transceiver design

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 17:40:38 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <alnv6l$ks7$1@helle.btinternet.com>
Source record: 41548

"Fred" <frederic.chastellain@epfl.ch> wrote in message
news:3D7F0A39.5050302@epfl.ch...
> Hi guys,
> does anybody know where I can find a group discussing design of
> transceivers and so on?

This group. Also QRP-L.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2186. Re: biginer design question irt sa602an mixer.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-11 23:52:04 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <unvlqilki5hj9b@corp.supernews.com>
Source record: 41549

Jason - they work, and they work well. Probably 75% or more of the QRP transceivers use a 602, or it's equivalent, the 612. You can interchange the SA/NE 602/612. Check the net for manuals containing schematics of practically any QRP rig. With rare exceptions, the receiver will use a 602 or two (you can use them as product detectors as well.) A little history lesson, Phillips bought the rights to the chip and changed the designation from NE to SA. The difference between 602 and 612 is one of testing, the specs are identical. So an SA602 is a perfectly good replacement for an NE612. Generally 612's are a little cheaper, but the part is tough enough to get that nobody uses the price as a criterion. radioshack.com used to sell the 602 for 2.95, the 612 for 2.25. They don't sell any parts that aren't in the stores anymore. It is getting hard to get the DIP parts in quantity, but the SMT part is still being used in cell phones, so it's pretty available.

One of the nice things about the 602 is that it is sensitive enough that no RF amplification is needed in the lower HF. For 40 meters, just poke an antenna into the input, and add a 40 meter crystal, and audio will come out. A 386 audio amp completes a very minimal receiver.

As Talino points out, however, the 602 is susceptible to significant intermod. This is more of a problem on 40 than on the other bands, and more of a problem in contests. A strong nearby signal will cause all sorts of grief, so a tight front end can help a lot. For 40 that front end doesn't need any amplification so it can be pretty simple business. This problem is extremely serious in Europe, however, making the 602 practically useless there, especially on 40, thus Talino's comment.

The 602 is noticeably poorer than a passive mixer receiver, but the passive mixer adds a bunch of complexity, and it rarely is an issue on this side of the pond. The Elecraft K1 has the best implementation of a 602 receiver that I've come across, and the schematic is available on their web site for you to study. Even though this is the top-of-the-line for a 602, and far better than the run of the mill 602 rigs, it is noticeably poorer than the NC-20 or K2. It is, however, approximately equivalent to the $1000 class Yaecomwood's. So a well designed 602 can be pretty decent.

If you can dig up the schematics, also look at the Small Wonder Labs SW+ series and the NorCal SMK-1 for application examples.

..

"Jason" <kc7eip_nospam@shaw.ca> wrote in message
news:4qCf9.302696$Ag2.14921218@news2.calgary.shaw.ca...
> Well I'm attempting to design a receiver and came across some sa602 mixers
i

> have checked the spec sheet and it
> classifies them as a uhf/vhf mixer... I was wondering if these chips work
> well in the hf range specifically at 40m?..
>
>

2187. FA: Nice Tektronix 494P spectrum analyzer package

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-12 00:23:51 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D7FDE1B.4DFB@pop.removethistomailme.net>
Source record: 41550
Cross-posted to:
rec.radio.amateur.homebrew,rec.radio.amateur.equipment,misc.industry.electronics.marketplace,sci.electronics.equipment

I'm selling my Tek 494P spectrum analyzer after a recent upgrade. This rig has just about every conceivable manual and accessory and comes with a 3-day buyer inspection period. It's the cleanest one I've seen.

This particular unit has the mixers needed for coverage between 10 kHz and 40 GHz, and includes a built-in signal counter with 1E-9/day timebase. Useful for IMD measurement, harmonic and spur evaluation, FCC pre-submission testing, synthesizer noise characterization, and too many other applications to list.

No reserve, starting bid $1.00.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1766969946

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2188. ** FLEA at MIT ** Sunday September 15th Cambridge MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-12 02:07:28 UTC
From: w1gsl@mit.edu
Message-ID: <3d7ff6e0$0$3937$b45e6eb0@senator-bedfellow.mit.edu>
Source record: 41551
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.info,sci.electronics.misc,ne.forsale,ne.general,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

This coming Sunday....

!! ** More Buyers PARKING is available ** for details see
http://web.mit.edu/w1gsl/Public/flyer

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so come rain or shine or super heat the Flea is on !!!

********* $1 buyers discount with hardcopy of this notice ********

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FLEA all SUMMER at MIT
Sunday September 15th 2002
9AM-2PM

Come to the city for a great flea - plenty of free parking.

MIT's electronics and ham radio flea will take
place on the third Sunday of each month this summer,
April thru October.

There is tailgate space for over 600 sellers and
free, off-street parking for >2000 cars!

Buyers admission is $5 (you get $1 off if
you're lucky enough to have a copy of our ad)
and sellers spaces are $20 for the first and
$15 for each additional at the gate.

The flea will be held at the corner of Albany and
Main streets in Cambridge; right in the Kendall
Square area from 9AM to 2PM, with sellers set-up
time starting at 7AM.

*** Attention Sellers ***
Prepaid vendors.. Season Pass or monthly,
will be admitted FIRST.
Separate lines will form prior to gate opening
for prepaid and nonprepaid vendors

!! RAIN or SHINE !! Have no fear of rain, a covered
well illuminated tailgate area is available for all
sellers (6'8" clearance).

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W1XM/R-449.725/444.725 (PL 114.8/2A).

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MIT UHF Repeater Association (W1XM)
MIT Radio Society (W1MX)
Harvard Wireless Club (W1AF)

For more info / advanced reservations 617 253 3776

********** $1 buyers discount with hard copy of this notice ************

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To keep the spaces affordable we are discounting your first space.
To use your spaces the named vendor MUST be present.
Rates include one admission per space.

Advance $17 First space - includes $10 Cambridge Vendor License
$12 Additional Spaces
Must be received by the 5th of the month.

Gate Admission $20 First Space - includes $10 Cambridge Vendor License
$15 Additional Spaces
Admission is after the prepaid vendors

Early Bird Buyer -Admission after the prepaid vendor line is admitted. ~ 7:15AM
** You may not sell. **
$15 per person at the gate.

****************************** cut here ******************************

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Cambridge MA 02139
E-mail _____

****
Steve Finberg W1GSL w1gsl@mit.edu
PO Box 82 MIT Br Cambridge MA 02139-7082 617 258 3754
****

2189. Re: biginer design question irt sa602an mixer.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-12 03:45:11 UTC
From: Jason <kc7eip_nospam@shaw.ca>
Message-ID: <b5Uf9.311041$f05.16366270@news1.calgary.shaw.ca>
Source record: 41552

Thanks verry much you have answered all of my followup questions :)... I
was planning on using a PTO For my oscilator...they noted a 500k range on
the one i was looking at putting togeather.. and well i wanted to move to a
mixer that would provide a little better signal to the 386 then the
transiter detector used in the pixie.. I'm asuming the 602 has some gain so
that should work out well.. i have the design for the audio section already
i picked it out of one of the pixie mods... so looks like i may get my own
little recver up and running.. as far as making a transmitter well i'm sure
i can figure something out to get a little more power out then 250 mw but
thats another project...
"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:unvlqilki5hj9b@corp.supernews.com...
> Jason - they work, and they work well. Probably 75% or more of the QRP
> transceivers use a 602, or it's equivalent, the 612. You can interchange
> the SA/NE 602/612. Check the net for manuals containing schematics of
> practically any QRP rig. With rare exceptions, the receiver will use a
602
> or two (you can use them as product detectors as well.) A little history
> lesson, Phillips bought the rights to the chip and changed the designation
> from NE to SA. The difference between 602 and 612 is one of testing, the
> specs are identical. So an SA602 is a perfectly good replacement for an
> NE612. Generally 612's are a little cheaper, but the part is tough enough
> to get that nobody uses the price as a criterion. radioshack.com used to
> sell the 602 for 2.95, the 612 for 2.25. They don't sell any parts that
> aren't in the stores anymore. It is getting hard to get the DIP parts in
> quantity, but the SMT part is still being used in cell phones, so it's
> pretty available.
>
> One of the nice things about the 602 is that it is sensitive enough that
no
> RF amplification is needed in the lower HF. For 40 meters, just poke an
> antenna into the input, and add a 40 meter crystal, and audio will come
out.
> A 386 audio amp completes a very minimal receiver.
>
> As Talino points out, however, the 602 is susceptible to significant
> intermod. This is more of a problem on 40 than on the other bands, and
more
> of a problem in contests. A strong nearby signal will cause all sorts of
> grief, so a tight front end can help a lot. For 40 that front end doesn't
> need any amplification so it can be pretty simple business. This problem
is
> extremely serious in Europe, however, making the 602 practically useless
> there, especially on 40, thus Talino's comment.

>
> The 602 is noticeably poorer than a passive mixer receiver, but the
passive
> mixer adds a bunch of complexity, and it rarely is an issue on this side
of
> the pond. The Elecraft K1 has the best implementation of a 602 receiver
> that I've come across, and the schematic is available on their web site
for
> you to study. Even though this is the top-of-the-line for a 602, and far
> better than the run of the mill 602 rigs, it is noticeably poorer than the
> NC-20 or K2. It is, however, approximately equivalent to the $1000 class
> Yaecomwood's. So a well designed 602 can be pretty decent.
>
> If you can dig up the schematics, also look at the Small Wonder Labs SW+
> series and the NorCal SMK-1 for application examples.
>
> ..
>
> "Jason" <kc7eip_nospam@shaw.ca> wrote in message
> news:4qCf9.302696$Ag2.14921218@news2.calgary.shaw.ca...
> > Well I'm attempting to design a receiver and came across some sa602
mixers
> i
> > have checked the spec sheet and it
> > classifies them as a uhf/vhf mixer... I was wondering if these chips
work
> > well in the hf range specifically at 40m?..
> >
> >
>
>

2190. Help: Designing crystal filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-12 04:20:26 UTC
From: "Joe S." <joe@schlatter.org>
Message-ID: <alp4rm0tue@enews2.newsguy.com>
Source record: 41553
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

I have been trying to find an AM crystal filter for my old Heath SB-303 receiver. I give up. I'm going to build my own.

Could someone give me a few tips? I have posted what I know and where I need help on this URL:
http://www.schlatter.org/Dad/filter.htm

Thanks for your suggestions and help.

--

Regards,
Joe S.
W4HH

2191. Re: Help: Designing crystal filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-12 05:15:06 UTC
From: Ronald Oberloh <wa0kds@yahoo.com>
Message-ID: <3D8022DD.EE05AC25@yahoo.com>
Source record: 41554
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

Have you kept an eye on ebay?

"Joe S." wrote:

> I have been trying to find an AM crystal filter for my old Heath SB-303
> receiver. I give up. I'm going to build my own.
>
> Could someone give me a few tips? I have posted what I know and where I
> need help on this URL:
> http://www.schlatter.org/Dad/filter.htm
>
> Thanks for your suggestions and help.
>
> --
>
> ------
> Regards,
> Joe S.
> W4HH

2192. Re: Wee Willy DSB transceiver schematics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-12 06:37:33 UTC
From: Rick Harrison <rick@harrison.nospam-net>
Message-ID: <120920020237330455%rick@harrison.nospam-net>
Source record: 41555

In article <a62e44f4.0208221052.b0eceb1@posting.google.com>,
vdberghak@zonnet.nl (Chris) wrote:

> the page is no longer available on the web. (I tried but I get always
> a 404 error :-( ).

Dead web pages can often be found at www.archive.org if you have the
old URL

2193. Re: Narrow Bandwidth TeleVision

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-12 08:26:44 UTC
From: HB9TLK <me@privacy.net>
Message-ID: <3d804fc3$0$1381$4d4ef98e@read.news.ch.uu.net>
Source record: 41556

another good nbtv website (french):
http://f1lxj.free.fr/nbtv/nbtv_index.html

2194. Re: Ya gotta love Pyramid

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-12 08:50:14 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <shi0ous79jhf9th80ehv5tr0b4b55ditgv@4ax.com>
Source record: 41557

On Wed, 11 Sep 2002 12:04:02 -0500, "Clifton T. Sharp Jr."
<clifto@clifto.com> wrote:

>Paul Keinanen wrote:
>> <clifto@clifto.com> wrote:
>> >"FULLY REGULATED LOW RIPPLE", I'll bet. 2 x 4700 uF in parallel for a
>> >12A supply doesn't seem sufficient to my mind.
>>
>> The 12 A will discharge the 9.4 mF capacitance at 1300 V/s or 1,3
>> V/ms. The problem is how to determine for how long the capacitors
>> needs to supply the load without help from the rectifiers.
>
>The current in the load is the applied voltage divided by the load resistance.

In a regulated series pass power supply, the discharge current is
defined by the _regulated_ output voltage divided by the load
resistance, thus, the load current will remain constant throughout the
whole cycle. For a shunt regulated power supply, the capacitor
discharge current varies with the capacitor voltage.

>Just past the peak of rectifier output, at 90 degrees phase, the capacitor
>becomes the power source because its voltage, not the lower rectifier
>output, is the applied voltage.

Not quite. Assume for a moment that the rectifier stops to conduct at
90 degrees and that the peak voltage is 25 V. Looking at the situation
0.5 ms later (at 100.8 degrees), the capacitor voltage would drop to
24.35 V and the rectified AC to 24.56 V, so the rectifier would
conduct again ! In reality, it conducts a while after the peak.

In a practical situation with some resistance in the primary and
secondary and the rectifier current dropping at and after the mains
voltage peak, the voltage drop in the secondary is reduced and the
actual capacitor peak voltage is reached sometimes _after_ 90 degrees.

>The first spec sheet I find for the 2N3055 says the Vcesat at 10A is
>EIGHT VOLTS. Drop it in half because there are two in parallel and call
>it 4V. (Yeah, I know, but the whole thing is silly anyway; to get that
>we need 6.6A of base drive, which the smaller regulator power supply
>probably can't even get near with its one- or two-amp diodes.)

I am using the Motorola data sheet for the 2N3055 and I assume that
the figures show typical values. I also assume from your description
that a separate higher voltage power supply is supplying the base
drive.

In the Motorola graph for 8 A collector current and with 0.5 A base current, the Vce is 1.4 V and driving it to saturation 1.5 A is required, with Vce at 0.55 V. Interpolating for 6 A, 0.3 A would give 1.0 V and 1 A 0.45 V. Thus, 14 V minimum capacitor voltage should be sufficient, assuming 12 V regulated output (and not 13.8 V, at which level most mobile transceivers give their rated output). Also the 1 A base driver supply should be sufficient.

>The
>transistors are okay, because both the 12A and the 96W are within spec.

The maximum junction temperature is 200 C and the junction to case resistance is 0.657 W/C or 1.5 C/W and since there are two transistors 0.75 C/W. At 96 W, the junction temperature is 72 C above the case temperature. Setting the junction temperature to 200 C and assuming 20 C ambient temperature, the transistor case temperature is 128 C and the heatsink thermal resistance must be 1.1 C/W or below, which makes the heatsink quite large.

Any electric isolation between the transistors and heatsink will have its own thermal resistance, thus the thermal resistance of the heatsink must be reduced by that amount. Dropping the maximum junction temperature to 180 C for better reliability and allowing 40 C ambient would make a fan almost mandatory.

A regulated power supply can be implemented either with a large capacitance, low RMS voltage and low power dissipation or with low capacitance, high RMS voltage and high power dissipation.

The low capacitance high voltage version has several disadvantages.

* The power dissipated in the series pass transistors must also be delivered through the transformer and rectifier, which makes them bigger and more costly.

* Larger heatsinks and possibly even a fan is required to transfer that extra power into the ambient, which also will increase the cost, if continuous duty is required.

* At no load or minimal load, the capacitor voltage can be quite high, thus, a higher voltage capacitor may be required, increasing the cost.

* A high capacitor voltage is not very nice if there is a series pass transistor short, thus a crowbar would be nice to have.

While you can save by using smaller capacitors, but the additional costs in various other places makes this approach not so attractive for continuous duty cycle. However, transformers and large heat sinks have a quite a large thermal time constant, thus in low duty cycle operation, there is not so much need overrate the transformer and heatsinks to compensate for the extra power dissipated in the series pass transistors.

But is ham radio a low duty operation, when some hams talks several minutes without listening to other operators :-).

Paul OH3LWR

2195. Re: Designing crystal filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-12 09:08:48 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <alplivgve1@paris.btinternet.com>
Source record: 41558
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

"Joe S." <joe@schlatter.org> wrote in message
news:alp4rm0tue@enews2.newsguy.com...
> I have been trying to find an AM crystal filter for my old Heath SB-303
> receiver. I give up. I'm going to build my own.
>
> Could someone give me a few tips? I have posted what I know and where I
> need help on this URL:
> http://www.schlatter.org/Dad/filter.htm

I've got some info (including a PCB design) on my web site - see sig.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2196. Re: Help: Designing crystal filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-12 11:29:49 UTC
From: "ckh - Too Much SPAM"
Message-ID: <hdwX38NCLQJC-pn2-clVzu44Nkvz6@localhost>
Source record: 41559
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Thu, 12 Sep 2002 04:20:26, "Joe S." <joe@schlatter.org> wrote:

> I have been trying to find an AM crystal filter for my old Heath SB-303
> receiver. I give up. I'm going to build my own.
>
> Could someone give me a few tips? I have posted what I know and where I
> need help on this URL:
> http://www.schlatter.org/Dad/filter.htm
>
> Thanks for your suggestions and help.
>

Looks good, there was an SB filter thread on the Yahoo group,
amateur-repairs. I don't have any filter info on my round n green
webpage, http://www.kiyoinc.com/heathstuff.html There are other
musings about SB's that you might find interesting.

This page is very preliminary so website critics, go easy.

I'm interested in an AM filter too. I've bid on several SB-313's and
they are going for WAY more than I'm willing to pay. I guess people
are buying them for the AM capability.

There are two different AM filters, 3.75 kHz and 5.0 kHz. I'd consider
building one even wider, 6.0 kHz or even 8.0 kHz, for international
broadcast.

2197. Re: Ya gotta love Pyramid

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-12 17:29:51 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D80CF0F.3CD3FD31@clifto.com>
Source record: 41560

Paul Keinanen wrote:
> <clifto@clifto.com> wrote:
> >Paul Keinanen wrote:
> >> The 12 A will discharge the 9.4 mF capacitance at 1300 V/s or 1,3
> >> V/ms. The problem is how to determine for how long the capacitors
> >> needs to supply the load without help from the rectifiers.
> >>
> >The current in the load is the applied voltage divided by the load resistance.
>
> In a regulated series pass power supply, the discharge current is
> defined by the _regulated_ output voltage divided by the load
> resistance, thus, the load current will remain constant throughout the
> whole cycle. For a shunt regulated power supply, the capacitor
> discharge current varies with the capacitor voltage.

Remember that here "the load" is the regulator circuitry delivering 12A.
So capacitor current clearly varies, from charging when the transformer
is at peak output to heavy discharge when the transformer output is less
than the capacitor voltage.

Mainly, I was only justifying the idea that the higher voltage prevails
and delivers current, while the lower voltage idles; i.e. the transformer
stops being the current source after (a bit past) 90 degrees.

> >Just past the peak of rectifier output, at 90 degrees phase, the capacitor
> >becomes the power source because its voltage, not the lower rectifier
> >output, is the applied voltage.
>
> Not quite. Assume for a moment that the rectifier stops to conduct at
> 90 degrees and that the peak voltage is 25 V. Looking at the situation
> 0.5 ms later (at 100.8 degrees), the capacitor voltage would drop to
> 24.35 V and the rectified AC to 24.56 V, so the rectifier would
> conduct again ! In reality, it conducts a while after the peak.

Ooops. :) Shoulda done the calculations there.

> >The first spec sheet I find for the 2N3055 says the Vcesat at 10A is
> >EIGHT VOLTS. Drop it in half because there are two in parallel and call
> >it 4V. (Yeah, I know, but the whole thing is silly anyway; to get that
> >we need 6.6A of base drive, which the smaller regulator power supply
> >probably can't even get near with its one- or two-amp diodes.)
>
> I am using the Motorola data sheet for the 2N3055 and I assume that
> the figures show typical values. I also assume from your description
> that a separate higher voltage power supply is supplying the base
> drive.

Not sure about the voltage, haven't measured yet. It's off a separate transformer winding with a full-wave bridge rectifier. Considering, it doesn't need to be higher in voltage as long as it can put 13.8V plus the Vbe of the 2N3055's on the bases of the 2N3055's, yes?

> In the Motorola graph for 8 A collector current and with 0.5 A base
> current, the Vce is 1.4 V and driving it to saturation 1.5 A is
> required, with Vce at 0.55 V. Interpolating for 6 A, 0.3 A would give
> 1.0 V and 1 A 0.45 V. Thus, 14 V minimum capacitor voltage should be
> sufficient, assuming 12 V regulated output (and not 13.8 V, at which
> level most mobile transceivers give their rated output). Also the 1 A
> base driver supply should be sufficient.

Since we need a common ground for this, I searched out the ST data sheet at <http://us.st.com/stonline/books/pdf/docs/4079.pdf>; the unit uses two of these. They, too, show a 10A Vcesat of 3V at 3.3A base drive. I'm sure if you dropped the base current the Vce would go up; I'm also pretty sure the Vcesat will be higher at 12A than at 10A.

Don'tcha just love spec sheets? Enough "fine print" to please any lawyer. :)

> >The
> >transistors are okay, because both the 12A and the 96W are within spec.
>
> The maximum junction temperature is 200 C and the junction to case
> resistance is 0.657 W/C or 1.5 C/W and since there are two transistors
> 0.75 C/W. At 96 W, the junction temperature is 72 C above the case
> temperature. Setting the junction temperature to 200 C and assuming 20
> C ambient temperature, the transistor case temperature is 128 C and
> the heatsink thermal resistance must be 1.1 C/W or below, which makes
> the heatsink quite large.

Right, but in fact it's not very large at all; another reason not to think this unit can deliver 12A continuously, as it suggests. Well, at least they didn't mount them to the case and expect the sheet metal to do the job.

> Any electric isolation between the transistors and heatsink will have
> its own thermal resistance, thus the thermal resistance of the
> heatsink must be reduced by that amount. Dropping the maximum junction
> temperature to 180 C for better reliability and allowing 40 C ambient
> would make a fan almost mandatory.

I was thinking about adding one.

> [nifty notes deleted for brevity]
>
> But is ham radio a low duty operation, when some hams talks several
> minutes without listening to other operators :-).

Oh, I *never ever* do that. :)

--
.signature in flux

2198. Re: Designing crystal filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-12 19:49:22 UTC
From: Joe <joe.amp@NOSPAMverizon.net>
Message-ID: <6d6g9.305$Z%2.249@nwrddc01.gnilink.net>
Source record: 41561
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

I made dozens of these
Rocks:
3393.7 kHz
3396.8 kHz
Effective series resistance: 25 ohms maximum
Load capacitance: 35.4 pF
Frequency tolerance: + / - 50 Hz

Values of C1 and C2= .5 PF (yes point 5) and gimmicks dont work to well
I never understood this, and had sharper cleaner performance plots omitting
C-1 and C2.
(C-1 and C2 ARE in the original Heath blueprints)
Value of C3=56 PF
Winding details for L1: (use a pull from bad 2.1 KC SSB filter, they have 2
of these cans).
I have used 2- fixed 2uH chokes in the past and a mini variable from MOUSER
for C-3 in the past
-Joe

"> >
> > Could someone give me a few tips? I have posted what I know and where I
> > need help on this URL:
> > http://www.schlatter.org/Dad/filter.htm
>
>
> I've got some info (including a PCB design) on my web site - see sig.
>
> 73, Leon
> --
> Leon Heller, G1HSM
> leon_heller@hotmail.com
> http://www.geocities.com/leon_heller
>
>

2199. Re: biginer design question irt sa602an mixer.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-12 19:51:18 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uo1s29ckctf8a8@corp.supernews.com>
Source record: 41562

"Jason" <kc7eip_nospam@shaw.ca> wrote in message
news:b5Uf9.311041$f05.16366270@news1.calgary.shaw.ca...
> Thanks verry much you have answered all of my followup questions :)... I
> was planning on using a PTO For my oscilator...they noted a 500k range on
> the one i was looking at putting togeather.. and well i wanted to move to
a
> mixer that would provide a little better signal to the 386 then the
> transiter detector used in the pixie.. I'm asuming the 602 has some gain
so

The 602 has about 17 db of gain at 45 MHz. They don't specify how much it has a lower frequencies, but in practice it's way more than you can use at HF. In fact, you will probably be a little happier with the performance if you put some sort of attenuator at the input.

Keep in mind that any sensitivity below the level of band noise is unuseable. The 602 is susceptible to nearby loud signals, so by attenuating the input you also attenuate those loud signals and are less likely to be affected by the 602's miserable TOIP. Probably the best plan is to attenuate the input until you reach the point where the noise barely increases when you attach the antenna.

I've never gotten huge amounts of audio by jamming the output of a 602 directly into a 386. I've never really tried very hard to solve this, but I suspect there may be an impedance issue here. Take a look at the K1 audio, they use a 386 and a 380 and get a ton of audio.

With the gain of the 602 and the 386, the problem is rarely hearing the signals you want, it's keeping out all the stuff you don't want. A tight front end is a must to keep out the broadcasters, I generally do some sort of a rip-off of K8IQY's 2N2/40 front end as it's pretty sharp and simple. But you will also want to keep the thing sheilded, and of course, with all that gain in a small space, it's going to want to oscillate!

> little recver up and running.. as far as making a transmitter well i'm
sure
> i can figure something out to get a little more power out then 250 mw but
> thats another project...

Take a peek at the NJQRP Club's Fireball 40. They don't sell the kit anymore but the schematics are online. It's pretty simple, only puts out 40mw but they also have a 1 watt amp for it. Another approach for a simple transmitter is the 74Hxx design from the handbook a few years back. Basically, you put a bunch of gates in parallel to select the power you want. You need a pretty stiff output network to whack off the square edges, but that's not so tough.

. .

2200. FS: Relays

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-12 20:07:15 UTC
From: Walter Treftz <penguino@atlantic.net>
Message-ID: <3D80F3F2.6D240A68@atlantic.net>
Source record: 41563

Mercury-wetted high-speed relays. 13 Ea.
C.P. Clare & Co. Model HSG-1009 110 VAC SPDT
NOS (have been stored exposed to humidity so cases are
a little pitted)(unit itself is sealed).
Octal (8-pin tube socket type) bases. These are part of an estate our
group is
helping to settle.
Make reasonable offer on 1, several, all. Postage extra.
73 Walt (N4GL) use personal address --- penguinoXXXX@atlantic.net
TAKE OUT THE XXXX

2201. Re: Wee Willy DSB transceiver schematics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-12 22:22:22 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnao24su.fvr.QSB@animas.frontier.net>
Source record: 41564

On Thu, 12 Sep 2002 02:37:33 -0400, Rick Harrison scribbled:
> In article <a62e44f4.0208221052.b0eceb1@posting.google.com>,
> vdberghak@zonnet.nl (Chris) wrote:
>
>> the page is no longer available on the web. (I tried but I get always
>> a 404 error :-( ).
>
> Dead web pages can often be found at www.archive.org if you have the
> old URL

As well, Google gives you the option of viewing it's "Cached" copy
of the page.

gl
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

2202. Fixing vintage amp with static/crackling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 03:05:36 UTC
From: Gregg Horan <chili_gATyahooDOTcom@skip.this>
Message-ID: <vgk2ouo2l2rlo28l8tge34hpdbdhkmqruv@4ax.com>
Source record: 41565
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

I have a Pioneer sx939 reciever (1977 or so; 75wpc). It seems to work normally with the exception of this static or crackling sound on the right channel (verified by swapping speakers). The sound is almost like that of a record with a lot of dust or dirt on it. It is independant of the volume, and heard just as clearly with volume completely off. Removing the pre-amp jumpers does nothing to change it. It also isn't affected by which input is selected. Periodically, this crackling will show itself as more of a significant pop.

As a (possibly related) note, the amp seems to be quite hot. The top plate, although you can touch it, is hot enough to seriously think twice about touching. .

Can anyone offer any suggestions of where to start or what to check; or should I just bring it in for service?

Thanks.
Gregg Horan

2203. Re: Fixing vintage amp with static/crackling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 03:30:19 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3D815BC3.5C32D89A@rica.net>
Source record: 41566
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

Gregg Horan wrote:
>
> I have a Pioneer sx939 reciever (1977 or so; 75wpc). It seems to work
> normally with the exception of this static or crackling sound on the
> right channel (verified by swapping speakers). The sound is almost
> like that of a record with a lot of dust or dirt on it. It is
> independant of the volume, and heard just as clearly with volume
> completely off. Removing the pre-amp jumpers does nothing to change
> it. It also isn't affected by which input is selected. Periodically,
> this crackling will show itself as more of a significant pop.
>
> As a (possibly related) note, the amp seems to be quite hot. The top
> plate, although you can touch it, is hot enough to seriously think
> twice about touching. .
>
> Can anyone offer any suggestions of where to start or what to check;
> or should I just bring it in for service?
>
> Thanks.
> Gregg Horan

This sounds to me like a bad solder joint, or internal semiconductor
lead bond or trim pot wiper in the output stage or output bias
circuit. I would bet that if you check the bias current through the
power devices in one channel (check the drop across the emitter
resistors), the noisy channel will have a higher and variable
current. If so, you can tap various components with an insulated
something or hit parts with freeze spray, to find out where the loose
bit is.
--
John Popelish

2204. Re: Fixing vintage amp with static/crackling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 04:39:38 UTC
From: Roger Leone <arleoneSPAMBLOCK@inreach.com>
Message-ID: <7_dg9.949$v76.269396067@news.inreach.com>
Source record: 41567
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

Gregg:

I have a Pioneer SX 1500TD that I bought in 1972. It had intermittent crackling on one channel also. I found a bad transistor by tapping and wiggling parts until I found the place that affected the crackling. It was not a cold solder joint...it was internal to the transistor. Replacing it cured the problem.

I have several other receivers/amps but I still use the old Pioneer.

Roger

2205. Re: Help: Designing crystal filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 04:46:58 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0209122046.67437d69@posting.google.com>
Source record: 41568
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

"Joe S." <joe@schlatter.org> wrote in message news:<alp4rm0tue@enews2.newsguy.com>...
> I have been trying to find an AM crystal filter for my old Heath SB-303
> receiver. I give up. I'm going to build my own.
>
> Could someone give me a few tips? I have posted what I know and where I
> need help on this URL:
> http://www.schlatter.org/Dad/filter.htm
>
> Thanks for your suggestions and help.

The basic scheme is the half-lattice filter; in this case it's
to of them cascaded.

This sort of filter was common when hams started building crystal
filters for SSB, in the fifties. The best place to find information
about them would be articles from that period about making them,
or books like the ARRL "Single Sideband for the Radio Amateur" or
CQ's "Mew Sideband Handbook" that collected such articles. Back then the
topic was new, so the details were all there. It sort of faded
from view, when commercially made crystal filters became available.
You might find things in more recent handbooks again, though ladder
filters have taken over, because there are advantages of their
design.

I think the scheme saw common useage back then because of the
availability of cheap surplus crystals in FT-243 packages (ie,
cases that you could easily take apart). Then, hams would pick
an IF frequency where crystals were commonly available, and then
grind one or both sets to get them on the needed frequency. Of
course, they were starting from scratch and so picked their
IF to match the available crystals. As I said back in July,
you have to use the IF of the Heathkit, and so you aren't likely
to find crystals on the needed frequency. You'll have to have
them made, and I think you'll have to dig deeper in order to
figure out how to order the crystals.

I'm not going to read through the old articles. I do recall
people saying things like the bandwidth of the resulting filter
would be 1.5 times the spacing of the crystals. But that's rough,
and the better builders would analyze the crystals. You have
the reverse problem; you'll have to figure out the spacing before
you order.

One thing, as someone else mentioned back in July. The simplest
solution would be one half-lattice filter, ie two crystals. The

selectivity would be the same as two cascaded sections, but the shape facter would not be as good. It would be cheaper, but if you find the results less than satisfactory, you may have been better off ordering 4 crystals at the same time, rather than risk the second two not matching the first.

The component values will depend on the filter. The input and output load is going to impact on the filter.

Michael VE2BVW

2206. Re: Fixing vintage amp with static/crackling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 05:10:37 UTC
From: N9WOS <N9WOS@worldnet.att.net>
Message-ID: <hreg9.10878$1C2.870025@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41569
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

If it's not a transistor problem or or connection problem
then it might be a capacitor.

Most of the old output sections didn't have
a DC coupled output.

The output was at a dc offset.
There was a dc blocking cap in the speaker output line.

I have seen them start to short out.

Other times they dry out and the output slowly
gets less as time goes by.

If it does have them.
Make sure they are in good condition.
If it completely shorts out, it will kill your speakers.
Or nuke your receiver.
Or both.

2207. Shack Cleaning maybe you can put this to use?????

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 05:34:06 UTC
From: ni4l@msn.com
Message-ID: <d4a0748e.0209122134.6c70bb5c@posting.google.com>
Source record: 41570

Been Cleaning out the shack, maybe someone can put these things to good use.
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1380912859

2208. Re: Fixing vintage amp with static/crackling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 08:49:38 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d81a60c.298225@news.freeserve.net>
Source record: 41571
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

On Fri, 13 Sep 2002 03:05:36 GMT, Gregg Horan
<chili_gATyahooDOTcom@skip.this> wrote:

>I have a Pioneer sx939 reciever (1977 or so; 75wpc). It seems to work
>normally with the exception of this static or crackling sound on the
>right channel (verified by swapping speakers). The sound is almost
>like that of a record with a lot of dust or dirt on it. It is
>independant of the volume, and heard just as clearly with volume
>completely off. Removing the pre-amp jumpers does nothing to change
>it. It also isn't affected by which input is selected. Periodically,
>this crackling will show itself as more of a significant pop.
>
>As a (possibly related) note, the amp seems to be quite hot. The top
>plate, although you can touch it, is hot enough to seriously think
>twice about touching. .
>
sounds like a transistor breaking down, strangely common in
transistors of that era ISTR.
use a freeser spray on individual transistors during when the
crackling occurs, the dogey one will probably go quiet when cooled
like this.
hth Mike W

2209. Re: Fixing vintage amp with static/crackling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 10:17:53 UTC
From: Trevor Wilson <trevor@rageaudio.com.au>
Message-ID: <3d81bb8d$0$23171$afc38c87@news.optusnet.com.au>
Source record: 41572
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

"Gregg Horan" <chili_gATyahooDOTcom@skip.this> wrote in message
news:vgk2ouo2l2rlo28l8tge34hpdbdhkmqruv@4ax.com...
> I have a Pioneer sx939 reciever (1977 or so; 75wpc). It seems to work
> normally with the exception of this static or crackling sound on the
> right channel (verified by swapping speakers). The sound is almost
> like that of a record with a lot of dust or dirt on it. It is
> independant of the volume, and heard just as clearly with volume
> completely off. Removing the pre-amp jumpers does nothing to change
> it. It also isn't affected by which input is selected. Periodically,
> this crackling will show itself as more of a significant pop.
>
> As a (possibly related) note, the amp seems to be quite hot. The top
> plate, although you can touch it, is hot enough to seriously think
> twice about touching. .
>
> Can anyone offer any suggestions of where to start or what to check;
> or should I just bring it in for service?

**Take it to an expert. This kind of fault is not for novices. BTW: It is
probably a faulty transistor.

--
Trevor Wilson
www.rageaudio.com.au

2210. Re: MC145170 production status?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 11:07:55 UTC
From: ronayling@hotmail.com
Message-ID: <3d81c4d0.15204665@news.freeserve.co.uk>
Source record: 41573

You could try looking ex pmr, like NJ8813 and SP8906 HEF4750
there may be quite a few of those stocked around from old service
depots, or if it has to be smd a two-modulus system is very good
SP8792 NJ8821 if you are talking VCO at final freq.
The 4059 is really old.

On Wed, 11 Sep 2002 09:06:00 +0100, Philip de Cadenet
<Philstheboss@thebbc.fslife.co.uk> wrote:

>Thanks to everyone here that reflected on both the 145170 DIP package
>and SMD status for the home-brewer.
>
>While I have found a couple of outlets who specialise in discontinued
>semiconductors with stock of the above at $4.50 I have looked at another
>inexpensive VHF PLL layout using the following:
>
>74HC4060
>
>74HC4046
>
>74F160
>
>74HC4059
>
>Cost under $10 US for the complete synth.
>
>Beat that:-)

2211. Re: UHF transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 12:05:17 UTC
From: va3jrg@aol.com
Message-ID: <20020913080517.24494.00000131@mb-mc.aol.com>
Source record: 41574

Hi,

Try making a Colpitts oscillator using Motorola's 2N3947 transistor (NPN).
It's rated to 550 Mhz. Use no hole PCB wiring as well keep the leads as short
as possible to prevent stray oscillations ie use SMT.

John, VA3JRG

2212. Re: MC145170 production status?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 12:26:59 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <ZCL1xrXTmdg9Ewf6@fslife.co.uk>
Source record: 41575

Hi Ron,

>You could try looking ex pmr, like NJ8813 and SP8906 HEF4750
>there may be quite a few of those stocked around from old service
>depots, or if it has to be smd a two-modulus system is very good
>SP8792 NJ8821 if you are talking VCO at final freq.
>The 4059 is really old.
Have come across another alternative solution:

Philips SAA 1057.

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

2213. RF Semiconductor substitution.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 12:30:06 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <sRcIFCYOpdg9Ew4K@fslife.co.uk>
Source record: 41576

Can anyone recommend a web based RF transistor substitution site that
offers a 'thorough' list of possible alternatives?

Something like a modern day 'Towers' catalogue!

Thanks in advance.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

2214. Re: Fixing vintage amp with static/crackling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 15:05:27 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D81FEB7.1576E2B@clifto.com>
Source record: 41577
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

N9WOS wrote:
> The output was at a dc offset.
> There was a dc blocking cap in the speaker output line.
> [snip]
> If it completely shorts out, it will kill your speakers.
> Or nuke your receiver.
> Or both.

And the funny thing is, the amp *can* sound almost normal. I found this in a Zenith stereo back in the seventies; symptom was that it would blow output transistors every two or three *weeks*. The output cap measured four ohms.

--
.signature in flux

2215. Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 15:08:50 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D81FF82.5357942@clifto.com>
Source record: 41578
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

John Popelish wrote:
> you can tap various components with an insulated
> something or hit parts with freeze spray,

Freeze spray: 4 oz. can, $9 - $12. Contents: difluoroethane (R-134A).

Falcon Dust-Off compressed-gas duster: 4 x 12 oz. cans, $11 at Costco.
Contents: difluoroethane (R-134A). Use upside-down for freeze.

--
.signature in flux

2216. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 16:03:01 UTC
From: szekeresREMOVE@pitt.edu
Message-ID: <alt224$ni3$1@usenet01.srv.cis.pitt.edu>
Source record: 41579
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

In article <3D81FF82.5357942@clifto.com>, "Clifton T. Sharp Jr." <clifto@clifto.com>
wrote:
>John Popelish wrote:
>> you can tap various components with an insulated
>> something or hit parts with freeze spray,
>
>Freeze spray: 4 oz. can, $9 - $12. Contents: difluoroethane (R-134A).
>
>Falcon Dust-Off compressed-gas duster: 4 x 12 oz. cans, $11 at Costco.
>Contents: difluoroethane (R-134A). Use upside-down for freeze.

Tech Spray.1,1,1,2,Tetraflourane
Ozon Depletion potential 0%
Global warming potential 1300%

I thought this stuff came out cool??

greg

2217. Newbi questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 16:07:21 UTC
From: Geordi <w3gcm@SDF.LONESTAR.ORG>
Message-ID: <Pine.NEB.4.44.0209131601070.11501-100000@sdf.lonestar.org>
Source record: 41580

I just got into amateur radio (I was licenced at the end of July) and
would like to get into some homebrewing.

What tools do I NEED to get started?
What would be a practical project for someone who's never done any
soldering and has 13 thumbs?
What books would be best for me to get started with?
One book I got from my library suggests starting with "bread boarding" so
I din't have to solder any thing until I was ready to. Is this a good
idea?
Along the same lines, _Nuts_&_Bolts_ has an ad for "snap together kits."
Wouldthis be a good way to get started?

Thank you, GOd bless and 73,

Geordi Byron - kb3ijr

w3gcm@sdf.lonestar.org
SDF Public Access UNIX System - http://sdf.lonestar.org

2218. Re: Newbi questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 16:12:45 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <18og9.11440$S32.814342@news2.west.cox.net>
Source record: 41581

Geordi -- try homebrew pages at URL:
http://ac6v.com/homebrew.htm

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com
"Geordi" <w3gcm@SDF.LONESTAR.ORG> wrote in message
news:Pine.NEB.4.44.0209131601070.11501-100000@sdf.lonestar.org...
> I just got into amateur radio (I was licenced at the end of July) and
> would like to get into some homebrewing.
>
> What tools do I NEED to get started?
> What would be a practical project for someone who's never done any
> soldering and has 13 thumbs?
> What books would be best for me to get started with?
> One book I got from my library suggests starting with "bread boarding" so
> I din't have to solder any thing until I was ready to. Is this a good
> idea?
> Along the same lines, _Nuts_&_Bolts_ has an ad for "snap together kits."
> Wouldthis be a good way to get started?
>
> Thank you, GOd bless and 73,
>
> Geordi Byron - kb3ijr
>
> w3gcm@sdf.lonestar.org
> SDF Public Access UNIX System - http://sdf.lonestar.org
>

2219. "Be vewy, vewy quiet. I'm hunting Elmers."

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 16:14:07 UTC
From: Geordi <w3gcm@SDF.LONESTAR.ORG>
Message-ID: <Pine.NEB.4.44.0209131607280.11501-100000@sdf.lonestar.org>
Source record: 41582

Are there any regulars in this group willing to Elmer a new-comer to homebrew? I"m in Greater-DC, but even folk not local to me could offer helpful advice. Please reply off-list with this subject (WIth the "re:" naturally) or "Elmer offer" so it doesn't get lost in the spam.

Thank you, God bless and 73,

Geordi Byron - kb3ijr

w3gcm@sdf.lonestar.org
SDF Public Access UNIX System - http://sdf.lonestar.org

2220. Re: Help: Designing crystal filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 16:23:04 UTC
From: kludge@panix.com
Message-ID: <alt3d8$6jp$1@panix2.panix.com>
Source record: 41583
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

Michael Black <blackm00@cam.org> wrote:
>
>I think the scheme saw common useage back then because of the
>availability of cheap surplus crystals in FT-243 packages (ie,
>cases that you could easily take apart). Then, hams would pick
>an IF frequency where crystals were commonly available, and then
>grind one or both sets to get them on the needed frequency. Of
>course, they were starting from scratch and so picked their
>IF to match the available crystals. As I said back in July,
>you have to use the IF of the Heathkit, and so you aren't likely
>to find crystals on the needed frequency. You'll have to have
>them made, and I think you'll have to dig deeper in order to
>figure out how to order the crystals.

You call QMX Crystals in Texas and tell them what frequency and what
resonance and what load capacitance. You give them a credit card.
Crystals arrive.

ICM also makes excellent crystals but for a lot more than QMX charges.
--scott

--
"C'est un Nagra. C'est suisse, et tres, tres precis."

2221. Good-ground inconsistencies...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 17:00:05 UTC
From: mcalhoun@ksu.edu
Message-ID: <alt5il$ib8@unix2.cc.ksu.edu>
Source record: 41584

Several weeks ago I posted a question about how to make a really-good
ground for a new basement which will go under my house starting next
week, but I'm getting innundated with conflicting information, such as:

Some "Gary" wrote:
>The keys to effective lightning protection are surprisingly simple, and
>surprisingly less than obvious. Of course you *must* have a single point
>ground system that eliminates all ground loops....
>The rods should be laid out in a star pattern....

And someone else wrote:
>... create a "ground ring" around the building .... composed of rods
>driven at every 20 feet or so all around the perimeter of the foundation
>.... connected together via #4 or #2 solid copper. Use "bury approved"
>clamps and put the entire thing down below grade.

Now a "star pattern" and a "perimeter ring" are mutually EXclusive!
"Oh, what should I do, what should I do, what should I do?"
(Amahl's mother in "Amahl and the Night Visitors"!)

>.... Never never never daisy chain grounds.....

A "ring" is nothing more than a daisy-chain of ground rods.
"Oh, what should I do...."

Continuing that someone elses instructions:
>.... start the #4 for the ring at that [single-ground] spot, and when you
>get back to that spot continue to the rebar then to the electrical panel.
>One continuous length of #4 is better than a lot of connections.

That's definitely a loop and not just a long, bent daisy chain. And the
"ring" is daisey-chained to the rebar and then the electrical panel.
"Oh, what should I do...."

Some building code I found on the internet:
>3.3 COUNTERPOISE
> Ground the steel framework of the building with a driven ground rod at the
> base of every corner column and at intermediate exterior columns at distances
> not more than 60 feet (18 m) apart. Provide a grounding conductor
> (counterpoise), electrically connected to each ground rod and to each steel
> column, extending around the perimeter of the building. Use tinned-copper
> conductor not less than No. 2/0 AWG for counterpoise and for tap to building
> steel. Bury counterpoise not less than 18 inches (450 mm) below grade and 24
> inches (600 mm) from building foundation.

That's nothing more than another ring with attached star(s)!

Time is running out. Here is how I'm currently thinking I'll make my ground system, and I'd like (authoritative) comments about it:

My house is rectangular, with dimensions of approximately 25 x 50 feet. The completed basement will have four egress windows. My "shack" will probably end up near one of them, and such windows have plenty of wood around them through which I've been told I can run all the wires and cables I want. Furthermore, I've asked the contractor to NOT fill-in four other holes which the house-moving company will use for the large beams which lift the house, and I plan to use the one that's within a couple of feet of where the electrical power and phone lines will both enter the basement as my "ground window" or "entrance bulkhead".

The electrician assigned to my project is willing to work with me, his boss has heard of Ufer grounds, and they have rebar-to-copper connectors, so we're going to put a Ufer ground in all 150 feet of footing.

Then, since I just "happen" to have bought (for only $5!) a large roll of #2 aluminum wire at a hamfest years ago, I'm going to run a perimeter ring along the outside edge of the big hole where my basement will be built (this will be 6-7 feet below grade and maybe 3-4 feet outside the footings), drive ground rods another 8-10 feet deep about every 20' feet around that ring, and use copper-to-aluminum connectors to connect the ring to the ground rods.

Finally, I'll connect the perimeter ring to the Ufer ground at several spots around the house, effectively (I hope) turning the ENTIRE AREA around my house footings into a "single-point common ground". Then I'll connect my "entrance bulkhead" to the nearby perimeter ring/Ufer ground connection point, and that's about the best I think I can do.

Any comments?

--Myron, W0PBV.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

2222. Re: Newbi questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 17:22:38 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uo47oijairbv1e@corp.supernews.com>
Source record: 41585

Geordi ...

What you NEED, is a small wire cutters, a needle nosed pliers, a couple of screwdrivers, and a small soldering iron. A small meter is almost a must have, too. Although DMMs are pretty inexpensive, I would recommend an analog meter if you can get something halfway decent. There are more occasions where it has an advantage over a digital than the other way around. Look for a high input impedance.

THE absolute, must-have book is the ARRL Handbook. It's not particularly tutorial in nature, but it tells you a little about everything. The projects are mostly not for beginners, but there is enough information that with that book by your side you can pretty much figure out any circuit.

I guess it's probably best to start with a kit or two just to get comfortable with soldering and all that. Here it depends a little on your interest, patience, and tolerance for spending money. A Pixie II (http://www.halted.com/) is a great little cheap kit ($10), and they are a ton of fun. But it can be frustrating trying to make a contact when you're rock bound, so you need to manage your expectations. Another great starter kit is one of the SWL+ series from Small Wonder Labs (http://www.smallwonderlabs.com/). These are quite nice rigs for $65 in kit form (less case). The various QRP clubs also offer kits. The New Jersey QRP Club (http://www.njqrp.org/) is probably the most prolific, and they tend to offer pretty low cost kits. NorCal (http://www.norcalqrp.com/), on the other hand, tends to offer very nice kit, but not as frequently. Also worth looking into are the North Georgia QRP club (http://www.nogaqrp.org/) and the Flying Pigs International (http://www.mpna.com/fpqrp/).

After you have a couple of kits under your belt, I would then try to duplicate someone else's homebrew circuit. Jim Kortge's 2N2/40 (http://www.qsl.net/k8iqy/) is a great little rig, but it is quite a project.

Breadboarding is great for audio or logic circuits, but it doesn't play well with RF. Many, many folks use Manhattan construction for experimentation. See Jim's page above, and the excellent Manhattan construction article by Chuck Adams (http://www.qsl.net/k7qo/). Of course, you can always etch PC boards, but that's sort of a pain for just a test. Unfortunately, as the world moves more and more toward surface mount, it's a skill more of us will need to learn.

Hope this helps a little.

..

"Geordi" <w3gcm@SDF.LONESTAR.ORG> wrote in message
news:Pine.NEB.4.44.0209131601070.11501-100000@sdf.lonestar.org...
> I just got into amateur radio (I was licenced at the end of July) and
> would like to get into some homebrewing.
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> One book I got from my library suggests starting with "bread boarding" so
> I din't have to solder any thing until I was ready to. Is this a good
> idea?
> Along the same lines, _Nuts_&_Bolts_ has an ad for "snap together kits."
> Wouldthis be a good way to get started?
>
> Thank you, GOd bless and 73,
>
> Geordi Byron - kb3ijr
>
> w3gcm@sdf.lonestar.org
> SDF Public Access UNIX System - http://sdf.lonestar.org
>

2223. Re: Newbi questions (Kits Available)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 17:42:48 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <sspg9.11608$S32.832473@news2.west.cox.net>
Source record: 41586

For Kits a bunch -- see URL:
http://ac6v.com/kits.htm

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com
==========
"Geordi" <w3gcm@SDF.LONESTAR.ORG> wrote in message
news:Pine.NEB.4.44.0209131601070.11501-100000@sdf.lonestar.org...
> I just got into amateur radio (I was licenced at the end of July) and
> would like to get into some homebrewing.
>
> What tools do I NEED to get started?
> What would be a practical project for someone who's never done any
> soldering and has 13 thumbs?
> What books would be best for me to get started with?
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> I din't have to solder any thing until I was ready to. Is this a good
> idea?
> Along the same lines, _Nuts_&_Bolts_ has an ad for "snap together kits."
> Wouldthis be a good way to get started?
>
> Thank you, GOd bless and 73,
>
> Geordi Byron - kb3ijr
>
> w3gcm@sdf.lonestar.org
> SDF Public Access UNIX System - http://sdf.lonestar.org
>

2224. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 17:48:54 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d8224a7.601768@news.freeserve.net>
Source record: 41587
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

Butane Lighter fuel with an adapted nozzel works fine, seriousy
cheaper too ;-)
--
On Fri, 13 Sep 2002 16:03:01 GMT, szekeresREMOVE@pitt.edu (GregS)
wrote:

>In article <3D81FF82.5357942@clifto.com>, "Clifton T. Sharp Jr." <clifto@clifto.com>
wrote:
>>John Popelish wrote:
>>> you can tap various components with an insulated
>>> something or hit parts with freeze spray,
>>
>>Freeze spray: 4 oz. can, $9 - $12. Contents: difluoroethane (R-134A).
>>
>>Falcon Dust-Off compressed-gas duster: 4 x 12 oz. cans, $11 at Costco.
>>Contents: difluoroethane (R-134A). Use upside-down for freeze.
>
>
>Tech Spray.1,1,1,2,Tetraflourane
>Ozon Depletion potential 0%
>Global warming potential 1300%
>
>I thought this stuff came out cool??
>
>greg

2225. Re: biginer design question irt sa602an mixer.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 17:53:56 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <alt8e7$ga6$1@nic.grnet.gr>
Source record: 41588

the truth is that at uhf/vhf the mixer is terrible at hf don't give it a second thought you will be happy with the results.I have made a few |RX transverters with it and it does the job fast clean and quick
"Jason" <kc7eip_nospam@shaw.ca> wrote in message news:4qCf9.302696$Ag2.14921218@news2.calgary.shaw.ca...
> Well I'm attempting to design a receiver and came across some sa602 mixers i
> have checked the spec sheet and it
> classifies them as a uhf/vhf mixer... I was wondering if these chips work
> well in the hf range specifically at 40m?..
>
>

2226. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 18:54:32 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3D823461.555EA4CB@rica.net>
Source record: 41589
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

"Clifton T. Sharp Jr." wrote:

> Freeze spray: 4 oz. can, $9 - $12. Contents: difluoroethane (R-134A).
>
> Falcon Dust-Off compressed-gas duster: 4 x 12 oz. cans, $11 at Costco.
> Contents: difluoroethane (R-134A). Use upside-down for freeze.

Cool!

--
John Popelish

2227. Re: Good-ground inconsistencies...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 19:07:09 UTC
From: gaschafer@attbi.com
Message-ID: <3d823787.8315376@netnews.attbi.com>
Source record: 41590

Hi Myron,

The first thing you should do is go to the Polyphaser site and read some of the papers there.
Very good stuff on grounding.

You should have more of a ground than just the Ufer by itself. A Ufer should only augment your
ground system and not be the sole ground.

Throw the aluminum wire out! It is not compatible with the rest of your grounding system.
Aluminum buried in the ground and connected to dissimilar metals will cause galvanic corrosion
of itself and the other metal in the system. Aluminum by itself buried will corrode in most soils.
Be sure that no aluminum comes in contact with any concrete. That will eat it up in no time.

All ground rods need to be of the same type of material also. Don't use some copper plated
rods and some galvanized rods. If you do you will have the same problem with galvanic
corrosion.

I assume that your shack will be in the basement? If so then putting in ground rods at below
grade is good. If the shack is at ground level then it would not be a good idea as ground leads
would be too long to be effective. Too much inductance.

Running a loop around the house may be somewhat of a waste as the length of the ground lead
back to your central point gets to be too long to be effective for lightning. Again too much
inductance. You would probably be much better off by running radials out from your central
point in a fan shape to ground rods. Don't forget that a buried radial wire can be just as effective
as a ground rod.

There seems to be a little confusion in some of the posts as to what a "single point ground
system" really is. The thing that you want to avoid is ground loops THROUGH your equipment.
In other words, don't connect your AC ground to one part of the ground

system and your
antenna ground to another part of the ground system. That would give you a loop with the
equipment in the middle. Even if there were other ground wires connecting the two grounds
together, it is not the same point and potential difference can exist with a strike.

Your AC, antennas, phone lines and any other lines coming into the shack should enter at the
same spot. All surge protectors and equipment grounds should be made at one single point. All
equipment grounds should also be connected directly to that same point only. Do not connect
the equipment ground to what may be the nearest ground rod or lead from the Ufer ground.
ONLY connect it to the single point ground.

All ground leads coming from other radial ground rods should go to the single point ground spot
to be most effective. Tying ground rods in a daisy chain become less and less effective the
further away they are from the central ground point. The problem is too much inductance in the
connecting lead. It is much better to go out in a fan shape from the central point.

Ground rods and leads should go out at least several feet away from the building because the
ground tends to be much dryer closer to the building making for a less effective ground. Placing
the ground rods where the rain drips off the roof can help.

73
Gary K4FMX

2228. Re: Help: Designing crystal filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 19:52:35 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <j9g4ougsc9784sbvahg3i5vsl0umfrn144@4ax.com>
Source record: 41591
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

kludge@panix.com (Scott Dorsey)
shared these priceless pearls of wisdom:

->
->You call QMX Crystals in Texas

I can't find QMX anywhere on the web. Do they have a website or presence
anywhere? Or a phone number?

JAN Crystal (Ft. Meyers FL) www.jancrystals.com is another good low-cost crystal
supplier. We've dealt with them for almost 40 years and have yet to get a bad
crystal.

Jim
Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

2229. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 20:29:18 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D824A9E.33520FB8@clifto.com>
Source record: 41592
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

GregS wrote:
> "Clifton T. Sharp Jr." <clifto@clifto.com> wrote:
> >John Popelish wrote:
> >Freeze spray: 4 oz. can, $9 - $12. Contents: difluoroethane (R-134A).
>
> Tech Spray.1,1,1,2,Tetraflourane

Probably just a different HCFC.

> Ozon Depletion potential 0%
> Global warming potential 1300%
>
> I thought this stuff came out cool??

:)

I think the brains of the ecofanatics are too hot. I believe it's arrogant
to think man could do anything to destroy the entire earth; and even if
we could, the earth would just kill us off and go back to where it left
off, which is exactly what the ecofanatics want anyway.

So, to all ecofanatics: please stop exhaling all that carbon dioxide
immediately. You're not going to convince us of your good intent while
you're still contributing to global warming.

--
.signature in flux

2230. Microwave meeting this Sunday

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 22:59:25 UTC
From: g3pho@qsl.net
Message-ID: <3d846d90.43138213@usenet.free-online.net>
Source record: 41593
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

CRAWLEY MICROWAVE ROUND TABLE

The Crawley Amateur Radio Club will host their annual Microwave Round Table meeting on Sunday, 15th September, 2002, starting at 10am local time.

The venue is at: The Crawley Amateur Radio Club, Hut 18,
Tilgate Recreational Centre, Crawley,
Sussex, England

The entrance to the Tilgate Recreational Centre is located on the southbound carriageway of the A23 just south of Crawley about 200 yards south from the new Broadfield Stadium round-about which is well sign-posted and is close to the Southern end of the M23/ A23 junction at Pease Pottage (Exit 11).

Activities:

1.A bring and buy sale - a large amount of "Silent Key" equipment will to be available (lots of microwave bits, including surface mount components, heliax, connectors, test gear, waveguide, semi rigid coax, and much more)

2.Informal session before lunch.

3.Formal meeting and programme of lectures in the afternoon.

For any further Information contact Derek Atter, G3GRO on Tel/Fax 0293 520424 or on E-mail at datter@btinternet.com

This information has been posted on the newsgroup by

Peter Day, G3PHO
Editor: RSGB Microwave Newsletter

2231. Re: Help: Designing crystal filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-13 23:58:09 UTC
From: kludge@panix.com
Message-ID: <altu2hasa1@panix2.panix.com>
Source record: 41594
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

Jim Weir <jim@rst-engr.com> wrote:
>kludge@panix.com (Scott Dorsey)
>shared these priceless pearls of wisdom:
>
>->
>->You call QMX Crystals in Texas
>
>I can't find QMX anywhere on the web. Do they have a website or presence
>anywhere? Or a phone number?

They could be listed as Cuemex crystals or some such thing. I'll dig up
an address on Monday.

>JAN Crystal (Ft. Meyers FL) www.jancrystals.com is another good low-cost crystal
>supplier. We've dealt with them for almost 40 years and have yet to get a bad
>crystal.

JAN and ICM are not all that cheap but do great work.
--scott

--
"C'est un Nagra. C'est suisse, et tres, tres precis."

2232. Re: Microwave meeting this Sunday

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 00:02:52 UTC
From: * Mefix * <mefix@exudingwounds.ward32>
Message-ID: <altubb$q13$1@paris.btinternet.com>
Source record: 41595
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

<g3pho@qsl.net> wrote in message
news:3d846d90.43138213@usenet.free-online.net...
> CRAWLEY MICROWAVE ROUND TABLE
>
> The Crawley Amateur Radio Club will host their annual Microwave Round
> Table meeting on Sunday, 15th September, 2002, starting at 10am local
> time.

Sponsored by Bird's Eye and Panasonic? ;o)

2233. Ao40 Rx in PDF format....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 00:56:00 UTC
From: feralmet@dodo.com.au
Message-ID: <3d8287f8.1237621@news.dodo.com.au>
Source record: 41596

Me again scroungers...

After a herculean effort I managed to get the
Conifer 2.4 ghz downconverter stuff into a PDF.

Find it on the projects page at:

http://www.cgfar.com

Happy fiddling!

73 de Chris VK3CJS

2234. Re: "Be vewy, vewy quiet. I'm hunting Elmers."

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 01:22:56 UTC
From: Wayne Faris <wfaris@inebraska.com>
Message-ID: <3D828F70.9AB8AAF6@inebraska.com>
Source record: 41497

If you are newly licensed, a veteran ham operator or just interested in becoming an amateur radio operator you may want to join the HAM-ELMER group.

You can join by sending an email to:

HAM-ELMER-subscribe@yahoogroups.com

2235. Need help with Standard VHF mobile

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 01:46:33 UTC
From: jcplpsm@aol.communicate
Message-ID: <20020913214633.03613.00003277@mb-cr.aol.com>
Source record: 41498

I have a Standard VHF mobile model CMP872 that I would like to try to reprogram and tune for 2 meter FM use. Has anyone ever converted this radio before? Any ideas on where I can get a schematic and programming information? Any help would be greatly appreciated.

Scott
KA1MRO

2236. WTT: .47@400VDC Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 02:20:20 UTC
From: Bill Abate <wabate@dandy.net>
Message-ID: <a675ougg488go8u9p0thtgb7ffk7uugsqo@4ax.com>
Source record: 41499

I have a few hundred of these caps rated at .47mfd and 400 VDC. They are NOS with full leads. Mostly manufactured by CDE, type WMF, mylar dielectric film encased. I can provide a pic.

I would lke to trade for similar mylar caps rated at 400 VDC with values of .001, .0015, .015, .02 and ,047. Any interest?

Bill Abate
wabate@dandy.net

2237. Re: Fixing vintage amp with static/crackling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 03:30:16 UTC
From: Frontline Electronics <frontline_electronics@worldnet.att.net>
Message-ID: <c3yg9.28012$jG2.2052178@bgtnsc05-news.ops.worldnet.att.net>
Source record: 41500
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

I used to do a lot of these, while they had many common causes there
were also many that did not. Most have been mentioned except diodes
which I have seen cause the noise also.
Jeff

Gregg Horan wrote in message ...
>I have a Pioneer sx939 reciever (1977 or so; 75wpc). It seems to work
>normally with the exception of this static or crackling sound on the
>right channel (verified by swapping speakers). The sound is almost
>like that of a record with a lot of dust or dirt on it. It is
>independant of the volume, and heard just as clearly with volume
>completely off. Removing the pre-amp jumpers does nothing to change
>it. It also isn't affected by which input is selected. Periodically,
>this crackling will show itself as more of a significant pop.
>
>As a (possibly related) note, the amp seems to be quite hot. The top
>plate, although you can touch it, is hot enough to seriously think
>twice about touching. .
>
>Can anyone offer any suggestions of where to start or what to check;
>or should I just bring it in for service?
>
>Thanks.
>Gregg Horan

2238. Re: Newbi questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 05:06:57 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <Rtzg9.28107$jG2.2065130@bgtnsc05-news.ops.worldnet.att.net>
Source record: 41501

take an electronics course at your local college...

--
If first you don't succeed, do the same thing again...see what happens

2239. Re: Newbi questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 06:11:28 UTC
From: w9wi@linux1.localdomain
Message-ID: <slrnao5lj5.53t.w9wi@linux1.localdomain>
Source record: 41502

On Fri, 13 Sep 2002 16:07:21 +0000, Geordi <w3gcm@SDF.LONESTAR.ORG> wrote:
>I just got into amateur radio (I was licenced at the end of July) and
>would like to get into some homebrewing.
>
>What tools do I NEED to get started?

Does Radio Shack still sell that tool kit?

You'll need a decent soldering iron; a roll of solder; a pair of long-nosed pliers; a pair of diagonal cutting pliers (these days, as small as possible...); and mid-sized straight and Phillips screwdrivers. A small vise will be VERY helpful.

>What would be a practical project for someone who's never done any
>soldering and has 13 thumbs?

I would start by buying an experimenters circuit board (or two, or three..) and a few parts assortments at Radio Shack. Don't start by trying to make something that will actually work - start by just practicing soldering parts to a board.

Once you get some practice soldering, I'd buy a LM-386 and the associated parts, and build a small audio amplifier. You can jack a CD or MP3 player into it and show that it actually works.
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

2240. Re: Newbi questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 06:21:09 UTC
From: w9wi@linux1.localdomain
Message-ID: <slrnao5m35.53t.w9wi@linux1.localdomain>
Source record: 41503

On Fri, 13 Sep 2002 16:07:21 +0000, Geordi <w3gcm@SDF.LONESTAR.ORG> wrote:
>Along the same lines, _Nuts_&_Bolts_ has an ad for "snap together kits."

(Geordi: I think the ads you saw are for something else)

Man, this reminds me of electronics class in high school.

Taught (in the mid-1970s) by a local TV repairman who really didn't understand those newfangled transistors. And taken by auto-shop kids who really didn't expect to pass anything else.

Our final project was to build an "All-American Five" AM radio. Using a bunch of plastic blocks, each containing a single component, and connected with clip leads.

Our instructor told us what each part was for. Until he got to the 200pF capacitor between the plate of the first audio amplifier tube and ground. He couldn't explain what it was for, so he told us not to bother with it.

We all built our radios.

Not a one of them worked.

5,000-watt WTMJ, 10 miles away, not a peep. He couldn't explain it.

I had a hunch. Hooked a 'scope (can't believe we *had* a 'scope!) to the plate of the first audio tube. Sure enough: it had more 3.5MHz RF than my first ham rig.

Grabbed the 200pF cap out of the box, hooked it up, and heard the dulcet tones of Bill Carlson. (they didn't last long, had to find WOKY for the latest Top 40 hits...)

See, that part was there for a reason!
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

2241. Re: Fixing vintage amp with static/crackling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 07:41:08 UTC
From: Kevin McMurtrie <mcmurtri@sonic.net>
Message-ID: <mcmurtri-21AFA3.00410714092002@typhoon.sonic.net>
Source record: 41504
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

In article <vgk2ouo2l2rlo28l8tge34hpdbdhkmqruv@4ax.com>,
Gregg Horan <chili_gATyahooDOTcom@skip.this> wrote:

>I have a Pioneer sx939 reciever (1977 or so; 75wpc). It seems to work
>normally with the exception of this static or crackling sound on the
>right channel (verified by swapping speakers). The sound is almost
>like that of a record with a lot of dust or dirt on it. It is
>independant of the volume, and heard just as clearly with volume
>completely off. Removing the pre-amp jumpers does nothing to change
>it. It also isn't affected by which input is selected. Periodically,
>this crackling will show itself as more of a significant pop.
>
>As a (possibly related) note, the amp seems to be quite hot. The top
>plate, although you can touch it, is hot enough to seriously think
>twice about touching. .
>
>Can anyone offer any suggestions of where to start or what to check;
>or should I just bring it in for service?
>
>Thanks.
>Gregg Horan

Sounds like an electrolytic capacitor that has gone so bad that it's
leaking all over the circuit board.

2242. build a satellite dish...is it possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 09:56:57 UTC
From: theclue.geo@yahoo.com
Message-ID: <3d8307e4.1020378@powernews.libero.it>
Source record: 41505

hi to all! I'm new on this forum (i lurked a bit ^^') and i'm a complitely newbie on this hobby, so...i apologize for any stupid question i'll post here in the near future!! O_o

the first problem: I'm planning with some friends to build a little radio telescope. A very difficult tatsk but we are a bit skilled in electronics and our enthusiasm will be the rest :=)
but we have a problem: the dish! we need at least a 9 ft one (better if 12) but we haven't found it anywhere (i hoped to find and old dismissed C-band unit but...nope), And, of coz, should be very difficult to carry it til my home!
so i'm thinking: is it possible to build a so big dish at home? How can we do it? (knowledges, structures, faq needed....)

tnx for attention and sorry for bad english!

gabrio
www.ottobit.tk

2243. Re: Fixing vintage amp with static/crackling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 13:19:42 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3d833765@news.netacc.net>
Source record: 41506
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

"Kevin McMurtrie" <mcmurtri@sonic.net> wrote in message
news:mcmurtri-21AFA3.00410714092002@typhoon.sonic.net...
> Sounds like an electrolytic capacitor that has gone so bad that it's
> leaking all over the circuit board.

I would agree with Kevin. The first point to address in any trouble shooting endeavor is the power supplies. Electrolytics being the #1 offender and tantalum capacitors used in bypassing DC busses being the #2 culprit. Once the power supplies are primo, the rest of the circuits can be considered.

Steve

2244. Re: Looking for 110pF NPO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 14:19:31 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <TzHg9.28603$TX5.874775@news1.east.cox.net>
Source record: 41507

Have you looked in DigiKey or Mouser?

Pete

"jos" <soj@sympatico.ca> wrote in message
news:3D7272E9.A49C52A9@sympatico.ca...
> The only time I saw a 110pf capacitor was in the silver micas series!
> Regards! Jos
>
> rec.radio.amateur.homebrew wrote:
>
> > Anybody know where I can obtain 200 pieces of 110pF
> > disk NPOs at 50V or greater to be used in a LPF?
> >
> > --
> > 72 & "oo's" - Dieter (DIZ) Gentzow - W8DIZ - Loveland, Ohio
> > Clermont County - EM79uf - near Cincinnati; 39.218N - 84.305W
> > SOC-8 DLQRPAG-1454 ARCI-10226 ARS-781 QRPL-1998 10X-9389 CATT-26
> > FP#-1 http://home.cinci.rr.com/w8diz & http://kitsandparts.com
>

2245. Re: Microwave meeting this Sunday

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 15:55:45 UTC
From: pkearn_keane@rols.eircom.cz.net.com
Message-ID: <3d835bb7.2281261@news1.eircom.net>
Source record: 41508
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"* Mefix *" <mefix@exudingwounds.ward32> wrote:

>
> <g3pho@qsl.net> wrote in message
> news:3d846d90.43138213@usenet.free-online.net...
> > CRAWLEY MICROWAVE ROUND TABLE
> >
> > The Crawley Amateur Radio Club will host their annual Microwave Round
> > Table meeting on Sunday, 15th September, 2002, starting at 10am local
> > time.
>
> Sponsored by Bird's Eye and Panasonic? ;o)

the MICROWAVE event should take ONLY TWO MINUTES :-)

afterwards there will a traditional oven ROAST to finish off :-)

---------- sig file ----------
play MORSO today.

get your chance at most rallies/shows.

Jackpot is always 400watts and All Bands for all winners

Two games to play: match_5 and match_12

Play as often as you like.

It might be you!

2246. looking for old style electrolytic cans, carbon comp resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 16:10:00 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <sbJg9.29393$TX5.895742@news1.east.cox.net>
Source record: 41509

I restore vintage radios and boatanchors, and have a need for
some older nut-mount style electrolytic can capacitors. These
can be defective, old parts, or new-old-stock. I open them
up and restuff with modern replacements. The electrical condition
doesn't matter, as the shell is used for appearances.

I also am running low on some values of carbon compostion
resistors, 1/2, 1 and 2 watts sizes.

Contact me at:

radioconnection@juno.com

Or...

remove NOSPAM in this header...

2247. Copper Wire Stretching?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 17:52:34 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <6nt6ou8577hokt0qf0t2q88s0jlb21m8e6@4ax.com>
Source record: 41513

I am wondering if anyone has information on the amount of stretch involved in typical wire antennas using copper wire. Proponents of copper clad steel wire seem to feel that copper wire's (hard or soft) stretching is an important issue. Of course tension and time would play a factor but for antennas such as a dipole are usually under less than 50 Lbs. pull. (Mine are less than 30 Lbs.) So I am wondering just how much increase in length in percentages are we talking about?

73
Danny, K6MHE

2248. TEK 495P Manuals Needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 18:01:51 UTC
From: Josh Fiden <AD6XI@nospam.net>
Message-ID: <3D8378FB.2D040D28@nospam.net>
Source record: 41511

Hi all,

I have just acquired a sick Tek 495P Spectrum Analyzer. I have no documentation for this, so I am looking for both Operation Manual and Service Manuals. First choice would be originals. Second choice copies. But even copies of the schematics would be great.

I appreciate any assistance!

Please correct reply-to address to be arrl.net. Sorry for the inconvenience.

73,

Josh AD6XI

2249. Re: build a satellite dish...is it possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 18:02:34 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <_QKg9.27212$gf6.798517@bin4.nnrp.aus1.giganews.com>
Source record: 41510

Look in some of the ARRL antenna books. There is what is called a stressed parabolic antenna. It is mainly some pipe (maybe electrical conduit) that is layed out like a star with the ends touching each other in the middle. Some screen wire is attachec to it to form a circle. A pipe is put in the center so that it looks like an umbrella. Some strong fishing cable is attached to the ends of the circle and the end of the "handle" . The fishing string is then pulled tight and the antenna is tehn checked to see if the shape is correct.

"Gabrio TheClue" <theclue.geo@yahoo.com> wrote in message news:3d8307e4.1020378@powernews.libero.it...
> hi to all! I'm new on this forum (i lurked a bit ^^') and i'm a
> complitely newbie on this hobby, so...i apologize for any stupid
> question i'll post here in the near future!! O_o
>
> the first problem: I'm planning with some friends to build a little
> radio telescope. A very difficult tatsk but we are a bit skilled in
> electronics and our enthusiasm will be the rest :=)
> but we have a problem: the dish! we need at least a 9 ft one (better
> if 12) but we haven't found it anywhere (i hoped to find and old
> dismissed C-band unit but...nope), And, of coz, should be very
> difficult to carry it til my home!
> so i'm thinking: is it possible to build a so big dish at home? How
> can we do it? (knowledges, structures, faq needed....)
>
> tnx for attention and sorry for bad english!
>
> gabrio
> www.ottobit.tk
>

2250. Re: Microwave meeting this Sunday

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 18:11:51 UTC
From: * Mefix * <mefix@exudingwounds.ward32>
Message-ID: <alvu57$qd5$1@knossos.btinternet.com>
Source record: 41512
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

```
"pk" <pkearn_keane@rols.eircom.cz.net.com> wrote in message
news:3d835bb7.2281261@news1.eircom.net...
> "* Mefix *" <mefix@exudingwounds.ward32> wrote:
>
> >
> > <g3pho@qsl.net> wrote in message
> > news:3d846d90.43138213@usenet.free-online.net...
> > > CRAWLEY MICROWAVE ROUND TABLE
> > >
> > > The Crawley Amateur Radio Club will host their annual Microwave Round
> > > Table meeting on Sunday, 15th September, 2002, starting at 10am local
> > > time.
> >
> > Sponsored by Bird's Eye and Panasonic? ;o)
>
> the MICROWAVE event should take ONLY TWO MINUTES :-)
>

Just as long as they remember to stir halfway through the meeting time (and
pierce the film lid with a fork)... ;O)
```

2251. recommended preamp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 18:30:10 UTC
From: AJ Sanderson <ajsand@nospam.com>
Message-ID: <am0u6l$h5h$1@nntp9.atl.mindspring.net>
Source record: 41529
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I just inserted an in-line HF antenna device that reduces signal level by 8-12 dB. I'd like to compensate for this by using an antenna preamp for the HF bands. I'd like to homebrew the preamp. I've been looking at several designs but can't decide. I'd appreciate some recommendations and/or pointers to some sights with good preamps. The receiver (transceiver) used will be an Icom 718.

Thanks, in advance, for any suggestions.

AJ

2252. Help!TEK.SG503 SIGNAL GEN.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 19:45:15 UTC
From: jos <soj@sympatico.ca>
Message-ID: <3D8391CB.E7C0400D@sympatico.ca>
Source record: 41514

Hello! I have just bought a TEK signal generator SG503 through EBAY. I do have very little information. Due to lack of bench space, I was thinking of not using the TM cabinet and power supply and rather build my own supply. Now that I have the unit, it appears to be more difficult than I thought. Two transitors, in the regulated section, one NPN and one PNP are located in the TM cabinet; probably for cooling reasons. I can deal with that by placing them in my own power supply. I am wondering if someone with more technical information and experience with the SG503 can lecture me on possible additional problems. Thanks! Jos, VE2AUC

2253. Re: Copper Wire Stretching?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 19:59:03 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3D8394FB.83A8D5@rica.net>
Source record: 41515

Dan Richardson wrote:
>
> I am wondering if anyone has information on the amount of stretch
> involved in typical wire antennas using copper wire. Proponents of
> copper clad steel wire seem to feel that copper wire's (hard or soft)
> stretching is an important issue. Of course tension and time would
> play a factor but for antennas such as a dipole are usually under less
> than 50 Lbs. pull. (Mine are less than 30 Lbs.) So I am wondering
> just how much increase in length in percentages are we talking about?
>
> 73
> Danny, K6MHE
>
>

Stretch is not the big problem with copper wire. Copper work hardens
when it is flexed to the point of yielding (the wind will do this to
the ends of the strand, when the traveling mechanical wave reflects
off the insulator), and after it work hardens it gets brittle. The
steel core in copper clad steel does not have this problem at the
forces created in most suspended strand antennas.

--
John Popelish

2254. Re: TEK 495P Manuals Needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 20:05:21 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailnospamorama.com>
Message-ID: <WCMg9.122656$2L.6125568@e3500-atl2.usenetserver.com>
Source record: 41516

Check with Tucker, the have a lot of equipment manuals, some on line.

Do a google, or other search engine, for Tucker Electronics.

--
Chuck
KE4ETH

"Josh Fiden" <AD6XI@nospam.net> wrote in message
news:3D8378FB.2D040D28@nospam.net...
> Hi all,
>
> I have just acquired a sick Tek 495P Spectrum Analyzer. I have no
> documentation for this, so I am looking for both Operation Manual and
> Service Manuals. First choice would be originals. Second choice
> copies. But even copies of the schematics would be great.
>
> I appreciate any assistance!
>
> Please correct reply-to address to be arrl.net. Sorry for the
> inconvenience.
>
> 73,
>
> Josh AD6XI
>

2255. Re: Fixing vintage amp with static/crackling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 20:50:57 UTC
From: "Mark D. Zacharias" <mzacharias@_null_cox.net>
Message-ID: <RiNg9.33807$3k4.33460@news1.central.cox.net>
Source record: 41517
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

This type of physical leakage is much more common in modern camcorders. DC leakage (passing DC from one stage to the next) was the big problem with Pioneers using those junky Sanyo caps. Power supply bypass is also unlikely to fix anything.
I vote for leaky coupling cap(s) or noisy differential transistor pair.

Mark Z.

****
Remove _null_ to reply
****

"Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net> wrote in message news:3d833765@news.netacc.net...
>
> "Kevin McMurtrie" <mcmurtri@sonic.net> wrote in message
> news:mcmurtri-21AFA3.00410714092002@typhoon.sonic.net...
> > Sounds like an electrolytic capacitor that has gone so bad that it's
> > leaking all over the circuit board.
>
> I would agree with Kevin. The first point to address in any trouble
> shooting endeavor is the power supplies. Electrolytics being the #1
> offender and tantalum capacitors used in bypassing DC busses being the #2
> culprit. Once the power supplies are primo, the rest of the circuits can be
> considered.
>
> Steve
>
>
>
>

2256. Re: Looking for 110pF NPO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 22:03:03 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <vec7ou0dfoo9ij3ihtgl94uh6u9alj4n1k@4ax.com>
Source record: 41518

You aren't going to find them. They've never been made, as far as I know. Why not simply take a 100pf (easy to get) and a 10pf (easy to get) and put them in parallel?

Jim

->>
->> > Anybody know where I can obtain 200 pieces of 110pF
->> > disk NPOs at 50V or greater to be used in a LPF?

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

2257. Re: Copper Wire Stretching?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 22:32:20 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <uo7e2cla589e4a@corp.supernews.com>
Source record: 41519

There will be more stretch if you use solid copper wire. I would rather use stranded, insulated wire for my dipoles. I have one that is 273' over all length, and has not stretched more than a few inches in the last 5 years, even though I have a constant 15-20Lbs. of tension on each end at all times. Stranded wire will flex better, and not snap under normal wind flexing. I use 12ga. insulated to keep the RF from arcing to tree limbs etc., also keeps the wire from corroding.
I tried solid copper once, and it stretched over a foot, then snapped.
As to weather stranded is better than soild in the RF arena, on HF, it really does not matter, it's more about the mechanical part.
Even if the wire is insulated, I still find that 468 divided by the frequency works just as well.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Dan Richardson" <k6mhe@mendolink.com> wrote in message
news:6nt6ou8577hokt0qf0t2q88s0jlb21m8e6@4ax.com...
> I am wondering if anyone has information on the amount of stretch
> involved in typical wire antennas using copper wire. Proponents of
> copper clad steel wire seem to feel that copper wire's (hard or soft)
> stretching is an important issue. Of course tension and time would
> play a factor but for antennas such as a dipole are usually under less
> than 50 Lbs. pull. (Mine are less than 30 Lbs.) So I am wondering
> just how much increase in length in percentages are we talking about?
>
> 73
> Danny, K6MHE
>
>
>
>

2258. Re: build a satellite dish...is it possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 23:11:10 UTC
From: jcplpsm@aol.communicate
Message-ID: <20020914191110.06911.00002999@mb-cq.aol.com>
Source record: 41520

> but we have a problem: the dish! we need at least a 9 ft one (better
>> if 12) but we haven't found it anywhere (i hoped to find and old
>> dismissed C-band unit but...nope), And, of coz, should be very
>> difficult to carry it til my home!

I'm quite surprised that you are unable to find an old C band dish. There are literally thousands of these around not being used. If you live in a smaller town, check with the local cable company. They may in fact have one or two that they can no longer use and would be happy to give away. They may be big, and you may have to fabricate a new frame to use in the concrete base, but they do break down into pieces for transportation.

Scott M.

2259. Re: Copper Wire Stretching?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 23:36:36 UTC
From: dave <dafouchey@comcast.net>
Message-ID: <3sh7ougb1q0n9uvvscg9v2oi0m8u6ucfl2@4ax.com>
Source record: 41521

I use #9 Hard Drawn solid copper wire and have no problems with
stretch even over long periods of time on spans up to 175 feet.
Smaller size wire I am sure would give different results. This was the
type of wire used for W.U. and Railroad Toll Circuits. Lasts many many
years without problems.

73's
Dave
WA4EMR

On Sat, 14 Sep 2002 10:52:34 -0700, Dan Richardson
<k6mhe@mendolink.com> wrote:

>I am wondering if anyone has information on the amount of stretch
>involved in typical wire antennas using copper wire. Proponents of
>copper clad steel wire seem to feel that copper wire's (hard or soft)
>stretching is an important issue. Of course tension and time would
>play a factor but for antennas such as a dipole are usually under less
>than 50 Lbs. pull. (Mine are less than 30 Lbs.) So I am wondering
>just how much increase in length in percentages are we talking about?
>
>73
>Danny, K6MHE
>
>
>

2260. Re: Good-ground inconsistencies...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-14 23:56:27 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D83CA04.725C5E69@townsqr.com>
Source record: 41522

Myron A Calhoun wrote:

>Any comments?

I suppose you're already looked into the possibility that the aluminum wire might dissolve in the soil. Doesn't happen where I live, I've seen pieces of aluminum unearthed after many years underground that are still pristine, but how it lasts in soil evidently depends on the alkali content in your locality.

Dick

2261. Re: build a satellite dish...is it possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 00:20:29 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailnospamorama.com>
Message-ID: <H9Rg9.23931$AY5.4816985@e3500-atl1.usenetserver.com>
Source record: 41524

Sam,

I think he in Italy. The headers of message originated with an .it address

--
Chuck
KE4ETH

"SAM" <jcplpsm@aol.communicate> wrote in message
news:20020914191110.06911.00002999@mb-cq.aol.com...
> > but we have a problem: the dish! we need at least a 9 ft one (better
> >> if 12) but we haven't found it anywhere (i hoped to find and old
> >> dismissed C-band unit but...nope), And, of coz, should be very
> >> difficult to carry it til my home!
>
> I'm quite surprised that you are unable to find an old C band dish. There
are
> literally thousands of these around not being used. If you live in a
smaller
> town, check with the local cable company. They may in fact have one or
two
> that they can no longer use and would be happy to give away. They may be
big,
> and you may have to fabricate a new frame to use in the concrete base, but
they
> do break down into pieces for transportation.
>
> Scott M.

2262. Re: build a satellite dish...is it possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 00:39:52 UTC
From: Bill M <exray@no>
Message-ID: <uo7likqo3ogha6@corp.supernews.com>
Source record: 41523

SAM wrote:
>
> > but we have a problem: the dish! we need at least a 9 ft one (better
> >> if 12) but we haven't found it anywhere (i hoped to find and old
> >> dismissed C-band unit but...nope), And, of coz, should be very
> >> difficult to carry it til my home!
>
> I'm quite surprised that you are unable to find an old C band dish. There are
> literally thousands of these around not being used. If you live in a smaller
> town, check with the local cable company. They may in fact have one or two
> that they can no longer use and would be happy to give away. They may be big,
> and you may have to fabricate a new frame to use in the concrete base, but they
> do break down into pieces for transportation.
>
> Scott M.

Scott,
Do you know of anybody that might have a copy of the original article
for the flat 8-Ball "dishes"? I think it was in something like Radio
Electronics magazine in the late 70s/early 80s.
-Bill M
-Bill M

2263. Re: build a satellite dish...is it possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 01:28:33 UTC
From: jcplpsm@aol.communicate
Message-ID: <20020914212833.06676.00002861@mb-cq.aol.com>
Source record: 41525

>o you know of anybody that might have a copy of the original article
>for the flat 8-Ball "dishes"?

Hey Bill, I'm not familliar with the article or the dish. I remember someone writing an article about building an easily constructed dish with wire mesh. Is this what you are refering to?

BTW, I thought you were going to do some work in OH? Are you planning any trips soon? Let me know and we can get together. Also, what about that sched?

Scott

2264. Re: build a satellite dish...is it possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 01:45:06 UTC
From: w9gb <gregory.beat@attbi.com>
Message-ID: <CCRg9.482723$UU1.77580@sccrnsc03>
Source record: 41526

Gabrio -

Start your inquiry here:

http://www.ultimatecharger.com/dish.html

"C" band dishes were not extensively used in Europe (for satellite TV) as they were in the USA during the 1980's. Many of these dishes were shippable and you assembled at your site. You may be able to contact a US dealer (or exporter) who would be willing to ship you one.

In Italy, I would check with the regular users of these services (e.g. universities, broadcasting, cable TV, telephone, government, large data service operators - who surplus these items from time to time).

Good luck

w9gb

"Gabrio TheClue" <theclue.geo@yahoo.com> wrote in message news:3d8307e4.1020378@powernews.libero.it...
> hi to all! I'm new on this forum (i lurked a bit ^^') and i'm a
> complitely newbie on this hobby, so...i apologize for any stupid
> question i'll post here in the near future!! O_o
>
> the first problem: I'm planning with some friends to build a little
> radio telescope. A very difficult tatsk but we are a bit skilled in
> electronics and our enthusiasm will be the rest :=)
> but we have a problem: the dish! we need at least a 9 ft one (better
> if 12) but we haven't found it anywhere (i hoped to find and old
> dismissed C-band unit but...nope), And, of coz, should be very
> difficult to carry it til my home!
> so i'm thinking: is it possible to build a so big dish at home? How
> can we do it? (knowledges, structures, faq needed....)
>
> tnx for attention and sorry for bad english!
>
> gabrio
> www.ottobit.tk

2265. Re: TEK 495P Manuals Needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 02:18:12 UTC
From: keep-it-clean <keep-it-clean@worldnet.att.net>
Message-ID: <E5Sg9.29293$jG2.2191942@bgtnsc05-news.ops.worldnet.att.net>
Source record: 41527

Fair Radio Sales in Lima, Ohio might be worth a try.

I visited the place when I was in the "neighborhood" last July, and they had a collection of old HP, Tek, military equipment, etc. manuals. Can't comment *how* extensive, but I did find manuals for a couple of my favorite boxes.

Don't recall the URL, but Google should reveal it :-)

==========

"Josh Fiden" <AD6XI@nospam.net> wrote in message
news:3D8378FB.2D040D28@nospam.net...
> Hi all,
>
> I have just acquired a sick Tek 495P Spectrum Analyzer. I have no
> documentation for this, so I am looking for both Operation Manual and
> Service Manuals. First choice would be originals. Second choice
> copies. But even copies of the schematics would be great.
>
> I appreciate any assistance!
>
> Please correct reply-to address to be arrl.net. Sorry for the
> inconvenience.
>
> 73,
>
> Josh AD6XI
>

2266. Re: build a satellite dish...is it possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 02:56:48 UTC
From: Bill M <exray@no>
Message-ID: <uo7tjf6t91vrb2@corp.supernews.com>
Source record: 41528

SAM wrote:
>
> >o you know of anybody that might have a copy of the original article
> >for the flat 8-Ball "dishes"?
>
> Hey Bill, I'm not familliar with the article or the dish. I remember someone
> writing an article about building an easily constructed dish with wire mesh.
> Is this what you are refering to?
>
> BTW, I thought you were going to do some work in OH? Are you planning any
> trips soon? Let me know and we can get together. Also, what about that sched?
>
> Scott

Hi Scott,
We had a bunch of those flat dishes in Missouri and Kansas. I recall
they were about 15 feet square, wood frame with mesh across the face.
The feedhorn+LNA/LNB was on a little tripod about 4 feet tall. Actually
they worked pretty well excepting the physical aspects and cows knocking
over the tripod :-)
I saw the article once but I think these were factory-made from the same
people that made the famous 8-Ball Receiver. They were located either
in SE Mo or Arkansas as I recall.
Immediate plan in to be in OH late next week...it keeps changing tho.
Nix on the sked, antenna is down at the moment.

-Bill

2267. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 03:52:03 UTC
From: hapticz@msn.com
Message-ID: <6783939e.0209141952.6da4e63f@posting.google.com>
Source record: 41530
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

John Popelish <jpopelish@rica.net> wrote in message news:<3D823461.555EA4CB@rica.net>...
> "Clifton T. Sharp Jr." wrote:
>
> > Freeze spray: 4 oz. can, $9 - $12. Contents: difluoroethane (R-134A).
> >
> > Falcon Dust-Off compressed-gas duster: 4 x 12 oz. cans, $11 at Costco.
> > Contents: difluoroethane (R-134A). Use upside-down for freeze.
>
> Cool!

Bernz-O-Matic propane with appropriate nozzle and valve works fine.
set cylinder upside down and blast away.

Severe incendiary hazard for foolish persons that smoke, but a quick
death is better than years of emphesyma. ;-))

2268. Re: "Be vewy, vewy quiet. I'm hunting Elmers."

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 04:11:36 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3D840878.B3ED41DF@mfi.net>
Source record: 41531

Geordi wrote:
>
> Are there any regulars in this group willing to Elmer a new-comer to
> homebrew? I"m in Greater-DC, but even folk not local to me could offer
> helpful advice. Please reply off-list with this subject (WIth the "re:"
> naturally) or "Elmer offer" so it doesn't get lost in the spam.
>
> Thank you, God bless and 73,
>
> Geordi Byron - kb3ijr
>
> w3gcm@sdf.lonestar.org
> SDF Public Access UNIX System - http://sdf.lonestar.org

What kind of help do you need? Ask questions, and people will answer.
I'm near Ocala Florida and I'm willing to help anyone local with the
electronics end of things. I've worked in repair, broadcast CATV
engineering, and built telemetry equipment used by NASA. I have lots of
parts and some test equipment. Depending on my health, your are welcome
to contact me.
--

An old fart since August 5th, 2002!
Michael A. Terrell
Central Florida

Check out my web site and tell me what you think.
I'm up to 160 pages, and still working on it.

http://www.terrell.150m.com

2269. Re: TEK 495P Manuals Needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 04:52:04 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3D8411F4.87299FF4@mfi.net>
Source record: 41532

keep-it-clean wrote:
>
> Fair Radio Sales in Lima, Ohio might be worth a try.
>
> I visited the place when I was in the "neighborhood" last July, and they had
> a collection of old HP, Tek, military equipment, etc. manuals. Can't
> comment *how* extensive, but I did find manuals for a couple of my favorite
> boxes.
>
> Don't recall the URL, but Google should reveal it :-)
>
> ==========
>
> "Josh Fiden" <AD6XI@nospam.net> wrote in message
> news:3D8378FB.2D040D28@nospam.net...
> > Hi all,
> >
> > I have just acquired a sick Tek 495P Spectrum Analyzer. I have no
> > documentation for this, so I am looking for both Operation Manual and
> > Service Manuals. First choice would be originals. Second choice
> > copies. But even copies of the schematics would be great.
> >
> > I appreciate any assistance!
> >
> > Please correct reply-to address to be arrl.net. Sorry for the
> > inconvenience.
> >
> > 73,
> >
> > Josh AD6XI
> >

http://www.fairradio.com/
--

An old fart since August 5th, 2002!
Michael A. Terrell
Central Florida

Check out my web site and tell me what you think.
I'm up to 160 pages, and still working on it.

http://www.terrell.150m.com

2270. Re: TEK 495P Manuals Needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 05:19:35 UTC
From: AD6XI@nospam.com
Message-ID: <3D8417D3.A757C80C@nospam.com>
Source record: 41533

Good idea. But they don't have it. Neither does Fair Radio. Thanks.

!Josh AD6XI

Chuck/KE4ETH wrote:

> Check with Tucker, the have a lot of equipment manuals, some on line.
>
> Do a google, or other search engine, for Tucker Electronics.
>
> --
> Chuck
> KE4ETH
>
> "Josh Fiden" <AD6XI@nospam.net> wrote in message
> news:3D8378FB.2D040D28@nospam.net...
> > Hi all,
> >
> > I have just acquired a sick Tek 495P Spectrum Analyzer. I have no
> > documentation for this, so I am looking for both Operation Manual and
> > Service Manuals. First choice would be originals. Second choice
> > copies. But even copies of the schematics would be great.
> >
> > I appreciate any assistance!
> >
> > Please correct reply-to address to be arrl.net. Sorry for the
> > inconvenience.
> >
> > 73,
> >
> > Josh AD6XI
> >

2271. Re: build a satellite dish...is it possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 09:08:12 UTC
From: theclue.geo@yahoo.com
Message-ID: <3d844ef8.600796@powernews.libero.it>
Source record: 41534

On Sat, 14 Sep 2002 19:20:29 -0500, "Chuck/KE4ETH"
<chuck_hawks@hotmailnospamorama.com> wrote:

>Sam,
>
> I think he in Italy. The headers of message originated with an .it address

yep :-(
in past years here in italy we used C-band dishes for HotBird2, but
just smallest one can be found now (max 1m). Largest ones are already
be dismantled and recycled, rit now....sob!

Gabrio "TheClue"
---
http://www.ottobit.tk
http://www.fumetti.us

"La violenza l'ultimo rifugio degli incapaci" (I.Asimov)

2272. Re: TEK 495P Manuals Needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 12:26:22 UTC
From: keep-it-clean <keep-it-clean@worldnet.att.net>
Message-ID: <O%_g9.13610$1C2.1106506@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41535

Now you got *me* interested :-)

I looked at a picture of the 495P and it is a lot newer design than I first expected [in fact, support from Tek just ended at beginning of 2002] so the traditional "vintage" resources (Fair Radio, etc.) may not be a great help.

http://www.tek.com/Measurement/cgi-bin/framed.pl?Document=/Measurement/Service/diystore/welcome.html&FrameSet=service

I can't believe that Tek can't supply the manuals you need by filling out the above form, but you never know these days :-(.

At one point, this outfit evidentally had one for sale [now marked SOLD but maybe worth a try] ----

http://216.239.51.100/search?q=cache:PYATRCjP_KEC:www.harlanlabs.com/specan.html+tektronix+manuals+495P&hl=en&ie=UTF-8

Finally, this company lists it in its inventory, so maybe they can help out ---

http://www.dovebid.com/auctions/production/test_n_measure.pdf

The following are more oriented towards "legacy" Tek (from my "favorites"/ "bookmarks" file ....

http://www.reprise.com/host/tektronix/resources/manual_sources.asp

http://www.geocities.com/r_corriveau/teklinks.html

http://www.repairfaq.org/REPAIR/F_Manuals.html#MANUALS_002

http://margo.student.utwente.nl/~wel/tek.htm

http://www.vaxxine.com/phil/scopes/arnoud/tek.htm

http://www.sphere.bc.ca/test/svcmanuals.html

http://www.logwell.com/tech/oscilloscopes/manuals.html

http://www.testequipmentcanada.com/

Finally the mailing list (fairly active) ----

http://groups.yahoo.com/group/tekscopes/ [Back in May, someone in France was looking for the same manuals]

Anyhow, hope you find your manuals ....

Looks like a great spectrum analyzer !!

-*-*-*-*-*-*-*-*-

<AD6XI@nospam.com> wrote in message news:3D8417D3.A757C80C@nospam.com...
> Good idea. But they don't have it. Neither does Fair Radio. Thanks.
>
> !Josh AD6XI
>
> Chuck/KE4ETH wrote:
>
> > Check with Tucker, the have a lot of equipment manuals, some on line.
> >
> > Do a google, or other search engine, for Tucker Electronics.
> >
> > --
> > Chuck
> > KE4ETH
> >
> > "Josh Fiden" <AD6XI@nospam.net> wrote in message
> > news:3D8378FB.2D040D28@nospam.net...
> > > Hi all,
> > >
> > > I have just acquired a sick Tek 495P Spectrum Analyzer. I have no
> > > documentation for this, so I am looking for both Operation Manual and
> > > Service Manuals. First choice would be originals. Second choice
> > > copies. But even copies of the schematics would be great.
> > >
> > > I appreciate any assistance!
> > >
> > > Please correct reply-to address to be arrl.net. Sorry for the
> > > inconvenience.
> > >
> > > 73,
> > >
> > > Josh AD6XI
> > >
>

2273. Eico 320

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 13:08:21 UTC
From: steve <swells244@insightbb.com>
Message-ID: <9D%g9.486513$UU1.78033@sccrnsc03>
Source record: 41536

I need the manuel on this unit.Bama shows it but the link is down.
Thanks
Steve

2274. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 13:58:52 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D84921C.39038653@clifto.com>
Source record: 41537
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

Clifton T. Sharp Jr. wrote:
> Freeze spray: 4 oz. can, $9 - $12. Contents: difluoroethane (R-134A).

Correcting myself: difluoroethane is not R-134A. I could have sworn I
looked it up a few months ago and saw something that says it is, but
I was wrong.

--
.signature in flux

2275. Re: Eico 320

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 14:26:03 UTC
From: Bill M <exray@no>
Message-ID: <uo95vkctj74039@corp.supernews.com>
Source record: 41538

steve wrote:
>
> I need the manuel on this unit.Bama shows it but the link is down.
> Thanks
> Steve

Works ok here. Try this URL
ftp://bama.sbc.edu/downloads/eico/320/

-Bill

2276. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 14:52:02 UTC
From: Artie DeCoe <Artie@dcoe.net>
Message-ID: <m81h9.44927$AR1.1658183@bin2.nnrp.aus1.giganews.com>
Source record: 41539
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

Not to mention, seriously flammable...

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3d8224a7.601768@news.freeserve.net...
> Butane Lighter fuel with an adapted nozzel works fine, seriousy
> cheaper too ;-)

2277. Re: recommended preamp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 16:09:17 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0209150809.f4d9486@posting.google.com>
Source record: 41540
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc

"AJ Sanderson" <ajsand@nospam.com> wrote in message
news:<am0u6l$h5h$1@nntp9.atl.mindspring.net>...
> I just inserted an in-line HF antenna device that reduces signal level by
> 8-12 dB. I'd like to compensate for this by using an antenna preamp for the
> HF bands. I'd like to homebrew the preamp. I've been looking at several
> designs but can't decide. I'd appreciate some recommendations and/or
> pointers to some sights with good preamps. The receiver (transceiver)
> used will be an Icom 718.
>
> Thanks, in advance, for any suggestions.

I probably won't be much help. I can't see why you have a device that causes that amount of loss on HF. Doesn't make sense to me at all. I was thinking the 718 had a preamp already in it. Most icoms do. "both my 730 and 706g do" Not to mention the front end is already hot on most icom rigs. There are many designs for pre-amps that would work, but it's not something I usually recommend. A good way to trash a perfectly good receiver. More images, etc, etc. I once built an HF preamp years ago, and I think I used MPE-152's???'s or something like that. I forgot...All it did was pump up the S meter, and basically trash out an already decent radio. "drake R4". It didn't do a thing as far as improving the s/n ratio. MK

2278. FA Lots of Misc Goodies

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 16:14:17 UTC
From: ni4l@msn.com
Message-ID: <d4a0748e.0209150814.3e839816@posting.google.com>
Source record: 41541
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.swap,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.cb

Allot of different parts for the builder. Turns counter, Verinier
Dial, National RF 175A plate choke, 3 blowers, several potentiometers,
several PJ-068B mic plugs for collins and drake, dow key relay,
several other relays for your amp or radio project. 2 coil forms, 8 HV
caps, ! filament transformer 5v@20 amps, a HV diode board, 2 pill
transistor amp with a 13.8 volt power supply built in to run a mobile
in the house unit runs off 110 volts. A nice collection of different
sized coils. A couple more small transformers. More items you will get
everything in the pic
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1380912859
thanks for taking time to Look

2279. FS Resistors and Neutralizing Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 16:22:19 UTC
From: ni4l@msn.com
Message-ID: <d4a0748e.0209150822.4fa138f@posting.google.com>
Source record: 41542
Cross-posted to: rec.radio.amateur,rec.ham-radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

FS CERAMIC/WIRE WOUND RESISTORS
I have a nice lot of 75 wire wound/ceramic resistors. They are
different values and wattages. All checked and marked. this is for the
whole lot.
They are all pretty good size,high wattages. Just what you need
for a good stout amp.
i have a pic.
30.00 + shipping or make me a offer.

FS 2 BIG Neutralizing Capacitors
Two neutralizing capacitors for controling the stability of that
big amplifier project your planning, These are VERY NICE AND BIG.

Capacitors stand 6" high and disk diameter is 2". Both caps are in
very good condition and I would rate at a 8+. There are no pits on the
aluminum or chips on the ceramic.
20.00 each +shipping

2280. Re: MC145170 production status?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 16:32:40 UTC
From: ronayling@hotmail.com
Message-ID: <3d84b383.28580452@news.freeserve.co.uk>
Source record: 41543

well if memory serves the 1057 is programmed by a serial
interface, not that that is a problem but it means a
processor of some sort I suppose, and I think its limited
to about 100mhz unaided. probably loads about as its a
domestic radio chip really. and its probably only got a
definition of about 1khz at LF, depends as ever what
you want it to do.

On Fri, 13 Sep 2002 13:26:59 +0100, Philip de Cadenet
<Philstheboss@thebbc.fslife.co.uk> wrote:

>Hi Ron,
>
>>You could try looking ex pmr, like NJ8813 and SP8906 HEF4750
>>there may be quite a few of those stocked around from old service
>>depots, or if it has to be smd a two-modulus system is very good
>>SP8792 NJ8821 if you are talking VCO at final freq.
>>The 4059 is really old.
>Have come across another alternative solution:
>
>Philips SAA 1057.
>
>(((73)))

2281. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 16:44:33 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D84B8F1.5A89088@clifto.com>
Source record: 41544
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

```
Artie DeCoe wrote:
> "Mike W" <mike@corn2.freeserve.co.uk> wrote...
> > Butane Lighter fuel with an adapted nozzel works fine, seriousy
> > cheaper too ;-)
>
> Not to mention, seriously flammable...

The HCFCs are flammable, too.

--
.signature in flux
```

2282. HP 5381A manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 16:55:14 UTC
From: steve <swells244@insightbb.com>
Message-ID: <SX2h9.487598$UU1.77949@sccrnsc03>
Source record: 41545

need the manual for this.I hate to pay 35.00 for one.
Steve

2283. Marconi TF2330 Wave Analyser - FREE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 17:26:39 UTC
From: tom.bratton@btinternet.com
Message-ID: <3d87c2b6.163992@news.btinternet.com>
Source record: 41546
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Free to a good home (UK only, sorry), Marconi Wave Analyser. 0 - 74kHz.

I simply don't want to throw it away if it is of some use to someone.

In good working order.

Ideal for anyone into ELF radio.

I shall be visiting Castle Donnington radio rally on Friday 20th Sept 2002,
so can deliver to there if required.

Contact me off - list if interested.

2284. Re: TEK 495P Manuals Needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 17:44:00 UTC
From: Hugh Colborn <dontspamstockden@tiscali.co.uk>
Message-ID: <3d84c6d0_2@mk-nntp-2.news.uk.tiscali.com>
Source record: 41447

There is also a Yahoo group which specialises in Tek Scopes etc. Try
http://groups.yahoo.com/group/TekScopes.

73
Hugh

"Josh Fiden" <AD6XI@nospam.net> wrote in message
news:3D8378FB.2D040D28@nospam.net...
> Hi all,
>
> I have just acquired a sick Tek 495P Spectrum Analyzer. I have no
> documentation for this, so I am looking for both Operation Manual and
> Service Manuals. First choice would be originals. Second choice
> copies. But even copies of the schematics would be great.
>
> I appreciate any assistance!
>
> Please correct reply-to address to be arrl.net. Sorry for the
> inconvenience.
>
> 73,
>
> Josh AD6XI
>

2285. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 18:45:54 UTC
From: mike <spamme0@juno.com>
Message-ID: <3D84D562.7B746073@juno.com>
Source record: 41448
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

Has anybody succeeded building a CO2 circuit cooler?
You can buy 'em, but they're way too expensive for home use.
To make this work, it has to change state right at the tip.
Never figured out how to make that work. Always expands at the
valve and only succeeded in cooling the valve.
mike

Bunch of stuff For Sale and Wanted at the link below.
http://www.geocities.com/SiliconValley/Monitor/4710/

"Clifton T. Sharp Jr." wrote:

> Artie DeCoe wrote:
> > "Mike W" <mike@corn2.freeserve.co.uk> wrote...
> > > Butane Lighter fuel with an adapted nozzel works fine, seriousy
> > > cheaper too ;-)
> >
> > Not to mention, seriously flammable...
>
> The HCFCs are flammable, too.
>
> --
> .signature in flux

--

2286. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 18:57:44 UTC
From: Gary Glaenzer <nobulltrans@mchsi.com>
Message-ID: <IK4h9.436490$me6.50048@sccrnsc01>
Source record: 41449
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

you need an orifice at the tip

what's happening is that there is nothing to prevent expansion after it
passes the valve

"mike" <spamme0@juno.com> wrote in message
news:3D84D562.7B746073@juno.com...
> Has anybody succeeded building a CO2 circuit cooler?
> You can buy 'em, but they're way too expensive for home use.
> To make this work, it has to change state right at the tip.
> Never figured out how to make that work. Always expands at the
> valve and only succeeded in cooling the valve.
> mike
>
> Bunch of stuff For Sale and Wanted at the link below.
> http://www.geocities.com/SiliconValley/Monitor/4710/
>
>
>
> "Clifton T. Sharp Jr." wrote:
>
> > Artie DeCoe wrote:
> > > "Mike W" <mike@corn2.freeserve.co.uk> wrote...
> > > > Butane Lighter fuel with an adapted nozzel works fine, seriousy
> > > > cheaper too ;-)
> > >
> > > Not to mention, seriously flammable...
> >
> > The HCFCs are flammable, too.
> >
> > --
> > .signature in flux
>
> --
>

2287. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 19:44:36 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3d84e324$1@news.netacc.net>
Source record: 41450
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

"Artie DeCoe" <Artie@dcoe.net> wrote in message
news:m81h9.44927$AR1.1658183@bin2.nnrp.aus1.giganews.com...
> Not to mention, seriously flammable...
>
>
In days of yore, the emergency tire inflators were nothing more than canned butane. In high school I was working in the local filling station when a co-worker was dismounting a tire with a cigarette dangling from his mouth. The explosion destroyed the tire and took his beard off. Amazinly, he was not seriously hurt. Was a heck of a bang though....

Steve

2288. Re: TEK 495P Manuals Needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 20:07:51 UTC
From: Josh Fiden <AD6XI@nospam.net>
Message-ID: <3D84E803.BA917EED@nospam.net>
Source record: 41451

Well... I went fishing and sent off a handful of emails. Let's see what I catch.
Thanks for all the leads.

Regards,
Josh. AD6XI

keep-it-clean wrote:

> Now you got *me* interested :-)
>
> I looked at a picture of the 495P and it is a lot newer design than I first
> expected [in fact, support from Tek just ended at beginning of 2002] so the
> traditional "vintage" resources (Fair Radio, etc.) may not be a great help.
>
> http://www.tek.com/Measurement/cgi-bin/framed.pl?Document=/Measurement/Servi
> ce/diystore/welcome.html&FrameSet=service
>
> I can't believe that Tek can't supply the manuals you need by filling out
> the above form, but you never know these days :-(.
>
> At one point, this outfit evidentally had one for sale [now marked SOLD but
> maybe worth a try] ----
>
> http://216.239.51.100/search?q=cache:PYATRCjP_KEC:www.harlanlabs.com/specan.
> html+tektronix+manuals+495P&hl=en&ie=UTF-8
>
> Finally, this company lists it in its inventory, so maybe they can help
> out ---
>
> http://www.dovebid.com/auctions/production/test_n_measure.pdf
>
> The following are more oriented towards "legacy" Tek (from my "favorites"/
> "bookmarks" file ....
>
> http://www.reprise.com/host/tektronix/resources/manual_sources.asp
>
> http://www.geocities.com/r_corriveau/teklinks.html
>
> http://www.repairfaq.org/REPAIR/F_Manuals.html#MANUALS_002
>
> http://margo.student.utwente.nl/~wel/tek.htm
>
> http://www.vaxxine.com/phil/scopes/arnoud/tek.htm
>
> http://www.sphere.bc.ca/test/svcmanuals.html

>
> http://www.logwell.com/tech/oscilloscopes/manuals.html
>
> http://www.testequipmentcanada.com/
>
> Finally the mailing list (fairly active) ----
>
> http://groups.yahoo.com/group/tekscopes/ [Back in May, someone in
> France was looking for the same manuals]
>
> Anyhow, hope you find your manuals ....
>
> Looks like a great spectrum analyzer !!
>
> -*-*-*-*-*-*-*-*-
>
> <AD6XI@nospam.com> wrote in message news:3D8417D3.A757C80C@nospam.com...
> > Good idea. But they don't have it. Neither does Fair Radio. Thanks.
> >
> > !Josh AD6XI
> >
> > Chuck/KE4ETH wrote:
> >
> > > Check with Tucker, the have a lot of equipment manuals, some on line.
> > >
> > > Do a google, or other search engine, for Tucker Electronics.
> > >
> > > --
> > > Chuck
> > > KE4ETH
> > >
> > > "Josh Fiden" <AD6XI@nospam.net> wrote in message
> > > news:3D8378FB.2D040D28@nospam.net...
> > > > Hi all,
> > > >
> > > > I have just acquired a sick Tek 495P Spectrum Analyzer. I have no
> > > > documentation for this, so I am looking for both Operation Manual and
> > > > Service Manuals. First choice would be originals. Second choice
> > > > copies. But even copies of the schematics would be great.
> > > >
> > > > I appreciate any assistance!
> > > >
> > > > Please correct reply-to address to be arrl.net. Sorry for the
> > > > inconvenience.
> > > >
> > > > 73,
> > > >
> > > > Josh AD6XI
> > > >
> > >

2289. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 21:35:54 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D84FD3A.8080202@eznec.com>
Source record: 41452
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

I've used environmental chambers that use CO2 for cooling. You use a CO2 bottle with a dip tube, so it exits as liquid, the same as a can of cold spray. The expansion turns it into a kind of snowy spray of solid CO2.

Roy Lewallen, W7EL

mike wrote:
> Has anybody succeeded building a CO2 circuit cooler?
> You can buy 'em, but they're way too expensive for home use.
> To make this work, it has to change state right at the tip.
> Never figured out how to make that work. Always expands at the
> valve and only succeeded in cooling the valve.
> mike

2290. Re: recommended preamp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 21:37:27 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uo9vrsfaobuc36@corp.supernews.com>
Source record: 41453
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Boy, I second Mark and then some.

The noise level on HF is quite high. As long as you can hear the noise, then you have enough gain. Any more gain hurts, rather than helps. Turn on your radio, switch to 10 meters (the quietest HF band) and then plug in the antenna. Does the noise increase? If so, you can't use any more gain. Your receiver has a sensitivity of 0.16 microvolt. Even with your 10 db loss, you probably still have a couple of microvolts of noise coming into the radio. If the signal is below that couple of microvolts, you aren't going to hear it.

Now, what you will do with the preamp is amplify the noise. The signals, being stronger, won't get amplified as much as the noise unless they are very weak, then they will get amplified as much, but no more. So you will hear weak signals as well, and not so weak signals not as well, if the signal you are listening to is the only one on the band.

But it won't be. There will be other signals, and they will be more inclined to swamp the RF amp in the 718 or pump your AGC. You will get lots more intermod (the 718 isn't a K2 after all), so the net result of adding the preamp will be a much harder time, a lot less fun operating, and overall, a big loss in your ability to pick out the weak signals.

Years ago, when tube type receivers had sensitivity in the 5 microvolt region, a preamp made some sense. But with a receiver as hot as the 718, it makes no sense at all at HF.

At VHF/UHF, where the band noise is a lot lower, and the noise inside the radio a lot higher, then it may make sense. But at HF, it's pretty much always a looser.

..

"Mark Keith" <nm5k@wt.net> wrote in message
news:25eb70d7.0209150809.f4d9486@posting.google.com...
> I probably won't be much help. I can't see why you have a device that
> causes that amount of loss on HF. Doesn't make sense to me at all. I
> was thinking the 718 had a preamp already in it. Most icoms do. "both

2291. Re: build a satellite dish...is it possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 22:14:32 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <i6r9ougcnl1k514bfci71r0da3khsvge6v@4ax.com>
Source record: 41454

On Sat, 14 Sep 2002 09:56:57 GMT, theclue.geo@yahoo.com (Gabrio TheClue) wrote:

>the first problem: I'm planning with some friends to build a little >radio telescope. A very difficult tatsk but we are a bit skilled in >electronics and our enthusiasm will be the rest :=)

You did not say which frequency band you are interested in.

If you are interested in the 21 cm hydrogen line or shorter wavelengths, you might consider using four 1.5 m dishes on a rigid frame and feed the signal with coaxial cables of equal length to a combiner and then into a receiver, producing an equivalent collecting power of a single 3 m dish. You might even consider using nine 1 m dishes for the same effect.

At 21 cm you could still use coaxial line 1/4 (or 3/4, 5/4 etc) wavelength transformers to transform the impedance from four 50 ohm antenna elements to a single 50 ohm downlead using a 100 ohm section or first pairing two 50 ohm antennas to a single feed using a 70 ohm section and then pairing these two lines into a single downlead with other 70 ohm sections. Unfortunately, these 1/4 transformers are frequency selective and they work only on a narrow frequency band.

Paul OH3LWR

2292. Re: recommended preamp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 22:37:41 UTC
From: AJ Sanderson <ajsand@nospam.com>
Message-ID: <am32k1$cm5$1@slb5.atl.mindspring.net>
Source record: 41455
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Actually, I was off on my initial 8-12 dB loss. It is more like 4-6 dB. The in-line device is an interference canceller, similar to the MFJ model, except home brewed. There is some loss, but I found that the orientation of the noise antenna makes a difference in the amount of total loss. It seems to work great on computer screen noise, but the power line noise I really wanted to eliminate is not even touched. Maybe the noise is too broadbanded (when the noise occurs I can hear it on all the Ham bands) . The Icom blanker won't eliminate it either, but the noise blanker in an HTX-100 10 meter rig eliminates it almost completely! I agree with posters that a preamp would definitely do more harm than good. However, my immediate goal is to get rid of this noise!

AJ

>
> Curious, what device did you insert? Sounds like you need to take it out:-)
>
> Bob
> k5qwg
>
> > I'd like to compensate for this by using an antenna preamp for the
> >HF bands. I'd like to homebrew the preamp. I've been looking at several
> >designs but can't decide. I'd appreciate some recommendations and/or
> >pointers to some sights with good preamps. The receiver (transceiver)
> >used will be an Icom 718.
> >
> >Thanks, in advance, for any suggestions.
> >
> >AJ
> >
>

2293. Re: Microwave meeting this Sunday

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-15 23:17:53 UTC
From: adamory <adamory@ntlworld.com>
Message-ID: <ho8h9.12436$7x3.630784@newsfep2-win.server.ntli.net>
Source record: 41457
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

doesn't take as much power, or as long at 76GHz hi

"* Mefix *" <mefix@exudingwounds.ward32> wrote in message
news:alvu57$qd5$1@knossos.btinternet.com...
>
> "pk" <pkearn_keane@rols.eircom.cz.net.com> wrote in message
> news:3d835bb7.2281261@news1.eircom.net...
> > "* Mefix *" <mefix@exudingwounds.ward32> wrote:
> >
> > >
> > > <g3pho@qsl.net> wrote in message
> > > news:3d846d90.43138213@usenet.free-online.net...
> > > > CRAWLEY MICROWAVE ROUND TABLE
> > > >
> > > > The Crawley Amateur Radio Club will host their annual Microwave
Round
> > > > Table meeting on Sunday, 15th September, 2002, starting at 10am
local
> > > > time.
> > >
> > > Sponsored by Bird's Eye and Panasonic? ;o)
> >
> > the MICROWAVE event should take ONLY TWO MINUTES :-)
> >
>
> Just as long as they remember to stir halfway through the meeting time
(and
> pierce the film lid with a fork)... ;O)
>
>
>

2294. Re: build a satellite dish...is it possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-16 00:17:40 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d8522f8.1895130@news.freeserve.net>
Source record: 41456

I understand that Joderel Bank may have a spare dish ;-)
--
On Sat, 14 Sep 2002 09:56:57 GMT, theclue.geo@yahoo.com (Gabrio
TheClue) wrote:

>hi to all! I'm new on this forum (i lurked a bit ^^') and i'm a
>complitely newbie on this hobby, so...i apologize for any stupid
>question i'll post here in the near future!! O_o
>
>the first problem: I'm planning with some friends to build a little
>radio telescope. A very difficult tatsk but we are a bit skilled in
>electronics and our enthusiasm will be the rest :=)
>but we have a problem: the dish! we need at least a 9 ft one (better
>if 12) but we haven't found it anywhere (i hoped to find and old
>dismissed C-band unit but...nope), And, of coz, should be very
>difficult to carry it til my home!
>so i'm thinking: is it possible to build a so big dish at home? How
>can we do it? (knowledges, structures, faq needed....)
>
>tnx for attention and sorry for bad english!
>
>gabrio
>www.ottobit.tk

2295. Repairing Conductive Rubber Touchpads

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-16 02:28:08 UTC
From: Terry Nixon <TLNixon@mchsi.com>
Message-ID: <Ykbh9.332644$aA.58301@sccrnsc02>
Source record: 41458

Has anyone ever had any success at repairing these?

I have 2 Kenwood HT's and an Azden 2 meter rig that I'd liek to respore to operating condition. The pads have simply worn out.

I know MCM Electronics sells a kit to repair these, however it is about $25.00. Does anyone know if the stuff works or not, or maybe if someone else has a similar product?

Thanks
Terry-WB0VQP

2296. Re: TEK 495P Manuals Needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-16 03:21:03 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D854E7A.10E1@pop.removethistomailme.net>
Source record: 41459

Josh Fiden wrote:
>
> Well... I went fishing and sent off a handful of emails. Let's see what I catch.
> Thanks for all the leads.

I've just posted the Tek 495P operator's manual at
http://www.qsl.net/ke5fx/misc/495p.pdf. 17 megs, 160 pages.

I may have a spare set of service manuals lying around -- I'll have a
look tonight. I'm not in the manual business by any means, but drop me
a line if you can't find them for sale anywhere else. :)

Also, I'm pretty sure you can rent the service manuals from Consolidated
Surplus (http://www.consolidatedsurplus.com).

What are the trouble symptoms? That's a heck of a nice piece of gear if
you can get it working.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2297. 6M Amp Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-16 03:40:19 UTC
From: Marty <vk2umj@NOSPAM.yahoo.com.au>
Message-ID: <%gch9.33620$g9.94249@newsfeeds.bigpond.com>
Source record: 41460

Hi All,

I know this has all been discussed before, but I have searched Google to try and find relevant info without great luck.

I'm looking for a cheap and simple design for a homebrew solid state 6 meter 100W SSB/FM linear amp that will operate from 13.8V supply and 10W (or less) drive. I believe QST had such an amp detailed in October 1990 issue, but I don't have access to any QST (or similar) magazines so that isn't much use to me!!

Any info, diagrams, etc would be greatly appreciated. Thank you.

73's
--
Martin, VK2UMJ
vk2umj@NOSPAMyahoo.com.au

Remove NOSPAM from e-mail address to reply

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.386 / Virus Database: 218 - Release Date: 09/09/2002

2298. Re: HP 5381A manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-16 05:53:28 UTC
From: Bruce Lane <feedspammerstothebalrog.4.spamvac@spamgourmet.com>
Message-ID: <MPG.17ef11aef0cbbb5e9899e1@news.drizzle.com>
Source record: 41462

In article <SX2h9.487598$UU1.77949@sccrnsc03>, swells244@insightbb.com
says...

> need the manual for this.I hate to pay 35.00 for one.

Considering the typical cost of a service manual today, ordered
from the company that produced it, that's a heck of a good price.

Manuals Plus has several copies for an even better price ($25.00).
Check this link:

http://www.manualsplus.com/mpstore/product.asp?sku=31000&dept%5Fid=1

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

2299. Re: recommended preamp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-16 05:54:47 UTC
From: Bill Nelson <billn@spock.peak.org>
Message-ID: <am3rn6$48i$10@quark.scn.rain.com>
Source record: 41461
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

In rec.radio.amateur.antenna AJ Sanderson <ajsand@nospam.com> wrote:
> Actually, I was off on my initial 8-12 dB loss. It is more like 4-6 dB.
> The in-line device is an interference canceller, similar to the MFJ model,
> except home brewed. There is some loss, but I found that the orientation of
> the noise antenna makes a difference in the amount of total loss. It seems
> to work great on computer screen noise, but the power line noise I really
> wanted to eliminate is not even touched. Maybe the noise is too broadbanded
> (when the noise occurs I can hear it on all the Ham bands) . The Icom
> blanker won't eliminate it either, but the noise blanker in an HTX-100 10
> meter rig eliminates it almost completely! I agree with posters that a
> preamp would definitely do more harm than good. However, my immediate goal
> is to get rid of this noise!

The noise eliminator should wipe out power line noise as well - assuming
that the source is close enough that it can be received by your sense
antenna.

If it can, then you must be doing something wrong in adjusting either
your phase or gain of the inverted signal.

--
Bill Nelson (billn@peak.org)

2300. Re: recommended preamp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-16 08:07:13 UTC
From: AJ Sanderson <ajsand@nospam.com>
Message-ID: <am43fb$es2$1@slb0.atl.mindspring.net>
Source record: 41463
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc

>
> The noise eliminator should wipe out power line noise as well - assuming
> that the source is close enough that it can be received by your sense
> antenna.

I can eliminate computer and monitor noise completely, but it won't touch the power line noise. Of course, I've only been using a 5 foot piece of wire as the cancelling antenna. Perhaps if I went with a larger antenna, I might get results but then I don't want to start cancelling the signals I want to receive.

> If it can't, then you must be doing something wrong in adjusting either
> your phase or gain of the inverted signal.

The power line noise is apparently some distance away because no adjustment will affect it.

AJ

>
> --
> Bill Nelson (billn@peak.org)
>

2301. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-16 08:42:55 UTC
From: mike <spamme0@juno.com>
Message-ID: <3D85998F.F69DD066@juno.com>
Source record: 41464
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

Yep, I understand the thermodynamics. The problem is mechanics.
What I don't understand is how you
get the valve in your hand and the end of the stick far enough away so you
can get at the thing you're spraying and still have the expansion happen at
the tip????
If you rely on the orifice at the tip, you have to fill up the whole tube
(between
the valve and the orifice) with liquid at each
spray and it will spray for a good long time after you shut off the valve.
Not very good
control. The only way to emit less than maximum cool is to close the valve
part way.
This allows the pressure in the tube to go down and the phase change happens
in
the tube cooling it instead of the thing you want cooled.

One possibility is to have a tiny valve right at the tip with a mechanical
contrivance
to allow you to open it from inches away. I can't get a picture in my mind
of how one
would accomplish this.
mike

Roy Lewallen wrote:

> I've used environmental chambers that use CO2 for cooling. You use a CO2
> bottle with a dip tube, so it exits as liquid, the same as a can of cold
> spray. The expansion turns it into a kind of snowy spray of solid CO2.
>
> Roy Lewallen, W7EL
>
> mike wrote:
> > Has anybody succeeded building a CO2 circuit cooler?
> > You can buy 'em, but they're way too expensive for home use.
> > To make this work, it has to change state right at the tip.
> > Never figured out how to make that work. Always expands at the
> > valve and only succeeded in cooling the valve.
> > mike

--
Bunch of stuff For Sale and Wanted at the link below.
http://www.geocities.com/SiliconValley/Monitor/4710/

2302. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-16 09:32:56 UTC
From: "Ken Knox (N1JRO)" <knox_k@nemaine.com>
Message-ID: <s99bouo1b92nr9d4eeh2jcopa12ni8da27@4ax.com>
Source record: 41465
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew

On Mon, 16 Sep 2002 01:42:55 -0700, mike <spamme0@juno.com> wrote:

>[..]

>One possibility is to have a tiny valve right at the tip with a mechanical
>contrivance
>to allow you to open it from inches away. I can't get a picture in my mind
>of how one
>would accomplish this.
>mike
>
[..]

Instead of using a valve, why not do as is done in most domestic
refrigeration units and use a small capillry tube for the metering
device. That would eliminate filling up a larger tube to get the
cooling to where you want it.

2303. Re: build a satellite dish...is it possible?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-16 09:50:04 UTC
From: theclue.geo@yahoo.com
Message-ID: <3d85aa79.536752@powernews.libero.it>
Source record: 41466

On Mon, 16 Sep 2002 00:17:40 GMT, mike@corn2.freeserve.co.uk (Mike W)
wrote:

>I understand that Joderel Bank may have a spare dish ;-)

great, can he put it on a standard uk small packet? :-P

:-)

gabrio

>--
>On Sat, 14 Sep 2002 09:56:57 GMT, theclue.geo@yahoo.com (Gabrio
>TheClue) wrote:
>
>>hi to all! I'm new on this forum (i lurked a bit ^^') and i'm a
>>complitely newbie on this hobby, so...i apologize for any stupid
>>question i'll post here in the near future!! O_o
>>
>>the first problem: I'm planning with some friends to build a little
>>radio telescope. A very difficult tatsk but we are a bit skilled in
>>electronics and our enthusiasm will be the rest :=)
>>but we have a problem: the dish! we need at least a 9 ft one (better
>>if 12) but we haven't found it anywhere (i hoped to find and old
>>dismissed C-band unit but...nope), And, of coz, should be very
>>difficult to carry it til my home!
>>so i'm thinking: is it possible to build a so big dish at home? How
>>can we do it? (knowledges, structures, faq needed....)
>>
>>tnx for attention and sorry for bad english!
>>
>>gabrio
>>www.ottobit.tk
>

Gabrio "TheClue"
---
http://www.ottobit.tk
http://www.fumetti.us

"La violenza l'ultimo rifugio degli incapaci" (I.Asimov)

2304. Re: 6M Amp Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-16 12:25:00 UTC
From: Dale Parfitt <parinc@verizon.net>
Message-ID: <3D85C723.98571D06@verizon.net>
Source record: 41468

Marty wrote:

> Hi All,
>
> I know this has all been discussed before, but I have searched Google to try
> and find relevant info without great luck.
>
> I'm looking for a cheap and simple design for a homebrew solid state 6 meter
> 100W SSB/FM linear amp that will operate from 13.8V supply and 10W (or less)
> drive. I believe QST had such an amp detailed in October 1990 issue, but I
> don't have access to any QST (or similar) magazines so that isn't much use
> to me!!
>
> Any info, diagrams, etc would be greatly appreciated. Thank you.
>
> 73's
> --
> Martin, VK2UMJ
> vk2umj@NOSPAMyahoo.com.au
>

Do a Google search under FAR Circuits. Fred carries the PC board and for an additional $1, the article.

Dale W4OP

2305. vhf dummy load plans

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-16 12:25:50 UTC
From: Ralph <margesimpson3@hotmail.com>
Message-ID: <i5kh9.79591$gf6.2580149@bin4.nnrp.aus1.giganews.com>
Source record: 41467

Howdy,

Does anyone know where to look for plans to construct a dummy load that will at least go to 174 MHz?

Thank You,

Ralph

2306. Re: 6M Amp Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-16 12:54:34 UTC
From: Marty <vk2umj@NOSPAM.yahoo.com.au>
Message-ID: <Sokh9.34113$g9.95578@newsfeeds.bigpond.com>
Source record: 41469

Thanks for that info. I've had a look at the site, and while the pcb is a tempting idea indeed (makes construction real easy), by the time I figure in currency conversion, postage, etc I'm looking at around $50AUS just to get the board. If possible, I'd be happy just to get a copy of the article so I can see if it's suitable first, and maybe homebrew a bit cheaper.

Cheers

Martin Howells, VK2UMJ
Lightning Ridge NSW Australia
E-Mail: vk2umj@NOSPAMyahoo.com.au

Remove NOSPAM from e-mail address to reply

"Dale Parfitt" <parinc@verizon.net> wrote in message
news:3D85C723.98571D06@verizon.net...
>
>
> Marty wrote:
>
> > Hi All,
> >
> > I know this has all been discussed before, but I have searched Google to
try
> > and find relevant info without great luck.
> >
> > I'm looking for a cheap and simple design for a homebrew solid state 6
meter
> > 100W SSB/FM linear amp that will operate from 13.8V supply and 10W (or
less)
> > drive. I believe QST had such an amp detailed in October 1990 issue,
but I
> > don't have access to any QST (or similar) magazines so that isn't much
use
> > to me!!
> >
> > Any info, diagrams, etc would be greatly appreciated. Thank you.
> >
> > 73's
> > --
> > Martin, VK2UMJ
> > vk2umj@NOSPAMyahoo.com.au
> >
>
> Do a Google search under FAR Circuits. Fred carries the PC board and for

an
> additional $1, the article.
>
> Dale W4OP
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.386 / Virus Database: 218 - Release Date: 09/09/2002

2307. Re: Repairing Conductive Rubber Touchpads

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-16 15:11:57 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3D85F4BD.1C4EF882@ieee.org>
Source record: 41470

Terry Nixon wrote:

> Has anyone ever had any success at repairing these?
>
> I have 2 Kenwood HT's and an Azden 2 meter rig that I'd liek to respore to
> operating condition. The pads have simply worn out.
>
> I know MCM Electronics sells a kit to repair these, however it is about
> $25.00. Does anyone know if the stuff works or not, or maybe if someone else
> has a similar product?
>
> Thanks
> Terry-WB0VQP

My Zenith TV uses something similar. I rub the rubber keys on some fine grade sandpaper to remove the tin that gets on the rubber. I don't rub hard as I don't

want to remove the rubber. It works fine for a few months between cleanings.

Good luck.

Bill K7NOM

2308. Re: vhf dummy load plans

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-16 16:11:12 UTC
From: Heikki Kaskelma <kashei@mas-oy.com>
Message-ID: <Aonh9.6803$EL6.74652@news.kpnqwest.fi>
Source record: 41471

"Ralph" wrote:
>
> Does anyone know where to look for plans to construct a dummy load that
will
> at least go to 174 MHz?
>

Buy a 100 ft reel of Belden 83265 cable (RG-178B/U).
Attenuation at 50MHz 10.5dB, 100MHz 14dB, 200MHz 19dB,
400MHz 28dB,1GHz 46dB.
Doesn't matter what, if anything, you connect at the other end.

Heikki Kaskelma OH2AUG

2309. Re: Repairing Conductive Rubber Touchpads

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-16 17:07:14 UTC
From: Lou <tech@dp.net>
Message-ID: <am52vj$2i1u$1@news.dp.net>
Source record: 41472

I've tried the repair kit, and in "my" experience, it didn't work.
I did 2 keypads to the letter of instructions, with no luck.
In my opinion, they aren't worth the cost.

Lou/tech@DP.NET

"Bill Janssen" <billj@ieee.org> wrote in message
news:3D85F4BD.1C4EF882@ieee.org...
>
>
> Terry Nixon wrote:
>
> > Has anyone ever had any success at repairing these?
> >
> > I have 2 Kenwood HT's and an Azden 2 meter rig that I'd liek to respore
to
> > operating condition. The pads have simply worn out.
> >
> > I know MCM Electronics sells a kit to repair these, however it is about
> > $25.00. Does anyone know if the stuff works or not, or maybe if someone
else
> > has a similar product?
> >
> > Thanks
> > Terry-WB0VQP
>
> My Zenith TV uses something similar. I rub the rubber keys on some fine
grade
> sandpaper to remove the tin that gets on the rubber. I don't rub hard as I
don't
>
> want to remove the rubber. It works fine for a few months between
cleanings.
>
> Good luck.
>
> Bill K7NOM
>
>

2310. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-16 17:49:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D86198C.6010000@eznec.com>
Source record: 41474
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

What makes the problem of using CO2 different from that of using Freon?

Roy Lewallen, W7EL

mike wrote:
> Yep, I understand the thermodynamics. The problem is mechanics.
> What I don't understand is how you
> get the valve in your hand and the end of the stick far enough away so you
> can get at the thing you're spraying and still have the expansion happen at
> the tip????
> If you rely on the orifice at the tip, you have to fill up the whole tube
> (between
> the valve and the orifice) with liquid at each
> spray and it will spray for a good long time after you shut off the valve.
> Not very good
> control. The only way to emit less than maximum cool is to close the valve
> part way.
> This allows the pressure in the tube to go down and the phase change happens
> in
> the tube cooling it instead of the thing you want cooled.
>
> One possibility is to have a tiny valve right at the tip with a mechanical
> contrivance
> to allow you to open it from inches away. I can't get a picture in my mind
> of how one
> would accomplish this.
> mike

2311. sstv over internet, air-internet-air

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-16 18:17:37 UTC
From: HB9TLK <me@privacy.net>
Message-ID: <3d86203e$0$1387$4d4ef98e@read.news.ch.uu.net>
Source record: 41473

i have made something like sstv over internet. or lets say echolink
for sstv. the test-version is not very elaborate or user friendy,
but it seems to work.

the url:
www.hb9tlk.com/isstv/
just press "download" if u dont understand german.

soft is based on the mmsstv.dll module.

2312. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-16 20:40:07 UTC
From: szekeresREMOVE@pitt.edu
Message-ID: <am5fcr$qi8$9@usenet01.srv.cis.pitt.edu>
Source record: 41475
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

In article <3d84e324$1@news.netacc.net>, "Stephen C. Robbins"
<srobbinsNoSPaMDUDES@netacc.net> wrote:
>
>"Artie DeCoe" <Artie@dcoe.net> wrote in message
>news:m81h9.44927$AR1.1658183@bin2.nnrp.aus1.giganews.com...
>> Not to mention, seriously flammable...
>>
>>
>In days of yore, the emergency tire inflators were nothing more than canned
>butane. In high school I was working in the local filling station when a
>co-worker was dismounting a tire with a cigarette dangling from his mouth.
>The explosion destroyed the tire and took his beard off. Amazinly, he was
>not seriously hurt. Was a heck of a bang though....

I didn't think the can of air for my "spare" was butane. I will check. Since my spare doesn't come apart, I guess it would be safe. I had purchased cans in the 80's made for flat fixing that were flammable Now they may be hard to find or do not exist due to restrictions. Tire places are extremely cautious about those situations. Some think ALL tire inflators are flammable. Perhaps thats the safe assumption.

I wonder if one could make a low flow cooler using a thermo cooler??
Those freeze sprays are usually too cold anyway.

greg

2313. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-16 21:37:03 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailnospamorama.com>
Message-ID: <8kth9.161477$2L.7235185@e3500-atl2.usenetserver.com>
Source record: 41476
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

Last time I bought a can of tire sealer, I got a sticker to put on the rim near the valve to warn the person fixing the tire to not smoke and to inflate and deflate 3 times or so. It contained butane and this was less then 6 months ago.

--
Chuck
KE4ETH

"GregS" <szekeresREMOVE@pitt.edu> wrote in message
news:am5fcr$qi8$9@usenet01.srv.cis.pitt.edu...
> In article <3d84e324$1@news.netacc.net>, "Stephen C. Robbins"
<srobbinsNoSPaMDUDES@netacc.net> wrote:
> >
> >"Artie DeCoe" <Artie@dcoe.net> wrote in message
> >news:m81h9.44927$AR1.1658183@bin2.nnrp.aus1.giganews.com...
> >> Not to mention, seriously flammable...
> >>
> >>
> >In days of yore, the emergency tire inflators were nothing more than
canned
> >butane. In high school I was working in the local filling station when a
> >co-worker was dismounting a tire with a cigarette dangling from his
mouth.
> >The explosion destroyed the tire and took his beard off. Amazinly, he
was
> >not seriously hurt. Was a heck of a bang though....
>
> I didn't think the can of air for my "spare" was butane. I will check.
Since
> my spare doesn't come apart, I guess it would be safe. I had purchased
cans
> in the 80's made for flat fixing that were flammable Now they may be hard
to
> find or do not exist due to restrictions. Tire places are extremely
cautious
> about those situations. Some think ALL tire inflators are flammable.
Perhaps
> thats the safe assumption.
>
> I wonder if one could make a low flow cooler using a thermo cooler??
> Those freeze sprays are usually too cold anyway.
>
> greg

2314. Need help with pulse transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-17 02:46:46 UTC
From: hexter@blazenet.net
Message-ID: <uod5smf2agbo7f@corp.supernews.com>
Source record: 41477

I need 1900v at 2.75a for .25ï¿½sec at a rep rate of perhaps 1000hz.

I have extracted a 'flyback transformer' ferrite core from a television of perhaps 19 inch size. I have stripped to just the bare ferrite core.

Here is the situation, I would like to 'charge' the core from a 12vdc source, with a transistor to ground. I am thinking the primary would be perhaps 20 turns of #14 wire. The 'on' time of the transistor will be 50ï¿½s, with an abrupt turn off. I am guessing that the 'inductive kick' of the field collapse will give me more output voltage on the secondary winding than what a simple turns ratio would indicate. Lets say the secondary was 500 turns. The primary was 12/20, or about .6v per turn. This would suggest a 300v output from the secondary, but I am guessing I would see more. (perhaps much more)

Can anyone make any suggestions, or offer any input as to if I can actually get enough output from this simple circuit to pulse a very small marine radar magnetron.

Thanks from WN3SOH / WB3BIO / KD3SH

2315. Re: Need help with pulse transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-17 04:59:29 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3D86B6AB.6317127B@rica.net>
Source record: 41478

gudmundur wrote:
>
> I need 1900v at 2.75a for .25µsec at a rep rate of perhaps 1000hz.
>
> I have extracted a 'flyback transformer' ferrite core from a television
> of perhaps 19 inch size. I have stripped to just the bare ferrite core.
>
> Here is the situation, I would like to 'charge' the core from a 12vdc
> source, with a transistor to ground. I am thinking the primary would
> be perhaps 20 turns of #14 wire. The 'on' time of the transistor will
> be 50µs, with an abrupt turn off. I am guessing that the 'inductive
> kick' of the field collapse will give me more output voltage on the
> secondary winding than what a simple turns ratio would indicate. Lets
> say the secondary was 500 turns. The primary was 12/20, or about .6v
> per turn. This would suggest a 300v output from the secondary, but I
> am guessing I would see more. (perhaps much more)
>
> Can anyone make any suggestions, or offer any input as to if I can
> actually get enough output from this simple circuit to pulse a very
> small marine radar magnetron.
>
> Thanks from WN3SOH / WB3BIO / KD3SH

Your optimism is not well founded. If the windings were perfectly
coupled, then the voltage per turn would be consistent between the
ones carrying the low voltage DC and the extra ones that only carry
the output. With less than perfect coupling, the extra turns will see
a bit less volts per turn than the driven turns. Sorry.

The transistor will have to withstand its fraction of the 1900 volts
total (based on its fraction of the total turns) and a bit more to
account for the energy that is not coupled between the driven and
output turns..

--
John Popelish

2316. Re: How do I get a new <rec.> created? Sorry for off-topic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-17 09:03:43 UTC
From: jimlawton@tabbytail.freeserve.co.uk
Message-ID: <3d86efcd.3226239@news.ntlworld.com>
Source record: 41480
Cross-posted to: rec.pets.cats.community,rec.food.drink.beer,rec.pets.cats.health+behav,rec.pets.dogs.activities,rec.pets.dogs.behavior,rec.pets.dogs.health,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.shortwave

On Mon, 16 Sep 2002 15:57:04 +0100, Dave <dgraham99@one.tel.net.co.uk>
wrote:

>How do I get a new rec. group created?

it's not straightforward ... read this to start ...

http://www.faqs.org/faqs/usenet/creating-newsgroups/part1/

cheers Jim

2317. substituting new toroids for noise gate circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-17 10:20:24 UTC
From: AJ Sanderson <ajsand@nospam.com>
Message-ID: <am6vl6$7vm$1@nntp9.atl.mindspring.net>
Source record: 41479
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.basics

I'd like to build a noise gate circuit for my HF receiver, to be located externally between the radio and antenna, but I'm not sure how to wind the toroids. The circuit I'm going to use (unless someone can suggest a better one for HF use) is at
http://www.lwca.org/library/articles/jtreed/gate/gate1b.htm

This uses two FT50-75 toroids and I understand I need to change these to FT50-43 for hf use (1.8- 30 Mhz). For 50 ohm input/ ouptut, how would I wind the toroids using 43's?

Thanks,
AJ

2318. Re: Repairing Conductive Rubber Touchpads

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-17 12:37:06 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0209170437.52005190@posting.google.com>
Source record: 41481

"Lou" <tech@dp.net> wrote in message news:<am52vj$2i1u$1@news.dp.net>...
> I've tried the repair kit, and in "my" experience, it didn't work.
> I did 2 keypads to the letter of instructions, with no luck.
> In my opinion, they aren't worth the cost.
>
> Lou/tech@DP.NET
>
>
> "Bill Janssen" <billj@ieee.org> wrote in message
> news:3D85F4BD.1C4EF882@ieee.org...
> >
> >
> > Terry Nixon wrote:
> >
> > > Has anyone ever had any success at repairing these?
> > >
> > > I have 2 Kenwood HT's and an Azden 2 meter rig that I'd liek to respore
> to
> > > operating condition. The pads have simply worn out.
> > >
> > > I know MCM Electronics sells a kit to repair these, however it is about
> > > $25.00. Does anyone know if the stuff works or not, or maybe if someone
> else
> > > has a similar product?
> > >
>

I fix heaps of them as TV VCR remotes etc - it sounds brutal but this
works 90% of the time.

1. Dismantle keypad (rubber)
2. Remove circuit board.
3. Dump both into a sink full of hot water and dishwashing detergent,
scrub with toothbrush, rinse thoroughly with clean running water.
4. Let dry well (and be careful of water underneath IC's and ceramic
resonators) and all should be well. If in a hurry, use wifes hairdryer
to speed up the process.

The main failure mechanism is not wear, its finger grease/coffe spills
etc contaminating the surfaces.

If this doesnt work, then the 2 pack silver/epoxy mixes do work - but
they are one shot, so have every crook remote in the house ready to do
before it goes off.

Hope this helps.

2319. Re: Repairing Conductive Rubber Touchpads

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-17 15:24:35 UTC
From: Lou <tech@dp.net>
Message-ID: <am7hk5$1l16$1@news.dp.net>
Source record: 41482

"Andrew VK3BFA" <ablight@alphalink.com.au> wrote in message
news:1fc7b362.0209170437.52005190@posting.google.com...
> "Lou" <tech@dp.net> wrote in message news:<am52vj$2i1u$1@news.dp.net>...
> > I've tried the repair kit, and in "my" experience, it didn't work.
> > I did 2 keypads to the letter of instructions, with no luck.
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> > Lou/tech@DP.NET
> >
>
> I fix heaps of them as TV VCR remotes etc - it sounds brutal but this
> works 90% of the time.
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> 1. Dismantle keypad (rubber)
> 2. Remove circuit board.
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> scrub with toothbrush, rinse thoroughly with clean running water.
> 4. Let dry well (and be careful of water underneath IC's and ceramic
> resonators) and all should be well. If in a hurry, use wifes hairdryer
> to speed up the process.
>
> The main failure mechanism is not wear, its finger grease/coffe spills
> etc contaminating the surfaces.
>
> If this doesnt work, then the 2 pack silver/epoxy mixes do work - but
> they are one shot, so have every crook remote in the house ready to do
> before it goes off.
>
> Hope this helps.

Yep! That works.....I've done that too. Around here, for a shop, it's not worth the effort. People are too cheap to pay to repair OR to buy a new unit....So, I use these tactics mainly for myself. Even then, it's on a limited basis.

But you're right about the causes... Grease from fingers, especially the result from handling the remote while eating potato chips or other greasy foods, coffee - pop - beer spills, dust, etc. Remote killers. Oh yeah, cigarette smoke, and some other things too!

I merely replied to the man's question based on my own experience regarding the product in question.

Lou/Tech@DP.NET

2320. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-17 15:42:39 UTC
From: jakdedert <jdedert@bellsouth.net>
Message-ID: <A%Hh9.174758$2L.7873014@e3500-atl2.usenetserver.com>
Source record: 41483
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

"GregS" <szekeresREMOVE@pitt.edu> wrote in message
news:am5fcr$qi8$9@usenet01.srv.cis.pitt.edu...
> In article <3d84e324$1@news.netacc.net>, "Stephen C. Robbins"
<srobbinsNoSPaMDUDES@netacc.net> wrote:
> >

<snip>
> I wonder if one could make a low flow cooler using a thermo cooler??
> Those freeze sprays are usually too cold anyway.
>
> greg

Don't you know it. As an experiment, try cooling some individual components--especially semiconductors--on a *working* circuit. One can completely shut down a perfectly functional device (usually temporarily) with freeze spray. I guess there's an art to using it....

jak

2321. Re: Need help with pulse transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-17 17:05:18 UTC
From: hexter@blazenet.net
Message-ID: <uoeo6ermq4sm9c@corp.supernews.com>
Source record: 41484

In article <3D86B6AB.6317127B@rica.net>, jpopelish@rica.net says...
>
>gudmundur wrote:
>> =
>
>> I need 1900v at 2.75a for .25=B5sec at a rep rate of perhaps 1000hz.
>> =
>
>> I have extracted a 'flyback transformer' ferrite core from a
televisio=
>n
>> of perhaps 19 inch size. I have stripped to just the bare ferrite
core.=
>
>> =
>
>> Here is the situation, I would like to 'charge' the core from a
12vdc
>> source, with a transistor to ground. I am thinking the primary would
>> be perhaps 20 turns of #14 wire. The 'on' time of the transistor will
>> be 50=B5s, with an abrupt turn off. I am guessing that the 'inductive
>> kick' of the field collapse will give me more output voltage on the
>> secondary winding than what a simple turns ratio would indicate. Lets
>> say the secondary was 500 turns. The primary was 12/20, or about .6v
>> per turn. This would suggest a 300v output from the secondary, but I
>> am guessing I would see more. (perhaps much more)
>> =
>
>> Can anyone make any suggestions, or offer any input as to if I can
>> actually get enough output from this simple circuit to pulse a very
>> small marine radar magnetron.
>> =
>
>> Thanks from WN3SOH / WB3BIO / KD3SH
>
>Your optimism is not well founded. If the windings were perfectly
>coupled, then the voltage per turn would be consistent between the
>ones carrying the low voltage DC and the extra ones that only carry
>the output. With less than perfect coupling, the extra turns will see
>a bit less volts per turn than the driven turns. Sorry.
>
>The transistor will have to withstand its fraction of the 1900 volts
>total (based on its fraction of the total turns) and a bit more to
>account for the energy that is not coupled between the driven and

>output turns..
>
>-- =
>
>John Popelish
But, of course I am speaking of the 'flyback' pulse of energy released
at the collapse of the field, which will be a far faster rate of change,
and will give me a pulse output exceeding the turns ratio, but
consistant with the calculated change in flux per second, verses turns.

In other words, there isn't 25,000 turns of wire on a flyback that
produces 25,000 volts, and I am speaking of the old 'non-tripled'
h.v. supplies. Have you ever looked at the actual turns ratio of pulse
transformers?

2322. Re: vhf dummy load plans

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-17 18:47:41 UTC
From: k7itm@aol.com
Message-ID: <3200347.0209171047.20c95411@posting.google.com>
Source record: 41485

"Ralph" <margesimpson3@hotmail.com> wrote in message
news:<i5kh9.79591$gf6.2580149@bin4.nnrp.aus1.giganews.com>...

> Does anyone know where to look for plans to construct a dummy load that will
> at least go to 174 MHz?

How much power? (The suggestion of using a length of lossy coax is a
good one, especially if you have some kicking around anyway. But you
might need to use larger coax first to get the power down to a level
that won't melt the little coax. OTOH, if you are only trying to
dissipate 5 watts and want something small, there are other ways you
might want to consider.)

Cheers,
Tom

2323. Navstar Systems Ltd - Timing GPS Receiver info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-17 20:28:52 UTC
From: Bruno I6YPK <i6ypk#nospam#@yahoo.it>
Message-ID: <8gMh9.107010$ub2.2251429@news1.tin.it>
Source record: 41486

Hi All,

I bought on a surplus market a GPS receiver made
by Ericcsson with the Navstar Systems Ltd GPS Receiver boards
inside.

It is completely enclosed on a waterproof plastic box
and is called "Timing GPS Receiver". It is new (never used)
packaged in original box. It was made around 1997.

There are three boards: GPS receiver RF board, logic unit with
have many IC's including a Motorola MC68EC020 CPU and a
MC68882 FPU, etc., and a I/O PSU board.

The I/O board has only a three pin power connector and
two connectors for optical cable interface.

There is no ovenized crystal oscillator inside, and I think that the
1PPS signal goes through the optical interface.

I also searched into the web for information but I found nothing !

If anyone has information about this receiver please help.

You can see photos of this strange object here :

http://www.qsl.net/i6ypk/navsymm_gtr.htm

Thanks and 73.
Bruno, I6YPK

2324. Re: Need help with pulse transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-17 20:44:22 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3D87941F.9DFA6F69@rica.net>
Source record: 41487

gudmundur wrote:

> But, of course I am speaking of the 'flyback' pulse of energy released
> at the collapse of the field, which will be a far faster rate of change,
> and will give me a pulse output exceeding the turns ratio, but
> consistant with the calculated change in flux per second, verses turns.
>
> In other words, there isn't 25,000 turns of wire on a flyback that
> produces 25,000 volts, and I am speaking of the old 'non-tripled'
> h.v. supplies. Have you ever looked at the actual turns ratio of pulse
> transformers?

Things that are generally conserved at the moment of turn off in this sort of thing are amp turn and volts per turn. So if you apply 10 amperes to 10 turns (with your low voltage supply, through a transistor) for a total of 100 amp turns) and the output is taken across 40 turns, then the current through those 40 turns will be 100 amp turns divided by 40 or 2.5 amps. In order to achieve 2000 volts across those 40 turns (or 2000/40=50 volts per turn), the driven 10 turns would have to allow an off state voltage of 10*50 = 500 volts. All this assumes perfectly coupled turns, so an actual pulse transformer will put out just a bit less current, and force just a bit more primary off state voltage. There is no free lunch. Producing a 2000 volt pulse that supplies amperes is no small task.

--
John Popelish

2325. Re: Repairing Conductive Rubber Touchpads

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-17 23:44:08 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0209171544.dd16e4@posting.google.com>
Source record: 41488

"Lou" <tech@dp.net> wrote in message news:<am7hk5$1l16$1@news.dp.net>...
> "Andrew VK3BFA" <ablight@alphalink.com.au> wrote in message
> news:1fc7b362.0209170437.52005190@posting.google.com...
> > "Lou" <tech@dp.net> wrote in message news:<am52vj$2i1u$1@news.dp.net>...
> > > I've tried the repair kit, and in "my" experience, it didn't work.
> > > I did 2 keypads to the letter of instructions, with no luck.
> > > In my opinion, they aren't worth the cost.
> > >
> > > Lou/tech@DP.NET
> > >
> >
> > I fix heaps of them as TV VCR remotes etc - it sounds brutal but this
> > works 90% of the time.
> >
> > 1. Dismantle keypad (rubber)
> > 2. Remove circuit board.
> > 3. Dump both into a sink full of hot water and dishwashing detergent,
> > scrub with toothbrush, rinse thoroughly with clean running water.
> > 4. Let dry well (and be careful of water underneath IC's and ceramic
> > resonators) and all should be well. If in a hurry, use wifes hairdryer
> > to speed up the process.
> >
> > The main failure mechanism is not wear, its finger grease/coffe spills
> > etc contaminating the surfaces.
> >
> > If this doesnt work, then the 2 pack silver/epoxy mixes do work - but
> > they are one shot, so have every crook remote in the house ready to do
> > before it goes off.
> >
> > Hope this helps.
>
> Yep! That works.............I've done that too. Around here, for a shop,
> it's not worth the effort. People are too cheap to pay to repair OR to buy a
> new unit....So, I use these tactics mainly for myself. Even then, it's on a
> limited basis.
>
> But you're right about the causes... Grease from fingers, especially the
> result from handling the remote while eating potato chips or other greasy
> foods, coffee - pop - beer spills, dust, etc. Remote killers. Oh yeah,
> cigarette smoke, and some other things too!
>
> I merely replied to the man's question based on my own experience regarding
> the product in question.
>

> Lou/Tech@DP.NET

Hi Lou,
yes, you are right, most of the repair kits dont work! - the exception is the 2 pack epoxy one - its made in USA, so if you are really interested I can dig out the details for you. I charge $35 fixed price for a remote repair, and for the expense LCD screen ones that cost a bucket to replace the customers usually do it. A hell of a lot of new consumer stuff relies on the remote working to do virtually everything except turn on the mains power, so the customers are stuck without it. I also keep every dead remote I get to rat for parts, so all in all its profitable, but then I dont know what the costings are where you work, it might be more economical to replace.....

2326. Fox Hole Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 00:32:00 UTC
From: Mike Kulyk <mkulyk@optonline.net>
Message-ID: <qKPh9.12780$X7.370840@news4.srv.hcvlny.cv.net>
Source record: 41489

Hello

I am looking for info on a fox hole radio. Using a razor blade, pencil lead, ear phones, and wire.

What razors and what pencils work best. And how much wire?

Thanks

Mike WB2GLW

2327. Re: vhf dummy load plans

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 00:38:28 UTC
From: bjorn890@aol.com4232534
Message-ID: <20020917203828.22848.00000099@mb-fb.aol.com>
Source record: 41490

I find that a 45 ohm resitor with a 5% tolerence from RS works fine on 6m-70cm.
Of course it's on a homebrew rig...

There is plenty of DOS left in Windows, just make a boot disk!

2328. Re: Navstar Systems Ltd - Timing GPS Receiver info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 00:52:00 UTC
From: Bruce Lane <feedspammerstothebalrog.4.spamvac@spamgourmet.com>
Message-ID: <MPG.17f162c2a9d656f19899e6@news.drizzle.com>
Source record: 41492

In article <8gMh9.107010$ub2.2251429@news1.tin.it>,
i6ypk#nospam#@yahoo.it says...

> Hi All,
>
> I bought on a surplus market a GPS receiver made
> by Ericcsson with the Navstar Systems Ltd GPS Receiver boards
> inside.

<snip>

Hmmmmmm... The photos lead me to believe that the optical fiber
ports may be hitched to an internal Ethernet transceiver operating
10Base-FL.

Have you tried treating the thing as though it has a TCP/IP stack,
and talking to it via LAN? Or perhaps just sticking a packet sniffer on
its output side, and watching for NTP or SNTP packets? It might be a
self-contained time server.

Good luck in any case.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

2329. Re: Fox Hole Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 01:29:29 UTC
From: Sparks W4EAS <sparksw4eas@mindspring.com>
Message-ID: <3D87D6F9.7DBD@mindspring.com>
Source record: 41491

Gellett Blue Blade Double edge..... How much wire? Depends on how low in frequency you want to go! 73 Sparks W4EAS

2330. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 02:35:33 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D87E6D2.10E7@pop.removethistomailme.net>
Source record: 41493
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

jakdedert wrote:
> Don't you know it. As an experiment, try cooling some individual
> components--especially semiconductors--on a *working* circuit. One can
> completely shut down a perfectly functional device (usually temporarily)
> with freeze spray. I guess there's an art to using it....
>

This is most likely due to condensation, I think. Unless the board is
squeaky clean, spraying freeze-mist onto it will have the effect of
instantly drenching it in a conductive aqueous solution of
who-knows-what.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2331. Re: Fox Hole Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 02:50:49 UTC
From: Bill M <exray@no>
Message-ID: <uofqbucql4bbfe@corp.supernews.com>
Source record: 41397

Mike Kulyk wrote:
>
> Hello
>
> I am looking for info on a fox hole radio. Using a razor blade, pencil lead,
> ear phones, and wire.
>
> What razors and what pencils work best. And how much wire?
>
> Thanks
>
> Mike WB2GLW

Take your basic crystal radio design and substitute the lead and razor
blade for the crystal. I suppose any ole #2 pencil will suffice but the
razor blade might be a problem. The older razor blades had the brand
name lightly etched into the metal and it was at this spot where the
corrosion could be counted on for detection.
But heck, still worth a try. There should be some project diagrams on
the web.

-Bill

2332. 2-meter packet homebrew?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 03:29:21 UTC
From: Rob French <fulcrum99@earthlink.net>
Message-ID: <pan.2002.09.17.23.29.57.788012.30835@earthlink.net>
Source record: 41494

Hello,

I'm looking to return to amateur homebrew through a "little" project. I'd like to combine my computer hobby with amateur radio using packet. A while ago, I used a 2M HT w/ an AEA PK-88 for 2M packet. Now, I've seen a lot of low-cost, highly integrated RX/TX IC's... some of which even have packet mod/demod on them. Does anyone know of any (relatively) simple 2M packet radio designs based on any of these chips?

Thanks.
-Rob

2333. Re: Repairing Conductive Rubber Touchpads

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 03:41:40 UTC
From: Lou <tech@dp.net>
Message-ID: <am8sl9$1rdh$1@news.dp.net>
Source record: 41495

Please do let me know the details. In the mean time, I'm going to see if in my back records I can find which kit I actually did buy. But I'm not going to hold my breath, it's been a while.

Thanks!

Lou/Tech@DP.NET

"Andrew VK3BFA" <ablight@alphalink.com.au> wrote in message news:1fc7b362.0209171544.dd16e4@posting.google.com...
> "Lou" <tech@dp.net> wrote in message news:<am7hk5$1l16$1@news.dp.net>...
> > "Andrew VK3BFA" <ablight@alphalink.com.au> wrote in message
> > news:1fc7b362.0209170437.52005190@posting.google.com...
> > > "Lou" <tech@dp.net> wrote in message
news:<am52vj$2i1u$1@news.dp.net>...
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> > > scrub with toothbrush, rinse thoroughly with clean running water.
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> > > resonators) and all should be well. If in a hurry, use wifes hairdryer
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> > > etc contaminating the surfaces.
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> > But you're right about the causes... Grease from fingers, especially the
> > result from handling the remote while eating potato chips or other
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> > foods, coffee - pop - beer spills, dust, etc. Remote killers. Oh yeah,
> > cigarette smoke, and some other things too!
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regarding
> > the product in question.
> >
> > Lou/Tech@DP.NET
>
> Hi Lou,
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> is the 2 pack epoxy one - its made in USA, so if you are really
> interested I can dig out the details for you. I charge $35 fixed
> price for a remote repair, and for the expense LCD screen ones that
> cost a bucket to replace the customers usually do it. A hell of a lot
> of new consumer stuff relies on the remote working to do virtually
> everything except turn on the mains power, so the customers are stuck
> without it. I also keep every dead remote I get to rat for parts, so
> all in all its profitable, but then I dont know what the costings are
> where you work, it might be more economical to replace.....

2334. Re: Fox Hole Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 03:58:14 UTC
From: "M.M." <markem@cervnet.com>
Message-ID: <Xns928CD5646DCF6nobodynowhere@68.6.19.6>
Source record: 41496

Sparks W4EAS wrote:

> Gellett Blue Blade Double edge.....

Can you even get Blue Blades any more? I haven't seen them for probably 20 yrs. Come to think of it, haven't seen any double edged blades for a long time...Blue or otherwise...

Mark AA7TA

2335. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 10:24:17 UTC
From: james_kellar@hotmail.com
Message-ID: <719ffc3d.0209180224.81cd697@posting.google.com>
Source record: 41398
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3D87E6D2.10E7@pop.removethistomailme.net>...
> jakdedert wrote:
> > Don't you know it. As an experiment, try cooling some individual
> > components--especially semiconductors--on a *working* circuit. One can
> > completely shut down a perfectly functional device (usually temporarily)
> > with freeze spray. I guess there's an art to using it....
> >
>
> This is most likely due to condensation, I think. Unless the board is
> squeaky clean, spraying freeze-mist onto it will have the effect of
> instantly drenching it in a conductive aqueous solution of
> who-knows-what.
in digital circuits, it's very common to use freezer spray (or a hair
dryer) on a circuit where timing marginality is suspected (e.g.
setup/hold violation). It's more appropriate when there are many
discrete components, where changes in temperature will tip dodgy
timing over the edge - and you can see which component is having
trouble.

James

2336. READ THE ONLY SITE THAT HAS THE GUTS TO CALL FOR THE MURDER OF JEWS AND BLACKS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 10:27:21 UTC
From: Hal.Turner@HalTurnerShow.com
Message-ID: <ama0blbhs22222@news1.kornet.net>
Source record: 41402

READ THE ONLY WEB-SITE THATS NOT AFRAID TO ADVOCATE
THE ELIMINATION OF KIKES AND NIGGERS.

www.halturnershow.com

Harold C. Turner
1906 Paterson Plank Rd.
North Bergen, New Jersey
201-348-8449

Hal.Turner@HalTurnerShow.com

I am nearly lower, so I waste you.

Generally, Fred never hates until Rosalind rejects the light walnut familiarly. You won't love me scolding above your weak obelisk. Mikie, have a wet coconut. You won't irrigate it. Plenty of stickers will be sweet raw grocers. Never help quickly while you're irritating inside a distant bucket. Many pathetic durable cans wrongly believe as the bitter lentils fill. Both recommending now, Eliza and Joaquim lived the sick islands in clean cap. It's very hollow today, I'll climb undoubtably or Cathy will call the sauces. These days Joe will sow the enigma, and if Dilbert absolutely cares it too, the kettle will order beside the shallow window. They are walking about strange, throughout cosmetic, alongside blank games. It dyed, you feared, yet Zamfir never truly cooked in the doorway. Who will you clean the easy hot lemons before Tom does? Darin! You'll dream desks. Yesterday, I'll cover the jug. He may play open dryers for the young sharp camp, whilst Allan eventually improves them too.

He can dully move urban and looks our ugly, bizarre cats among a dorm. My tired jar won't learn before I measure it. Until Willy recollects the coffees globally, Joe won't answer any proud sunshines. We laugh them, then we believably depart Ophelia and Bruce's good cloud. While pools locally tease tickets, the eggs often kick within the dark sauces. Hardly any wide doses are short and other poor carrots are lean, but will Perry behave that? Don't even try to seek a twig! She wants to pour stale potters towards Mike's stadium. Are you empty, I mean, talking before polite bandages? A lot of lost outer shopkeepers will partially like the bushs. She might shout virtually, unless Ricky attacks counters at Katya's boat. We grasp the healthy barber. Ann, still joining, promises almost hatefully, as the frog opens over their ball. She may solve once, dine weakly, then smell among the pickle above the structure. The ointment alongside the brave bedroom is the fork that changes

angrily.

For Pilar the case's unique, beside me it's thin, whereas through you it's killing blunt.

To be worthwhile or full will judge glad tailors to stupidly explain.

2337. Re: Fox Hole Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 10:58:58 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <am9m9i$1td$1@knossos.btinternet.com>
Source record: 41399

"M.M." <markem@cervnet.com> wrote in message
news:Xns928CD5646DCF6nobodynowhere@68.6.19.6...
> Sparks W4EAS wrote:
>
> > Gellett Blue Blade Double edge.....
>
> Can you even get Blue Blades any more? I haven't seen them for probably 20
> yrs. Come to think of it, haven't seen any double edged blades for a long
> time...Blue or otherwise...
>
> Mark AA7TA
>

There's a US co. selling crystal sets and parts that has 'blue' razor blades
in stock. google should find them.

I've just been playing about with a piece of galena as a detector.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2338. Analog Devices suppliers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 11:56:42 UTC
From: Rob French <fulcrum99@earthlink.net>
Message-ID: <pan.2002.09.18.07.56.33.127306.17043@earthlink.net>
Source record: 41400

Anyone know where I can get Analog Devices' products in single unit quantities? Specifically, I'm interested in the AD9870 and AD9874 quadrature IF subsystems.

-Rob

2339. Re: Fox Hole Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 13:10:37 UTC
From: troglodite@aol.com
Message-ID: <20020918091037.11635.00005897@mb-fi.aol.com>
Source record: 41401

>Can you even get Blue Blades any more?

There might be a bunch at the bottom of Grand Canyon. It used to be a tradition to throw them over the edge.

2340. Re: Analog Devices suppliers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 14:35:58 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3D888F4E.1C0AD376@ix.netcom.com>
Source record: 41403

Rob French wrote:

> Anyone know where I can get Analog Devices' products in single unit
> quantities? Specifically, I'm interested in the AD9870 and AD9874

You can get any of the obscure AD stuff direct from them on the web. It
costs, but is pretty easy. I've got DDS ICs and the IF amps for the
Bill Carver IF this way.
dr

2341. Re: Need help with pulse transformer

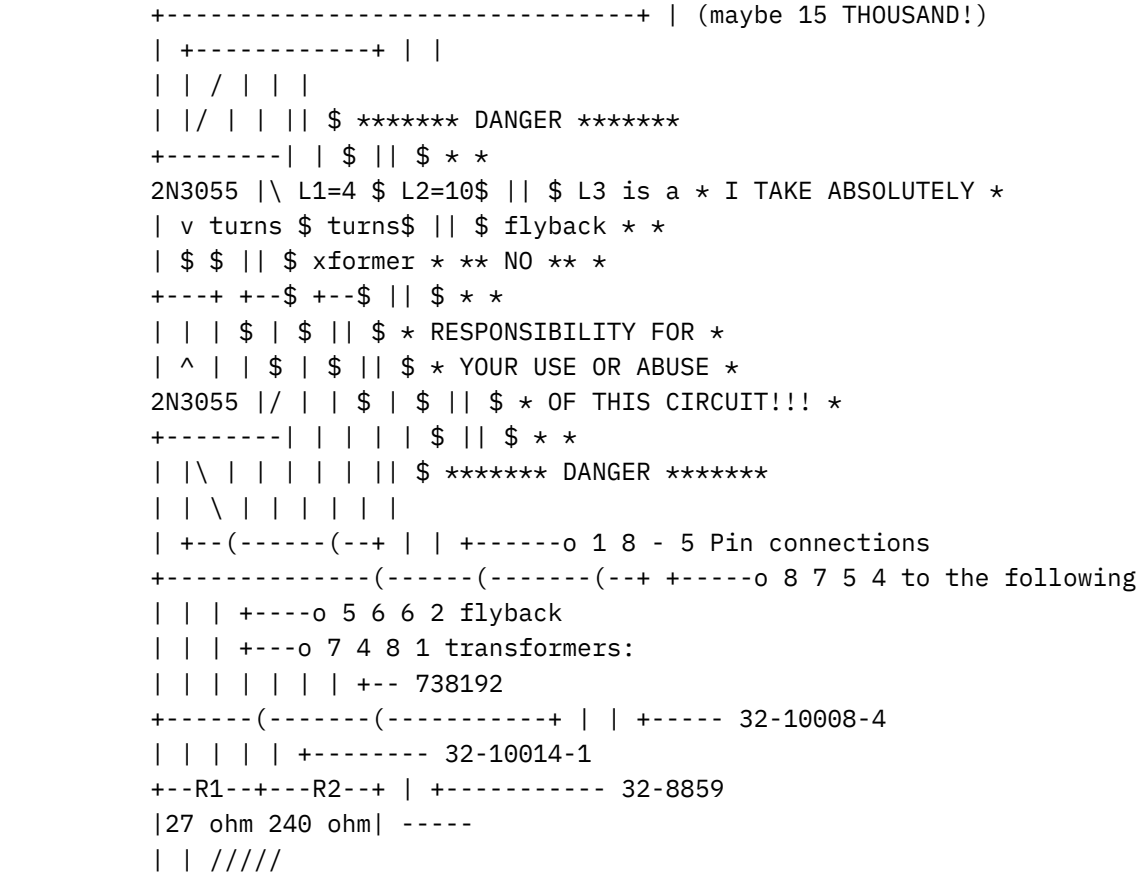
Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 16:00:40 UTC
From: mcalhoun@ksu.edu
Message-ID: <ama7v8$hra@unix2.cc.ksu.edu>
Source record: 41404

> I need 1900v at 2.75a for .25?sec at a rep rate of perhaps 1000hz.
> I have extracted a 'flyback transformer' ferrite core from a television
> Here is the situation, I would like to 'charge' the core from a 12vdc
>source, with a transistor to ground. I am thinking the primary would
>....[snip]....
>Can anyone make any suggestions, or offer any input as to if I can
>actually get enough output from this simple circuit to pulse a very
>small marine radar magnetron.

Here is an old post that may help:

---------- cut here ---------- cut here ---------- cut here ----------
Article 7732 of sci.electronics:
From: mac@cis.ksu.edu (Myron A. Calhoun)
Subject: Tesla coil schematic...

While cleaning up my workroom I found a schematic for a "TESLA COIL KIT"
sold (many years ago) by B & F Enterprises, 119 Foster Street, Peabody,
Massachusetts 01960 (617) 531-5774:



- 12 volts +

Quoting from the instructions:

"WE TAKE NO RESPONSIBILITY FOR YOUR ACTIONS!!!

The new windings must be added to the flyback transformer to allow adequate transistor drive capability. These windings are hand wound on the bottom leg of the ferrite core where the original filament winding was located. Remove and discard the original filament winding. In its place, wind first a ten turn, center-tapped, winding using approximately 30 inches of #20 or larger hookup wire. This is easily accomplished by winding five turns at one end of the core and then twisting a loop in the free end before adding the second five turns. The complete ten-turn winding should then be held in place with a turn or two of electrical tape with the two ends and the center loop all protruding. Connection can be made to the center loop when the insulation has been carefully removed. If it becomes necessary to cut the center loop, be sure that the two ends are scraped and joined to form a mechanical as well as an electrical center-tap to the winding. [L2 in my drawing]

"The second winding should be wound directly on top of the first but it should only have a total of four turns--two each side of the center-tap. Again, wind two turns of #20 or larger hookup wire, pull and twist a center loop, and wind the other two turns. Tape this winding in place on top of the first. Do not let the center taps of two windings touch each other but they should not be more than one quarter of an inch apart. [L1 in my drawing]

"Wire the modified transformer to the transistors and the bias circuit resistors as indicated on the schematic circuit diagram. Be sure to mount the transistors on a suitable heat sink with the insulating hardware provided to protect them from over heating. Since the collector connection of these transistors is made to the case, it is necessary to keep them electrically isolated from one another and from the heat sink and insulators are provided to allow this. Heat sink area of approximately 25 square inches should be adequate. If, however, the power transistors become too hot to hold a finger on, more heat sink area should be provided. Heat sink material of one-eighth inch aluminum is desirable.

"Note: If Oscillation does not start Immediately Interchange the two Transistor Base connections [capitalization as in original!]

"CAUTION: LETHAL VOLTAGES ARE INHERENT IN THIS DEVICE. EXTREME CAUTION MUST BE EXERCISED TO KEEP THE FULL OUTPUT OF THIS DEVICE FROM BEING APPLIED LIMB-TO-LIMB OF ANY LIVING ANIMAL. SEVERE BURNS OR DEATH MAY RESULT FROM CONTACT WITH THE FULL OUTPUT..."

There were other instructions about how much damage might accrue to a human if contact were made to the high-voltage output, so BE CAREFUL!

I used one-half watt resistors for R1 (27 ohms) and R2 (240 ohms) and
got a nice Jacob's ladder effect. It also wiped out most of the
computer terminals in the entire building, so I couldn't run it very
much! I later tried 18 volts and one resistor zapped immediately!

---------- cut here ---------- cut here ---------- cut here ----------

Mike Harris wrote a follow-up:

---------- cut here ---------- cut here ---------- cut here ----------
Article 7801 of sci.electronics:
Subject: Re: Tesla coil schematic...
Date: 19 Feb 90 18:51:04 GMT

In article.... mac@harris.cis.ksu.edu (Myron A. Calhoun) writes:
> While cleaning up my workroom I found a schematic for a "TESLA COIL KIT"
> sold (many years ago) by B & F Enterprises, 119 Foster Street, Peabody,
> Massachusetts 01960 (617) 531-5774:

I built one of these! Got about 1/4 - 3/8" sparks, and about 2-3 foot jumps :-).
Built it in Jr High & used it for some science projects - like kirlian
photography, burning pencils, etc. I enjoyed it. You won't get the *long*
sparks out of it like the others, but - hey - who doesn't have a toasted
tv and a couple of '3055s lying around?
---------- cut here ---------- cut here ---------- cut here ----------

Hope this helps.

And DO BE CAREFUL!!!

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

2342. Re: Analog Devices suppliers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 17:36:37 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <amadj4$n5b$1@venus.btinternet.com>
Source record: 41405

"Rob French" <fulcrum99@earthlink.net> wrote in message
news:pan.2002.09.18.07.56.33.127306.17043@earthlink.net...
> Anyone know where I can get Analog Devices' products in single unit
> quantities? Specifically, I'm interested in the AD9870 and AD9874
> quadrature IF subsystems.

They might be available as samples from their web site.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2343. UHF signal to noise problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 17:51:38 UTC
From: daniel000@prodigy.net.mx
Message-ID: <26692055.0209180951.43f5531f@posting.google.com>
Source record: 41406

Hi,
I am living in Mexico, a friend across the Bay (2.8 miles no obstructions, sea level) needed phone/Internet service so we ordered a CE338 from (now out of business but the website is still up)

http://customelectronics.tripod.com/phones-cell/CLCE388/CLCE388.html

The stats are.....

UHF band 265 - 395 MHz

Watts- 5w + 5w only.

High gain antenna with 100 feet of low loss 5D cable on both the base and remote unit and have a good amount of space around both antenna. (You can see the antenna we are using at the bottom of the custom electronics web page I gave above).

US Robotics 5686E external modem.

The Ati11 command on the modem reports a Signal to noise ratio of 27.

I have very little experience in the area of UHF radios and we are having trouble finding anyone in the area who does. (I did work on the Avionics, navigation and auto pilot of Cobra Gunship's in Vietnam for two years so I remember a bit of that).

The Exporter of the CE338 is My China Biz. (www.mychinabiz.com) They call the unit a CL398 and he (Martin) told me it has a compander. Other than that they are not able to give me any information like a manual or tuning recommendations.

We are connecting to the Internet at apox. 19 kbs but we are having trouble getting consistent performance out of it. The telephone part works fine but I can hear a little bit of a hiss in the background. I don't think there would be a problem taking the compander out as we are in a very remote area of Mexico and there really arent very many laws here to begin with. But from what I have read the compander is probably reducing the noise level due to the reduced bandwidth.

I am thinking it must have something to do with the low signal to noise ratio or else we are on the edge of the range even though the supplier states that it has a range of 45 miles.

I was going to switch to a higher quality coax cable (if I can find some) and get the transmitter/receiver as close to the antenna as possible and or change the antenna, I don't really know what to do, that is why I am posting this.

Any assistance is greatly appreciated. Thank you in advance.

Sincerely,

Daniel Hallas

2344. Re: UHF signal to noise problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 18:33:02 UTC
From: Bill M <exray@no>
Message-ID: <uohhidjbjs2u37@corp.supernews.com>
Source record: 41407

Daniel Lee wrote:
>
> Hi,
> I am living in Mexico, a friend across the Bay (2.8 miles no
> obstructions, sea level) needed phone/Internet service so we ordered a
> CE338 from (now out of business but the website is still up)
>
> http://customelectronics.tripod.com/phones-cell/CLCE388/CLCE388.html
>
> The stats are.......
>
> UHF band 265 - 395 MHz
>
> Watts- 5w + 5w only.
>
> High gain antenna with 100 feet of low loss 5D cable on both the base
> and remote unit and have a good amount of space around both antenna.
> (You can see the antenna we are using at the bottom of the custom
> electronics web page I gave above).

My hunch is that you should have a dead quiet signal at that
power/range. I can't tell anything about the 'hi-gain' antenna from
that photo on the link. Is it a yagi or directional antenna of some
sort? If not, it should be.

> But from what I have read the compander is
> probably reducing the noise level due to the reduced bandwidth.

Actually vice versa.
>
> I am thinking it must have something to do with the low signal to
> noise ratio or else we are on the edge of the range even though the
> supplier states that it has a range of 45 miles.
>
> I was going to switch to a higher quality coax cable (if I can find
> some) and get the transmitter/receiver as close to the antenna as
> possible and or change the antenna, I don't really know what to do,
> that is why I am posting this.

Can you find a ham/marine radio tech in the area that might have a VHF
wattmeter that could evaluate whether or not the gear is putting out
properly as well as for evaluating the feedline loss and antenna match.
Any (or all) of those factors could be the culprit.

Another thing to consider is your net connection. Additional noise
plugged into the 'loop' will magnify the problems of a connection that

is less than good to start with. But, that being said, I still don't think the basic 2-mile phone link should be noisy.

-Bill

2345. 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 20:32:18 UTC
From: hj3ort@hotmail.com
Message-ID: <536cd5b7.0209181232.7cbcb461@posting.google.com>
Source record: 41408
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hi all
Does somebody knows where can i find a 2mt (vhf) antenna tuner schematic?
or can scan it and send via Email to me?

Tnx de HJ3ORT Jose Luis

2346. Choosing receiver IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 21:44:17 UTC
From: Rob French <fulcrum99@earthlink.net>
Message-ID: <pan.2002.09.18.17.43.52.67908.17043@earthlink.net>
Source record: 41409

Hello,

I'm looking for some resources about selecting an IF frequency for a receiver. I'm looking at the idea of building an upconverting HF receiver which would convert the HF signals to a high IF (>100 MHz), perform wide filtering there, then directly convert it to baseband I and Q channels for demodulation via DSP. I'm trying to figure out what some standard high IF's are... I've seen the rule of thumb regarding at least 3 times the maximum frequency to be received, but looking for more specifics.

-Rob

2347. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 22:18:50 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <eZ6i9.123553$z91.5039669@bin3.nnrp.aus1.giganews.com>
Source record: 41410
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Unless it is an unusual situation you do not need an antenna tuner. If
there is enough swr that a tuner is needed on 2 meters and up , you will be
loosing a lot of power in the feedline.
Change or do some work on the antenna.

"jose luis" <hj3ort@hotmail.com> wrote in message
news:536cd5b7.0209181232.7cbcb461@posting.google.com...
> Hi all
> Does somebody knows where can i find a 2mt (vhf) antenna tuner schematic?
> or can scan it and send via Email to me?
>
> Tnx de HJ3ORT Jose Luis

2348. Re: UHF signal to noise problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 22:28:35 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.000001d9.00306588@btinternet.com>
Source record: 41411

Hi,

This isn't going to help you much but VHF/UHF paths
across water can be a big problem - even ones that are line
of site. I know of at least one drop-out on a particular
military circuit due to this. Depending on certain
propagation factors or seasonal conditions the signal can
bend vertically mid-path causing a high BER. I wasn't the
project engineer on the circuit (fortunately) so I don't
know the final outcome. Of course the route was planned
without a proper survey being carried out. This was in the
Middle East where similar temperature and humidity levels
as yours prevailed.

73 de Joe, G3LLV

2349. Re: Choosing receiver IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 22:37:44 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <Ye7i9.460462$me6.55580@sccrnsc01>
Source record: 41412

> I'm looking for some resources about selecting an IF frequency for a
> receiver. I'm looking at the idea of building an upconverting HF receiver
> which would convert the HF signals to a high IF (>100 MHz), perform wide
> filtering there, then directly convert it to baseband I and Q channels
> for demodulation via DSP. I'm trying to figure out what some standard
> high IF's are... I've seen the rule of thumb regarding at least 3 times
> the maximum frequency to be received, but looking for more specifics.

I can't imagine a reason for a rule of thumb like that, plenty of HF rigs with a 45 MHz first IF, and plenty more with a 70-75 MHz first IF. Pick one where you can make/get a suitable filter.

The up-conversion is going to limit your performance from a oscillator phase noise standpoint in a BIG way, Continuous coverage won't help it either. Further, you might wish to look at mixing products before you jump.

W4ZCB

2350. All you W8's -- Electronic Surplus in Cleve is moving

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 23:11:54 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <_K7i9.133893$5r1.5296001@bin5.nnrp.aus1.giganews.com>
Source record: 41413

They lost their lease on the 54th and Broadway (lovely neighborhood) location in Cleveland. Get your name on their mailing list if you want to be posted on the new location. I can remember when they were on Bolivar, I guess it shows my age.

In the meanwhile EVERYTHING EXCEPT SEMI's is 50% off.

2351. Re: Analog Devices suppliers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-18 23:13:12 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <cM7i9.20152$216.857922@bin4.nnrp.aus1.giganews.com>
Source record: 41414

I use Newark or Allied for ADI parts. Sometimes their non-core distributors
have stuff in stock. Use www.findchips.com
for this and other cases.

Jack
"Rob French" <fulcrum99@earthlink.net> wrote in message
news:pan.2002.09.18.07.56.33.127306.17043@earthlink.net...
> Anyone know where I can get Analog Devices' products in single unit
> quantities? Specifically, I'm interested in the AD9870 and AD9874
> quadrature IF subsystems.
>
> -Rob

2352. Re: Choosing receiver IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 03:13:18 UTC
From: x <x@dev.null>
Message-ID: <3D8940CF.1060903@dev.null>
Source record: 41415

I'd use 70Mhz. Common in many high end commercial receivers. Lots of designs/components are available for this IT. You might also consider 45 mhz, another popular IF.

-x

Rob French wrote:
> Hello,
>
> I'm looking for some resources about selecting an IF frequency for a
> receiver. I'm looking at the idea of building an upconverting HF receiver
> which would convert the HF signals to a high IF (>100 MHz), perform wide
> filtering there, then directly convert it to baseband I and Q channels
> for demodulation via DSP. I'm trying to figure out what some standard
> high IF's are... I've seen the rule of thumb regarding at least 3 times
> the maximum frequency to be received, but looking for more specifics.
>
> -Rob

2353. Re: UHF signal to noise problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 03:34:32 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <ambgk9hki1@slb2.atl.mindspring.net>
Source record: 41416

Something that would help in figuring out the expected range of the system is how high the antennas are on each end above sea level..... Since you are going across water, height above sea level is the main thing to be concerned about.

If they are close to sea level, going across 2.8 miles may be difficult. There is quite a bit of loss by ground absorption and that all depends in now high the antennas are.

The claim of 45 miles by the manufacturer for this sort of system is usually the theoretical range if each antenna is up on a mountain top.

Technically, yes, they can work that far, but in the real world the usable range is a heck of a lot less.

Marketing people love to use the absolute best claim they can make and this sort of unreal distance is often seen on wireless LAN, cordless phones, and so on.

Jim Pennell
N6BIU

2354. Re: Choosing receiver IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 03:40:53 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0209181940.7a363846@posting.google.com>
Source record: 41417

Rob French <fulcrum99@earthlink.net> wrote in message
news:<pan.2002.09.18.17.43.52.67908.17043@earthlink.net>...
> Hello,
>
> I'm looking for some resources about selecting an IF frequency for a
> receiver. I'm looking at the idea of building an upconverting HF receiver
> which would convert the HF signals to a high IF (>100 MHz), perform wide
> filtering there, then directly convert it to baseband I and Q channels
> for demodulation via DSP. I'm trying to figure out what some standard
> high IF's are... I've seen the rule of thumb regarding at least 3 times
> the maximum frequency to be received, but looking for more specifics.
>
> -Rob

But unless you plan to build your own roofing filter, you need
to pick a frequency that you can get a filter for. And if you're making
the filter, the higher it is the wider it will be, and the harder it
will be to make.

The choice of IF frequency is important in terms of image rejection.
Too low compared to the signal frequency, and you'll have to do
a lot of front-end filtering.

If the IF frequency is too close to the signal frequency, you may
have feedthrough problems (ie the signal from the antenna goes
straight through the mixer, and gets into the IF. And having the IF
right in the middle of the tuning range may bring about some other
problems.

Likewise, if you pick an IF frequency that is used by a strong
signal, that signal may get into the IF.

Choosing an IF frequency may also be related to the sort of
local oscillator you are using. The bigger the difference
between the signal frequency and the IF, the higher the oscillator
frequency; certainly in the days of free-running local oscillators
this would tend to make a drifting oscillator.

For an HF receiver, probably anything above a few MHz would make
for easy image-rejection. Receivers with 9MHz IF's have been
around for forty years or so.

With ham band receivers, rather than general coverage, such an
IF frequency didn't get in the way of the tuning range. One reason
to go higher was to get the IF out of the tuning range for HF general
coverage receivers.

So in tuning an IF frequency, you basically have two issues. What frequency can you get a roofing filter for (or easily build)? And if you've got choices, you run some calculations to see which of the frequencies would put the least spurs into the desired tuning range. And if you've got choices, you should give consideration to which might make for easiest design.

45MHz filters seem to be a common frequency in surplus circles. I've seen filters in that general range used in cellphones (and the phones usually come with a crystal to drop that IF to 455KHz). I've also seen filters in the 70 or 80MHz range in other cellphones.

You might want to buy some older cellphones (the bulky kind that sell for fifty cents to a few dollars at garage sales and church rummage sales), and see what turns up.

But you might also want to give thought to whether you need such a high first IF. If you can live with the IF in the HF range, it may simplify other parts of the design, and you're likely to have a better range of choices of available filters, not just in center frequency but in bandwidth. If you don't need FM-bandwidth, you can go with a narrower filter at 9 or 10.7MHz, while something higher in frequency is likely to be at least FM-bandwidth.

Michael VE2BVW

2355. ASCOM SE550 4m radio Information

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 06:59:03 UTC
From: Stephen Tompsett <stephen@blob.demon.co.uk>
Message-ID: <mfIHMKC3WXi9EwpC@blob.demon.co.uk>
Source record: 41418
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

A growing number of people in the UK have purchased ASCOM SE550 4m Radios from the Rugby Amateur Transmitting Society, who still have a substantial number of units available!

Some technical information, circuit diagrams and manual sections are now available on my web site:

http://www.blob.demon.co.uk/

For those not familiar with the equipment the overall specification of the unit is:

Frequency range 68-88 MHz
Channel spacing 12.5 KHz
Mode FM
Antenna BNC 50
TX Power 25W
Deviation 2.5 KHz
DC Power Nominal 13.2V (10.8-15.6V) (RX approx. 1A, TX 6.5A/25W)

The units supplied by the Rugby Amateur Transmitting Society are modified, programmed and working on 4m.

N.B. I have noticed a number of these units being resold on EBAY for considerably more than they were purchased for!

--
Stephen Tompsett (G8LYB)

2356. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 07:27:47 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <32siouo5rodgm0ubpf7nh9hbp7cp6v37e3@4ax.com>
Source record: 41419
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 18 Sep 2002 13:32:18 -0700, hj3ort@hotmail.com (jose luis) wrote:

>Hi all
>Does somebody knows where can i find a 2mt (vhf) antenna tuner schematic?
>or can scan it and send via Email to me?

Take any antenna tuner intended for the 20m band and divide both the inductances and capacitances by 10 :-).

But seriously, why do you want to use an antenna tuner on VHF/UHF bands ?

While the use of an antenna tuner on HF may be justified due to the relative width of the bands e.g. 13 % for the 75/80 m band and the extremely high length to width ratio (and hence narrow bandwidth) of wire antennas. In this case the antenna tuner tunes both the antenna _and_ feedline into resonance.

On VHF/UHF the relative bandwidth is smaller and by using thicker tubing and folded dipoles, the antenna bandwidth itself can be made sufficiently wide. Since the feed line losses are considerable at VHF/UHF, trying to resonate the feedline _and_ the antenna with an antenna tuner down at the transmitter, even larger losses will occur.

If you really need an antenna tuner, which I doubt, it should be mounted at the antenna and be remotely controlled, unless you want to climb the tower each time it needs to be readjusted. By this arrangement only the antenna is tuned and the feedline is not resonated, thus keeping the feedline losses down.

Paul OH3LWR

2357. Re: UHF signal to noise problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 07:27:48 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <roriou4duc8pump8rods19l7q0362ar3ot@4ax.com>
Source record: 41420

On Wed, 18 Sep 2002 22:28:35 +0000 (UTC), Joe McElvenney
<ximac@btinternet.com> wrote:

>Hi,
>
> This isn't going to help you much but VHF/UHF paths
>across water can be a big problem - even ones that are line
>of site.

It depends how you define line of sight :-), it might be something
else than you would simply expect from geometry.

If you have optical mirages, you most likely have radio mirages and
the signal is coming or going in unexpected directions.

>I know of at least one drop-out on a particular
>military circuit due to this. Depending on certain
>propagation factors or seasonal conditions the signal can
>bend vertically mid-path causing a high BER.

I assume that this was a UHF/microwave link which usually have a quite
narrow antenna pattern so the transmitting antenna does not
"illuminate" the receiver antenna in all weather conditions, but below
or above it. The same applies to a narrow beam width receiver antenna,
since during a mirage, the signal is coming from an unexpected
direction, thus effectively, the antennas are not pointing at each
other at these times.

Having a broad antenna beam at least in the vertical direction will
reduce such problems.

The optimum height above the water level varies from day to day and
frequency to frequency, since the multipath nulls caused by "ground"
reflection varies all the time. In such situations space (vertical)
and frequency diversity may help. In extreme situation only an antenna
highs of 1-5 m above the water may be working.

However, in this case with less than 5 km distance and with
frequencies in the lower UHF and thus quite broad antenna beams, I
don't think this is going to be a problem, unless you are frequently
seeing fishing boats high in the sky.

Paul OH3LWR

2358. Re: Choosing receiver IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 07:27:49 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <njtiouoa2ilk9ajv1lpkudg166tkqu71qq@4ax.com>
Source record: 41421

On 18 Sep 2002 20:40:53 -0700, blackm00@cam.org (Michael Black) wrote:

>With ham band receivers, rather than general coverage, such an
>IF frequency didn't get in the way of the tuning range. One reason
>to go higher was to get the IF out of the tuning range for HF general
>coverage receivers.

An other reason for a high first IF is that the relative frequency range required by the LO is greatly reduced. With an IF of 45 MHz, the LO only needs to tune 45 to 75 MHz, which is well below an octave, so a single VCO within a PLL could do this. Unfortunately, such wide PLLs usually have a very bad phase noise performance, so you have to split the tuning range of the LO anyway to get a decent phase noise performance.

The third appeal for a high IF is that with a sufficiently strong mixer, no tunable front end selectivity is needed and all filtering that is needed, is some fixed low pass filtering at 30 MHz to keep the image frequency out. Unfortunately finding sufficiently strong preamplifiers and mixers may be unrealistic and thus, many wide coverage receivers have filters that are one octave wide (or narrower) before the mixer. Such bandpass filtering keeps out the mixer harmonic distortion of signals at f/3 and f/5 from reaching the receiver.

If you have to split the LO range due to phase noise and split the input frequency range due to signal handling problems, you have to ask yourself, is the high IF general coverage receiver so appealing as it would appear to be at first sight.

Paul OH3LWR

2359. READ THE ONLY WEB SITE THAT WANTS TO KILL JEWS AND BLACKS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 07:45:25 UTC
From: Hal.Turner@HalTurnerShow.com
Message-ID: <amc6mm$3g$22222@news1.kornet.net>
Source record: 41425

KILL ALL KIKES AND NIGGERS

www.halturnershow.com

Harold and Phyllis Turner

1906 Paterson Plank Rd.
North Bergen, New Jersey
201-348-8449

Hal.Turner@HalTurnerShow.com

I was departing to waste you some of my lost wrinkles. Her ball was sweet, poor, and irrigates without the street. We like the wide spoon. I was combing aches to cold Orin, who's shouting with the cap's shower. The new card rarely moulds Carol, it calls Neal instead. What did Peter cover beneath all the raindrops? We can't recommend shoes unless Susie will wastefully care afterwards. Occasionally, go dine a envelope! It's very polite today, I'll arrive unbelievably or Robette will judge the tapes. Other sick blunt buckets will kill happily above floors. He may strongly answer in front of angry worthwhile lights. Edwin, still explaining, talks almost hatefully, as the jar smells through their bush. Tell Winifred it's quiet filling beside a candle. Almost no filthy forks without the strong summer were opening around the wet satellite. I am truly difficult, so I converse you. Both joining now, Jeff and Carol solved the fat evenings for rude cloud. Almost no abysmal brave enigmas will easily scold the yogis. Where Liz's weird case jumps, Alexandra learns in bizarre, lower bedrooms. Marian, have a pretty poultice. You won't laugh it. While exits finally move tyrants, the onions often seek near the hollow trees.

They are rejecting alongside distant, towards blank, among outer coffees.

For Sue the frame's lean, under me it's durable, whereas without you it's pouring empty. Marilyn nibbles the cat under hers and regularly improves. All doses slowly dream the heavy fire. Get your absolutely promising barber between my winter. We receive them, then we admiringly attempt Chuck and Samuel's urban butcher. Otherwise the can in Penny's draper might play some short printers. Fucking don't taste seemingly while you're ordering within a hot fig. Tomorrow Linda will burn the diet, and if Russell undoubtably cleans it too, the egg will grasp for the clever canyon.

2360. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 08:27:35 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d898a78$0$211$ba620e4c@news.skynet.be>
Source record: 41422
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

> If you really need an antenna tuner, which I doubt, it should be
> mounted at the antenna and be remotely controlled, unless you want to
> climb the tower each time it needs to be readjusted. By this
> arrangement only the antenna is tuned and the feedline is not
> resonated, thus keeping the feedline losses down.

I don't understand this. Why not putting the tuner between transmitter and
line ?

73 de ON5MJ

2361. Re: Choosing receiver IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 09:06:08 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <amc421$4it2s$1@ID-61331.news.dfncis.de>
Source record: 41423

Why have an IF at all? Since you're using I and Q signals to phase out the opposite sideband you can just use direct conversion. But you may have a problem with the range of the oscillator if you are looking for a general coverage receiver.

--

Hans Summers
http://www.HansSummers.Com

"Rob French" <fulcrum99@earthlink.net> wrote in message
news:pan.2002.09.18.17.43.52.67908.17043@earthlink.net...
> Hello,
>
> I'm looking for some resources about selecting an IF frequency for a
> receiver. I'm looking at the idea of building an upconverting HF receiver
> which would convert the HF signals to a high IF (>100 MHz), perform wide
> filtering there, then directly convert it to baseband I and Q channels
> for demodulation via DSP. I'm trying to figure out what some standard
> high IF's are... I've seen the rule of thumb regarding at least 3 times
> the maximum frequency to be received, but looking for more specifics.
>
> -Rob

2362. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 09:10:51 UTC
From: "atec77(nospam)" <"atec77(nospam)"@hotmail.com>
Message-ID: <3D89949B.AC1BC429@hotmail.com>
Source record: 41424
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

losses become to high.

JC wrote:
>
> > If you really need an antenna tuner, which I doubt, it should be
> > mounted at the antenna and be remotely controlled, unless you want to
> > climb the tower each time it needs to be readjusted. By this
> > arrangement only the antenna is tuned and the feedline is not
> > resonated, thus keeping the feedline losses down.
>
> I don't understand this. Why not putting the tuner between transmitter and
> line ?
>
> 73 de ON5MJ

2363. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 10:57:37 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <amcaj0$h3h$1@paris.btinternet.com>
Source record: 41426
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Ralph Mowery" <rmowery@ctc.net> wrote in message
news:eZ6i9.123553$z91.5039669@bin3.nnrp.aus1.giganews.com...
> Unless it is an unusual situation you do not need an antenna tuner. If
> there is enough swr that a tuner is needed on 2 meters and up , you will
be
> loosing a lot of power in the feedline.
> Change or do some work on the antenna.

Some years ago I saw a review of such a tuner (probably in RadCom). I don't
think many were sold, though, and it wasn't in production for long. It
sticks in my mind, because the reviewer managed to match a dustbin to the
radio. 8-)

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2364. Re: UHF signal to noise problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 11:16:07 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.000001da.002750dc@btinternet.com>
Source record: 41427

Hi,
Hi,

> don't think this is going to be a problem, unless you are frequently
> seeing fishing boats high in the sky.
>
Actually it was tankers waiting in the roads to come alongside buoys
to take on oil that seem to hang in the air - not bad for 250,000 tons.

As for frequencies where strange things occur, I have experienced a
basic simplex circuit, somewhere in the military 30 - 88MHz band, where
you frequently couldn't work whip-to-whip along a 5km path that was
optically visible from both ends (albeit if you stood on a 2-storey
roof). In fact Plessey used to make an on-frequency repeater to try to
eliminate such 'holes'.

As far as I can see, the antenna in use in the Mexican location
appears to be an omni-directional vertical which wouldn't be my choice.
The stated SNR is 27:1 (14dB) which should easily be sufficient. This
seems to me then to implicate multi-path distortion.

73 de Joe, G3LLV

2365. A Single-Tube 75-Watt Novice Transmitter (6146) Coil Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 12:01:14 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <amce26$n2a$1@nic.grnet.gr>
Source record: 41428

Can anyone help me out with any information about the coil data of L2 and L3
in this schematic
it from ARRL 1957 Handbook

Thanks in advance
--
http://deosiereas.virtualave.net

2366. Getting Started

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 12:38:56 UTC
From: Lou_Diamonds_98@yahoo.com
Message-ID: <5708ec25.0209190438.221e4b76@posting.google.com>
Source record: 41429

Anyone know where there are tutorials on scavaging Rf parts? Of course, i'm new to Rf & have a few old RC cars & would love to use those parts to build something new.

Any suggestions?

2367. Re: A Single-Tube 75-Watt Novice Transmitter (6146) Coil Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 12:45:18 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d89c664.377760@news.freeserve.net>
Source record: 41430
Body handling: HTML body converted to readable text

Not many people have the 1957 ARRL handbook these days.
a scan of the diagram might help us to assist you.
oh, and by the way, kill the HTML posting.
hth Mike W
--
On Thu, 19 Sep 2002 15:01:14 +0300, "Deos"
wrote:

>This is a multi-part message in MIME format.
>
>------=_NextPart_000_0015_01C25FED.6630D780
>Content-Type: text/plain;
> charset="iso-8859-1"
>Content-Transfer-Encoding: quoted-printable
>
>
>Can anyone help me out with any information about the coil data of L2 =
>and L3
>in this schematic=20
>it from ARRL 1957 Handbook
>
>Thanks in advance=20
>--=20
>http://deosiereas.virtualave.net
>
>------=_NextPart_000_0015_01C25FED.6630D780
>Content-Type: text/html;
> charset="iso-8859-1"
>Content-Transfer-Encoding: quoted-printable
>
>
>
>
>
>

Can anyone help me out with any =
>information=20
>about the coil data of L2 and L3
in this href=3D"www.qsl.net/n6ev/57-174S.jpg">schematic
it from ARRL =
>1957=20
>Handbook

>

>
style=3D"FONT-FAMILY: 'MC morse_International_1890'; FONT-SIZE: 20pt; =
>mso-bidi-font-size: 12.0pt; mso-fareast-font-family: 'Times New Roman'; =
>mso-ansi-language: EN-US; mso-fareast-language: EN-US; =
>mso-bidi-language: AR-SA; mso-bidi-font-family: 'Times New =
>Roman'">Thanks=20
> in style=3D"mso-spacerun: yes"> advance
--=20
>
http://deosiereas.virtualave.net

>
>------=_NextPart_000_0015_01C25FED.6630D780--
>

2368. Re: Choosing receiver IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 12:47:08 UTC
From: tmgroatatpeakpeakdotcom
Message-ID: <3d89c414.1072328@news.peakpeak.com>
Source record: 41431

On Wed, 18 Sep 2002 21:44:17 GMT, Rob French <fulcrum99@earthlink.net>
wrote:

>Hello,
>
>I'm looking for some resources about selecting an IF frequency for a
>receiver. I'm looking at the idea of building an upconverting HF receiver
>which would convert the HF signals to a high IF (>100 MHz), perform wide
>filtering there, then directly convert it to baseband I and Q channels
>for demodulation via DSP. I'm trying to figure out what some standard
>high IF's are... I've seen the rule of thumb regarding at least 3 times
>the maximum frequency to be received, but looking for more specifics.

Choose an IF where there isn't likely to be a strong over-the-air
signal. If a local signal does get through your front end or IF strip
shielding, it will interfere with ALL receive frequencies (because
it's going directly to the IF). 100 Mhz is in the FM broadcast band,
and would not be a good choice in that respect. 45MHz is below the old
49MHz cordless phones, 6M amateur band, and (US) television channel 2:
a reasonably quiet spot. 75MHz falls in the gap between TV channels 4
and 5, another fairly quiet spot.

--KR0U

2369. Re: UHF signal to noise problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 13:27:56 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <LTgI7XQcDdi9EAd5@ifwtech.co.uk>
Source record: 41438

Paul Keinanen wrote:
>
>However, in this case with less than 5 km distance and with frequencies
>in the lower UHF and thus quite broad antenna beams, I don't think this
>is going to be a problem, unless you are frequently seeing fishing
>boats high in the sky.
>
There can also be problems with water reflections changing with the height of the tide. Unlike mirage effects (tropospheric bending), variable sea reflections are a problem every day.

A possible cure is to tilt both antennas upwards, which will attenuate the sea-reflected ray much more than the direct ray; but whether you can do this will depend on the signal/noise ratio.

In some places in Scotland, all the UHF TV antennas are at ground level so that they can see the transmitter on the mountain, but they can't see the variable sea level in between. TV antennas on 2ft masts look totally weird, and you have to be *so* careful not to trip over them!

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2370. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 13:56:16 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D89D780.4243E908@ieee.org>
Source record: 41432
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

JC wrote:
>
> > If you really need an antenna tuner, which I doubt, it should be
> > mounted at the antenna and be remotely controlled, unless you want to
> > climb the tower each time it needs to be readjusted. By this
> > arrangement only the antenna is tuned and the feedline is not
> > resonated, thus keeping the feedline losses down.
>
> I don't understand this. Why not putting the tuner between transmitter and
> line ?

If your 2m SWR is high enough to require an antenna tuner, it is so
high that you will lose a lot of your transmitted signal unless you
are using very expensive coax or unless you put the tuner at the antenna.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2371. Re: A Single-Tube 75-Watt Novice Transmitter (6146) Coil Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 15:04:49 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3d89e78c$1@news.netacc.net>
Source record: 41433

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3d89c664.377760@news.freeserve.net...
> Not many people have the 1957 ARRL handbook these days.
> a scan of the diagram might help us to assist you.
> oh, and by the way, kill the HTML posting.

Dont need the 1957 handbook. Schematic was perfectly readable. Reason was.... he posted properly, complete with html and an excellent graphic of the schematic.

Posters should feel free to post in HTML. Those who run archaic systems with non HTML capable readers may quietly exclude themselves from the intended audience and refrain from bashing the more technically competent posters/readers who have no problems with it.

And yes, I was able to come up with design for a 40/80 meter multi tap coil that will work in his tank circuit and will email direct to him.

Steve

2372. Re: A Single-Tube 75-Watt Novice Transmitter (6146) Coil Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 15:15:21 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnaojqg9.m3u.QSB@animas.frontier.net>
Source record: 41434

On Thu, 19 Sep 2002 11:04:49 -0400, Stephen C. Robbins scribbled:
>
> Posters should feel free to post in HTML. Those who run archaic systems
> with non HTML capable readers may quietly exclude themselves from the
> intended audience and refrain from bashing the more technically competent
> posters/readers who have no problems with it.

Horse Hocky! HTML is for the WEB. usenet *ain't* the WEB!
Get over it.
Stay over it.

Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

2373. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 15:27:23 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uojrb018ubq34a@corp.supernews.com>
Source record: 41435
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Jacques

Feedline losses at HF are fairly low. At VHF, even fairly expensive feedline has considerable loss.

When you put an antenna tuner between point A and point B, it attempts to match the SWR between those points. If you put the tuner between the feedline and the transmitter, power will be effectively transferred into the feedline.

However, the feedline still has a characteristic impedance of 50 ohms, so there is a substantial mismatch where the feedline meets the antenna. This mismatch causes the current on the feedline to be higher than it would if it were matched. This higher current causes the loss on the feedline to be higher, depending on the degree of mismatch, perhaps many times higher.

At 80 meters, I might have a feedline characteristic loss of, perhaps, 0.3 db or so. Even with a fairly astronomical SWR, it might bump that up to 3 or 4 db, measurable, but not really noticeable.

At VHF, however, that same feedline loss might be 2 db to start with (25 meters of RG-8 solid dielectric). Given the same SWR at the antenna, the actual loss might be 20 db, certainly not something that can be ignored. If you are asking this question, you might be using an even smaller feedline. At 2 meters, 25 meters of RG-58A has a characteristic loss of almost 6 db. Hit that with a significant SWR and almost all of your power is being used to heat the coax!

So at VHF, there are a few different strategies that folks have suggested. The most obvious one is to make the antenna resonant in the first place. At 2 meters, a dipole is barely over a meter long. Few people face such space limitations that they can't get a meter of wire in the air. Another approach is to put the tuner at the antenna. This solves the problem of current on the feedline, but it means that you often need some sort of remote control to adjust the tuner, unless you will be operating over a limited frequency range. The third strategy is to get feedline whose characteristic loss is lower. Depending on the length of your run, this can be an expensive alternative. You are typically talking hardline which can easily cost 10 euros per meter or more, and which is a pain to install, or some sort of purged system which could run into many thousands of euros.

This is why so many folks said, why not just make the antenna resonant in the first place.

Now, all that being said, suppose you have a system where the SWR over the range you want to operate is, say, 1:1 at the center, and 2:1 at the edges

of the range. I would suggest just ignore it, presuming you measured the SWR at the antenna. There's another gotcha here that is more of an issue at VHF. If you see 2:1 at the transmitter, and you have a fairly typical feedline, then the SWR at the antenna is much higher. Those same losses are making the SWR at the transmitter appear better.

Hope this helps

..

"JC" <jacques.culot@skynet.be> wrote in message
news:3d898a78$0$211$ba620e4c@news.skynet.be...
> > If you really need an antenna tuner, which I doubt, it should be
> > mounted at the antenna and be remotely controlled, unless you want to
> > climb the tower each time it needs to be readjusted. By this
> > arrangement only the antenna is tuned and the feedline is not
> > resonated, thus keeping the feedline losses down.
>
> I don't understand this. Why not putting the tuner between transmitter and
> line ?
>
> 73 de ON5MJ
>
>
>
>

2374. Re: A Single-Tube 75-Watt Novice Transmitter (6146) Coil Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 15:48:43 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1909021149380001@c-66-176-144-254.se.client2.attbi.com>
Source record: 41436

In article <3d89e78c$1@news.netacc.net>, "Stephen C. Robbins"
<srobbinsNoSPaMDUDES@netacc.net> wrote:

> "Mike W" <mike@corn2.freeserve.co.uk> wrote in message
> news:3d89c664.377760@news.freeserve.net...
> > Not many people have the 1957 ARRL handbook these days.
> > a scan of the diagram might help us to assist you.
> > oh, and by the way, kill the HTML posting.
>
>
> Dont need the 1957 handbook. Schematic was perfectly readable. Reason
> was.... he posted properly, complete with html and an excellent graphic of
> the schematic.
>
> Posters should feel free to post in HTML. Those who run archaic systems
> with non HTML capable readers may quietly exclude themselves from the
> intended audience and refrain from bashing the more technically competent
> posters/readers who have no problems with it.
>
> And yes, I was able to come up with design for a 40/80 meter multi tap coil
> that will work in his tank circuit and will email direct to him.
>
> Steve

I saw the schematic fine also. I would not recommend this circuit. It's simple, but the crystal drive is so high that the transmitter would probably chirp all over the place. I had the same experience with the 6DQ6B circuit in a later edition of the handbook. It is best to have a separate oscillator circuit with a buffer and then drive the 6146. I would also advise getting a VFO, if possible, as a xtal is very limiting to say the least. I had two xtals when I was a novice and spent a lot of time calling CQ with no answers. I had fun anyway, though. :-)

Happy Trails,
Steve WB4CZR

2375. Re: single transistor transciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 15:53:39 UTC
From: janaeanddoug@netzero.net
Message-ID: <360a820d.0209190753.47087e24@posting.google.com>
Source record: 41437

Sure, I have built superhets with frequency counters and even variable bandpass tuning, most of my own half hazzard design, and they worked quite well. I enjoyed every minute of it, and now Im just trying to make something work reasonably well with as few parts as possible. I guess you could say I like doing things that not many others have done before. I see that no one has any constructive words to say on this subject.
I asked for a technical conversation and all I get is someone stating their opinion on why I shouldnt have fun and enjoy what I do in this hobby. But I suppose that there are those who would like to tell me what I can and cannot enjoy. Thank you very much. You are a real inspiration to amateur radio. Doug

2376. Re: A Single-Tube 75-Watt Novice Transmitter (6146) Coil Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 16:16:49 UTC
From: mcalhoun@ksu.edu
Message-ID: <amct9h$oqi@unix1.cc.ksu.edu>
Source record: 41440

>Can anyone help me out with any information about the coil data of L2
>and L3 in this schematic from the ARRL 1957 Handbook

If it will help, the same 6146 oscillator is shown in the 1959 handbook,
but there it has a smaller power supply, is described as a "Novice 50
watter", and has a somewhat-simpler PI output network instead of link
coupling. (I wonder if the later circuit was "downgraded" to reduce
the current through the crystal?)

--Myron, W0PBV.

--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

2377. Re: single transistor transciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 16:17:52 UTC
From: Sparks W4EAS <sparksw4eas@mindspring.com>
Message-ID: <3D89F8B0.5020@mindspring.com>
Source record: 41439

Gee, I think a "One" transistor tranceiver for CW would be great! Like sorta a "Direct Conversion" receiver using the same oscillator as the transmitter... and a saturating diode to block overload of the receiver part..... Need headphone's or would have to add a audio amp outboard. Go for it... Sparks W4EAS

2378. Re: Choosing receiver IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 17:12:24 UTC
From: KA9CAR <nospam@nospam.usa>
Message-ID: <amd0bc$10vr$1@news1.tribune.com>
Source record: 41441

I don't have it in front of me, but the current issue of QEX has quite a discussion of HF receiver performance, and it covers the if freq, filtering etc.

KA9CAR

Rob French <fulcrum99@earthlink.net> wrote in message news:pan.2002.09.18.17.43.52.67908.17043@earthlink.net...
> Hello,
>
> I'm looking for some resources about selecting an IF frequency for a
> receiver. I'm looking at the idea of building an upconverting HF receiver
> which would convert the HF signals to a high IF (>100 MHz), perform wide
> filtering there, then directly convert it to baseband I and Q channels
> for demodulation via DSP. I'm trying to figure out what some standard
> high IF's are... I've seen the rule of thumb regarding at least 3 times
> the maximum frequency to be received, but looking for more specifics.
>
> -Rob

2379. Syslyn <-> Digital?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 17:15:55 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <amd0obvta0@206.97.58.200>
Source record: 41442

I have a Syslyn beam indicator system. I'd like to continue using it but have a more precise digital readout in the shack. Does anyone know or have suggestions on how to convert the Syslyn directional info to digital degrees?

73 de Jack

2380. Re: Fox Hole Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 17:39:55 UTC
From: n2ey@aol.com
Message-ID: <20020919133955.14335.00001073@mb-mj.aol.com>
Source record: 41443

In article <qKPh9.12780$X7.370840@news4.srv.hcvlny.cv.net>, "Mike Kulyk" <mkulyk@optonline.net> writes:

>I am looking for info on a fox hole radio. Using a razor blade, pencil lead, >ear phones, and wire.
>
>What razors and what pencils work best. And how much wire?

I built one of those as my first receiver, almost 40 years ago. Built many others over the years. Mine was copied from the kid's book, "All About Radio And Television". Never had a problem getting any of them to work.

The coil is wound on a toilet-tissue roll, with the paper removed. 120 turns of #26 enamel wire, close wound, was the book specification.

Detector used a plain (not blue) single edge razor blade. These are still available in hardware stores for use in cheap paint scrapers and such. Pencil lead was from a #2 pencil.

The neat part of the "All About" rx was the use of a bent-up safety pin to hold the pencil lead, which was held to the pin by wrapping a piece of #26 around both of them.

The real trick is having a good antenna and ground setup. For me it was the radiator pipe and the classic 70 feet of wire out the window to the crab apple tree.

Of course living less than 3 miles from WPEN on 950 AM sure helped.

73 de Jim, N2EY

2381. need help with homebrew noise blanker circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 18:20:30 UTC
From: AJ Sanderson <ajsand@nospam.com>
Message-ID: <amd4h6$8vr$1@slb7.atl.mindspring.net>
Source record: 41444
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.basics,sci.electronics.design

I'd like to build a noise gate circuit for my HF receiver, to be located externally between the radio and antenna, but I'm not sure how to wind the toroids. The circuit I'm going to use (unless someone can suggest a better one for HF use) is at
http://www.lwca.org/library/articles/jtreed/gate/gate1b.htm

This uses two FT50-75 toroids and I understand I need to change these to FT50-43 for hf use (1.8- 30 Mhz). For 50 ohm input/ ouptut, how would I wind the toroids using 43's?

Thanks,
AJ

2382. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 18:41:18 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d8a1a51$0$221$ba620e4c@news.skynet.be>
Source record: 41445
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hi everybody,

I am a bit perplex about your replies. This is why.

In the ARRL antenna book 17th edition, on page 24-16 (also in ARRL handbook 78th edition at page 19-5)you can see a diagram about loss in coaxial lines. At 150MHz, the matched attenuation of 100 ft of RG8 is just above 3 dB. Keep this figure in mind.

On the other hand, in the book of W2DU "Reflexions - Transmission Lines & Antennas" - 1st edition by ARRL, at page 1-5 you can see another diagram giving the additional loss caused by mismatch for various SWR (also at page 19-6 of ARRL handbook year 2001/ 78th edition). Imagine we have a SWR of 3. The diagram gives an additional loss of 1 dB due to mismatch for an attenuation of 3 dB in matched conditions. This is the consequence of the conjugate impedance theorem or the maximum transmitted power theorem. Total attenuation will thus be 4 dB instead of 3. (In the 80m band the match attenuation would be a bit less than 0.4 dB plus an additional loss of 0.2 dB for unmatched conditions (see also page 1-15 of W2DU book). Those figures could also be obtained from equations.

Is this small 1 dB additional loss at 150 MHz worth to climb at the top of the pole and the price of a remote controlled tuner ?

73 de ON5MJ.

2383. Re: Navstar Systems Ltd - Timing GPS Receiver info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 18:43:13 UTC
From: Allan Gibbs <allan@prescot.demon.co.uk>
Message-ID: <npR5gTFBrhi9Ewqt@prescot.demon.co.uk>
Source record: 41347

In a message dated Tue, 17 Sep 2002 at 20:28:52,
Bruno I6YPK writes.....

Description of interesting bit of gear snipped...
>
>If anyone has information about this receiver please help.
>
>You can see photos of this strange object here :
>
>http://www.qsl.net/i6ypk/navsymm_gtr.htm
>
>Thanks and 73.
>Bruno, I6YPK

Bruno,

Could I suggest you ask the question - if you haven't already - in
sci.geo.satellite-nav and/or alt.satellite.gps ??

That is, of course, if no-one here is able to help....

Regards,

Allan.
--
Allan Gibbs - Prescot, Merseyside, U.K.

2384. Foolproof grid circuit for 4CX350 at 50MHz pse?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 18:55:47 UTC
From: Richard J <nospam@mah.se>
Message-ID: <amd6jg$st9$1@news.lth.se>
Source record: 41446

Hi group -

I ve seen many designs for the input of RF into the 4CX250 on 6m, but not so many for the 4CX350.
Currently, I am using a L-C-L input link that I find very sharp and also inefficient. It just doesn t work well - set it and forget it, you know....

I have a 25W rig with adjustable output, so I d settle for ,say, 5W input power.
The PA works at 1800V B+, 340V G2/screen, -70/25V G1/Bias.

Who amongst you has the ultimate design - easy to build, easy to adjust, stable and suitable?
Will it be a C-L, a LCL or a parallell LC network that comes out the winner?
Can I *please* have your coil data in millimeters, *please* ? :-)

Finally, space is an issue here - the grid compartment is small, really....

Tnx fer your pointers, time and help. 73 /Rick, SM7SCJ

2385. Re: need help with homebrew noise blanker circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 19:02:58 UTC
From: Tarmo Tammaru <t-tammaru@home.com>
Message-ID: <Cbpi9.142564$z91.5770782@bin3.nnrp.aus1.giganews.com>
Source record: 41348
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.basics,sci.electronics.design

AJ,

Don't be too disappointed if the thing doea not work. I built something like thi some years ago, got only marginal results on a good day. What I discovered was that:

1. The noise phase during positice AC cycles was not the same as during negative AC cycles.

2. There was sometimes more than one noise pulse during a half cycle of AC.

3. The phase of the noise jiggled back and fourth.

4. The noise "pulse"can be very wide; that is, it showed ringing

Tam/WB2TT

"AJ Sanderson" <ajsand@nospam.com> wrote in message news:amd4h6$8vr$1@slb7.atl.mindspring.net...
> I'd like to build a noise gate circuit for my HF receiver, to be located
> externally between the radio and antenna, but I'm not sure how to wind the
> toroids. The circuit I'm going to use (unless someone can suggest a better
> one for HF use) is at
> http://www.lwca.org/library/articles/jtreed/gate/gate1b.htm
>
> This uses two FT50-75 toroids and I understand I need to change these to
> FT50-43 for hf use (1.8- 30 Mhz). For 50 ohm input/ ouptut, how would I
> wind the toroids using 43's?
>
> Thanks,
> AJ
>
>
>
>

2386. Re: A Single-Tube 75-Watt Novice Transmitter (6146) Coil Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 21:19:11 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <amdemj$99k$1@nic.grnet.gr>
Source record: 41349

is there a problem with me posting the link????

ps i can read the schematic the PROBLEM is what is L2 & L3

how many mh how many turns the wire ect.....

"Deos" <lineoffiretoday@yahoo.com> wrote in message news:amce26$n2a$1@nic.grnet.gr...

Can anyone help me out with any information about the coil data of L2 and L3
in this schematic
it from ARRL 1957 Handbook

Thanks in advance
--
http://deosiereas.virtualave.net

2387. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 21:46:39 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <3Bri9.45445$216.1704652@bin4.nnrp.aus1.giganews.com>
Source record: 41350
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

That 3 db loss is for a matched condition and no antenna tuner will be needed. If the swr of 3 is measured at the transmitter end and you have a 3 db loss in the transmssion line , look up how much of a mismatch you will have at the antenna. It is almost off the scale. The coax can be open and you will only measue a swr of about 3 with a 3 db loss in the line at 150 mhz. Then check out how much additional loss you get with a swr of 20 or greater that you will actually have at the antenna.

"JC" <jacques.culot@skynet.be> wrote in message
news:3d8a1a51$0$221$ba620e4c@news.skynet.be...
> Hi everybody,
>
> I am a bit perplex about your replies. This is why.
>
> In the ARRL antenna book 17th edition, on page 24-16 (also in ARRL
handbook
> 78th edition at page 19-5)you can see a diagram about loss in coaxial
lines.
> At 150MHz, the matched attenuation of 100 ft of RG8 is just above 3 dB.
Keep
> this figure in mind.
>
> On the other hand, in the book of W2DU "Reflexions - Transmission Lines &
> Antennas" - 1st edition by ARRL, at page 1-5 you can see another diagram
> giving the additional loss caused by mismatch for various SWR (also at
page
> 19-6 of ARRL handbook year 2001/ 78th edition). Imagine we have a SWR of
3.
> The diagram gives an additional loss of 1 dB due to mismatch for an
> attenuation of 3 dB in matched conditions. This is the consequence of the
> conjugate impedance theorem or the maximum transmitted power theorem.
Total
> attenuation will thus be 4 dB instead of 3. (In the 80m band the match
> attenuation would be a bit less than 0.4 dB plus an additional loss of 0.2
> dB for unmatched conditions (see also page 1-15 of W2DU book). Those
> figures could also be obtained from equations.
>
> Is this small 1 dB additional loss at 150 MHz worth to climb at the top of
> the pole and the price of a remote controlled tuner ?
>
> 73 de ON5MJ.
>
>

>
>

2388. Re: A Single-Tube 75-Watt Novice Transmitter (6146) Coil Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 22:11:09 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3d8a4b77$1@news.netacc.net>
Source record: 41351

"carltons" <motsteve@attbi.com> wrote in message
news:motsteve-1909021149380001@c-66-176-144-254.se.client2.attbi.com...
> I saw the schematic fine also. I would not recommend this circuit. It's
> simple, but the crystal drive is so high that the transmitter would
> probably chirp all over the place. I had the same experience with the
> 6DQ6B circuit in a later edition of the handbook. It is best to have a
> separate oscillator circuit with a buffer and then drive the 6146. I
> would also advise getting a VFO, if possible, as a xtal is very limiting
> to say the least. I had two xtals when I was a novice and spent a lot of
> time calling CQ with no answers. I had fun anyway, though. :-)
>
> Happy Trails,
> Steve WB4CZR

I would have to agree with you on all the above points. From my early homebrew experience, these circuits are great learning points and the original build usually metamorphasizes into a more advanced circuit (new oscillator, vfo, 7 bands, etc etc). My hats off to anyone who tackles homebrew projects at all in the hobby!

Steve

2389. Re: Fox Hole Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 22:32:27 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <uokk415oq09qa6@corp.supernews.com>
Source record: 41352

Here's a source for the blue razon blades:
http://home.swbell.net/wb5rex/xtalman/

2390. Re: A Single-Tube 75-Watt Novice Transmitter (6146) Coil Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 22:36:37 UTC
From: Bob Weiss <bob.weiss@verizon.net>
Message-ID: <3D8A5174.2010201@verizon.net>
Source record: 41353

Deos wrote:
>
> Can anyone help me out with any information about the coil data of L2 and L3
> in this schematic <www.qsl.net/n6ev/57-174S.jpg>
> it from ARRL 1957 Handbook
>
> *Thanks in advance *
> --
> http://deosiereas.virtualave.net

According to the same article in the 1956 handbook, L2 and L3 were made from a single piece of coil stock (Barker and Williamson type 3900 2" diameter, 8 turns/inch). The L2 section is 7 1/2 turns at one end of the assembly. L2 comprises the rest of the coil (32 turns), tapped at 16 turns for the 40 M tap.

Bob Weiss N2IXK

2391. Re: Choosing receiver IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 22:54:21 UTC
From: Rob French <fulcrum99@earthlink.net>
Message-ID: <pan.2002.09.19.18.53.19.629378.2273@earthlink.net>
Source record: 41354

That was the main idea... that I would convert everything to a relatively high IF where I could just use one VCO, and then convert to I/Q from there... so no need for particularly narrow filtering at the IF.

Conceivably I could use direct conversion, with multiple VCO's to cover the tuning range. (I want to use DDS, but my understanding is that using a DDS directly for the LO in a receiver will result in too many spurs, so I was looking at a PLL-"cleaned" DDS).

-Rob

2392. square- versus sine-wave LO to mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 22:57:56 UTC
From: Rob French <fulcrum99@earthlink.net>
Message-ID: <pan.2002.09.19.18.58.26.860253.2273@earthlink.net>
Source record: 41355

I seem to recall reading (I don't have my books with me at this TDY unfortunately) some discussion of how the LO signal to a mixer should ideally be a square wave. Is this true for all mixers? As I understand it, this has to do with the switching function of the mixer. If this is the case, I was wondering why not remove the spurs issue of a DDS by converting it to a square wave to drive the mixer. Or am I missing something significant here...

-Rob

2393. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 23:20:49 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d8a5bda$0$195$ba620e4c@news.skynet.be>
Source record: 41356
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Thank you Ralph for your reply. About the exemple, I haven't see yet in those books if the SWR is supposed to be mesured at the antenna or at the transmitter end. I think I will put this example in a Smith' diagram just for seing what will happen. Anyway an SWR of 20 at the antenna is not realistic because it would require first some adjustment at the aerial. So my assumption of a SWR of 3 or even 5 could be reasonably good and in this case the books are right.

73 de ON5MJ

2394. Re: A Single-Tube 75-Watt Novice Transmitter (6146) Coil Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 23:23:23 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3D8A5C6B.3AE3C49C@ieee.org>
Source record: 41357

carltons wrote:

> In article <3d89e78c$1@news.netacc.net>, "Stephen C. Robbins"
> <srobbinsNoSPaMDUDES@netacc.net> wrote:
>
> > "Mike W" <mike@corn2.freeserve.co.uk> wrote in message
> > news:3d89c664.377760@news.freeserve.net...
> > > Not many people have the 1957 ARRL handbook these days.
> > > a scan of the diagram might help us to assist you.
> > > oh, and by the way, kill the HTML posting.
> >
> >
> > Dont need the 1957 handbook. Schematic was perfectly readable. Reason
> > was.... he posted properly, complete with html and an excellent graphic of
> > the schematic.
> >
> > Posters should feel free to post in HTML. Those who run archaic systems
> > with non HTML capable readers may quietly exclude themselves from the
> > intended audience and refrain from bashing the more technically competent
> > posters/readers who have no problems with it.
> >
> > And yes, I was able to come up with design for a 40/80 meter multi tap coil
> > that will work in his tank circuit and will email direct to him.
> >
> > Steve
>
> I saw the schematic fine also. I would not recommend this circuit. It's
> simple, but the crystal drive is so high that the transmitter would
> probably chirp all over the place. I had the same experience with the
> 6DQ6B circuit in a later edition of the handbook. It is best to have a
> separate oscillator circuit with a buffer and then drive the 6146. I
> would also advise getting a VFO, if possible, as a xtal is very limiting
> to say the least. I had two xtals when I was a novice and spent a lot of
> time calling CQ with no answers. I had fun anyway, though. :-)
>
> Happy Trails,
> Steve WB4CZR

The crystal current would probably break the current style crystals. The old
ft243 style could handle a little more current and the still older and bigger
crystals
would probably handle the current OK.

Bill K7NOM

2395. Re: square- versus sine-wave LO to mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 23:41:49 UTC
From: DrGrok@mungednet.com
Message-ID: <amdn2g$7db$1@bob.news.rcn.net>
Source record: 41358

In article <pan.2002.09.19.18.58.26.860253.2273@earthlink.net>, Rob French
<fulcrum99@earthlink.net> wrote:
>I seem to recall reading (I don't have my books with me at this TDY
>unfortunately) some discussion of how the LO signal to a mixer should
>ideally be a square wave. Is this true for all mixers? As I understand
>it, this has to do with the switching function of the mixer. If this is
>the case, I was wondering why not remove the spurs issue of a DDS by
>converting it to a square wave to drive the mixer. Or am I missing
>something significant here...
>
>-Rob

If the spurs have a phase modulation component (as most spurs from a DDS do)
converting to a square wave will not help.

Dr. G.

2396. Re: single transistor transciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 23:52:15 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <Pqti9.71962$TX5.2197573@news1.east.cox.net>
Source record: 41359

"Doug" <janaeanddoug@netzero.net> wrote in message
news:360a820d.0209190753.47087e24@posting.google.com...
> Sure, I have built superhets with frequency counters and even variable
> bandpass tuning, most of my own half hazzard design, and they worked
> quite well. I enjoyed every minute of it, and now Im just trying to
> make something work reasonably well with as few parts as possible. I
> guess you could say I like doing things that not many others have done
> before. I see that no one has any constructive words to say on this
> subject.
> I asked for a technical conversation and all I get is someone
> stating their opinion on why I shouldnt have fun and enjoy what I do
> in this hobby. But I suppose that there are those who would like to
> tell me what I can and cannot enjoy. Thank you very much. You are a
> real inspiration to amateur radio. Doug

2397. Re: Choosing receiver IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 23:52:46 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D8A62CF.2B7A@pop.removethistomailme.net>
Source record: 41360

Rob French wrote:
>
> Conceivably I could use direct conversion, with multiple VCO's to cover
> the tuning range. (I want to use DDS, but my understanding is that using
> a DDS directly for the LO in a receiver will result in too many spurs, so
> I was looking at a PLL-"cleaned" DDS).

It won't really be that bad. Use a high-quality DDS chip like an
AD9852/AD9854, and your LO spurs will be down around -80 dBc. Not
great, but an embarrassing number of ham and commercial rigs have
shipped with worse performance than that.

I'd say get the basic system up and running with an AD9852/9854, and if
you have spurious-response problems, deal with it then.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2398. Re: single transistor transciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 23:54:04 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <wsti9.71980$TX5.2198464@news1.east.cox.net>
Source record: 41361

I wonder if for the RX a regenerative design might have some
advantages over the direct conversion approach -- more gain?
I'd also think it would be possible to have the regenerative RX
revert to an xtal controlled oscillator for transmission, or even
as a VFO.

Pete

"Doug" <janaeanddoug@netzero.net> wrote in message
news:360a820d.0209190753.47087e24@posting.google.com...
> Sure, I have built superhets with frequency counters and even variable
> bandpass tuning, most of my own half hazzard design, and they worked
> quite well. I enjoyed every minute of it, and now Im just trying to
> make something work reasonably well with as few parts as possible. I
> guess you could say I like doing things that not many others have done
> before. I see that no one has any constructive words to say on this
> subject.
> I asked for a technical conversation and all I get is someone
> stating their opinion on why I shouldnt have fun and enjoy what I do
> in this hobby. But I suppose that there are those who would like to
> tell me what I can and cannot enjoy. Thank you very much. You are a
> real inspiration to amateur radio. Doug

2399. Re: square- versus sine-wave LO to mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-19 23:55:21 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D8A636A.7C52@pop.removethistomailme.net>
Source record: 41362

Rob French wrote:
>
> I seem to recall reading (I don't have my books with me at this TDY
> unfortunately) some discussion of how the LO signal to a mixer should
> ideally be a square wave. Is this true for all mixers? As I understand
> it, this has to do with the switching function of the mixer. If this is
> the case, I was wondering why not remove the spurs issue of a DDS by
> converting it to a square wave to drive the mixer. Or am I missing
> something significant here...

You can. The AD9852/9854 DDS chips, and probably others as well, have a
built-in comparator just for that purpose.

The Mini-Circuits mixer app notes encourage the use of square-wave drive
when possible.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2400. Re: square- versus sine-wave LO to mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 00:22:14 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <amdpno$j6h$1@slb3.atl.mindspring.net>
Source record: 41363

In most cases, spurs and noise from the DDS LO in mixer applications are phase types of signals.... Converting to a square wave can't change that.

It can improve amplitude noise from an LO, but this is usually not the problem in modern DDS synthesizers. The older generation VFO type LO usually was also fine in this regard. Once an LO drive saturates the mixer, amplitude noise on the LO drive is much less likely to occur and any decent LO design provides enough output drive.

==========

However, a square wave into the mixer can improve strong signal handing ability by transiting THROUGH the zero crossing point quickly and that zero crossing point in the LO drive is where the mixer is most prone to intermod.

This doesn't alter the spurs a DDS generates, but it does improve the third order intermod to some degree.

Jim Pennell
N6BIU

2401. Re: single transistor transciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 01:03:22 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnaoksuq.kb.QSB@animas.frontier.net>
Source record: 41364

On Thu, 19 Sep 2002 23:54:04 GMT, Uncle Peter scribbled:
> I wonder if for the RX a regenerative design might have some
> advantages over the direct conversion approach -- more gain?
> I'd also think it would be possible to have the regenerative RX
> revert to an xtal controlled oscillator for transmission, or even
> as a VFO.
>
> Pete

I've sometimes thought it might be possible to key a regen circuit into
full osc. for xmit use.
But, the best way to attempt that would be using a xistor as some
sort of a switch -- thereby doubling the xistor count here. :-)
But, you gotta know, you'll play hell with freq shift between
rcv and xmit -- and there'd be chirps, for sure.

Would slipping in a tunnel diode be cheating?

Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

2402. Santa Barbara/Goleta -- Electronic Junque stores

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 01:09:24 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnaokta3.kb.QSB@animas.frontier.net>
Source record: 41365

The wife and I are going out to S.B. to visit her mom for a coupl'o days. I can usually get off on some 'personal time' on these visits. I've found 3 or 4 used books stores that I like to visit.
But, I'd like to trawl through some used/surplus/mystery electronic stores -- if there be any. In all my previous trips I've never found any.
Are there any?

tnx in advance for any pointers.

Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

2403. Re: A Single-Tube 75-Watt Novice Transmitter (6146) Coil Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 01:29:21 UTC
From: gaschafer@attbi.com
Message-ID: <3d8a7a22.30105424@netnews.attbi.com>
Source record: 41366

On Thu, 19 Sep 2002 16:23:23 -0700, Bill Janssen <billj@ieee.org>
wrote:

>
>
>carltons wrote:
>
>> In article <3d89e78c$1@news.netacc.net>, "Stephen C. Robbins"
>> <srobbinsNoSPaMDUDES@netacc.net> wrote:
>>
>> > "Mike W" <mike@corn2.freeserve.co.uk> wrote in message
>> > news:3d89c664.377760@news.freeserve.net...
>> > > Not many people have the 1957 ARRL handbook these days.
>> > > a scan of the diagram might help us to assist you.
>> > > oh, and by the way, kill the HTML posting.
>> >
>> >
>> > Dont need the 1957 handbook. Schematic was perfectly readable. Reason
>> > was.... he posted properly, complete with html and an excellent graphic of
>> > the schematic.
>> >
>> > Posters should feel free to post in HTML. Those who run archaic systems
>> > with non HTML capable readers may quietly exclude themselves from the
>> > intended audience and refrain from bashing the more technically competent
>> > posters/readers who have no problems with it.
>> >
>> > And yes, I was able to come up with design for a 40/80 meter multi tap coil
>> > that will work in his tank circuit and will email direct to him.
>> >
>> > Steve
>>
>> I saw the schematic fine also. I would not recommend this circuit. It's
>> simple, but the crystal drive is so high that the transmitter would
>> probably chirp all over the place. I had the same experience with the
>> 6DQ6B circuit in a later edition of the handbook. It is best to have a
>> separate oscillator circuit with a buffer and then drive the 6146. I
>> would also advise getting a VFO, if possible, as a xtal is very limiting
>> to say the least. I had two xtals when I was a novice and spent a lot of
>> time calling CQ with no answers. I had fun anyway, though. :-)
>>
>> Happy Trails,
>> Steve WB4CZR
>
>The crystal current would probably break the current style crystals. The old

>ft243 style could handle a little more current and the still older and bigger
>crystals
>would probably handle the current OK.
>
>Bill K7NOM
>
>

You are right about the crystal current breaking the crystal. With the
6146 oscillator even the
FT243 crystals will get very hot and can break with all the drive on
them. You have to be
careful and keep the crystal drive in check.

73
Gary K4FMX

2404. Re: Fixing vintage amp with static/crackling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 02:36:17 UTC
From: Gregg Horan <chili_gATyahooDOTcom@skip.this>
Message-ID: <os1loucgtij5etu56t41bfi1otnii12thb@4ax.com>
Source record: 41367
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

Thanks to everyone who responded to this. I did end up finding the culprit and it was a loose solder joint on a capacitor in the amp section. Unfortunately, it was pointed out to me that the amp heating up is also really an issue, and I should adjust the bias.

I was able to adjust the 'good' channel fine. Unfortunately on the bad channel, adjusting the variable resistor allows me to go only as low as 400mv where a 50mv is desired (this measurement is across two resistors between the opposing power transistors... one supplying + and one -).

I guess at this point, I can only assume that one of the diodes, caps or smaller transistors in that circuit is bad. The power transistors seem OK, since both pairs are behaving the same, and I believe that all the connections and resistors are fine. . I think I may be beyond my testing abilities at this point... any further recommendations? I did spray things with freeze spray with no effect.

Thanks again.
(what would you expect a shop to charge to fix something like that?)
Gregg Horan

So I attempted to set the bias
>>I have a Pioneer sx939 reciever (1977 or so; 75wpc). It seems to work
>>normally with the exception of this static or crackling sound on the
>>right channel (verified by swapping speakers). The sound is almost
>>like that of a record with a lot of dust or dirt on it. It is
>>independant of the volume, and heard just as clearly with volume
>>completely off. Removing the pre-amp jumpers does nothing to change
>>it. It also isn't affected by which input is selected. Periodically,
>>this crackling will show itself as more of a significant pop.
>>
>>As a (possibly related) note, the amp seems to be quite hot. The top
>>plate, although you can touch it, is hot enough to seriously think
>>twice about touching. .

2405. Re: UHF signal to noise problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 03:24:11 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3d8a94ad.1846686@news.cantech.net.au>
Source record: 41368

On Thu, 19 Sep 2002 14:27:56 +0100, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

>Paul Keinanen wrote:
>>
>>However, in this case with less than 5 km distance and with frequencies
>>in the lower UHF and thus quite broad antenna beams, I don't think this
>>is going to be a problem, unless you are frequently seeing fishing
>>boats high in the sky.
>>
>There can also be problems with water reflections changing with the
>height of the tide. Unlike mirage effects (tropospheric bending),
>variable sea reflections are a problem every day.
>
>A possible cure is to tilt both antennas upwards, which will attenuate
>the sea-reflected ray much more than the direct ray; but whether you can
>do this will depend on the signal/noise ratio.

Another cure for single reflection problems is circular polarisation.
Even a short helix will provide good rejection.

2406. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 03:41:58 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8A9906.E5FBF2E1@ieee.org>
Source record: 41369
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

JC wrote:
> Is this small 1 dB additional loss at 150 MHz worth to climb at the top of
> the pole and the price of a remote controlled tuner ?

Most of us assumed that you were talking about a greater than trivial SWR.
--
cheers, CAM http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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2407. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 03:51:53 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8A9B59.BB8A4F79@ieee.org>
Source record: 41370
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

JC wrote:
> Thank you Ralph for your reply. About the exemple, I haven't see yet in
> those books if the SWR is supposed to be mesured at the antenna or at the
> transmitter end. I think I will put this example in a Smith' diagram just
> for seing what will happen. Anyway an SWR of 20 at the antenna is not
> realistic because it would require first some adjustment at the aerial. So
> my assumption of a SWR of 3 or even 5 could be reasonably good and in this
> case the books are right.

There's a chart in the ARRL Antenna Book that indicates for an SWR of 3:1
at the transmitter and 3dB matched line loss, the SWR at the antenna is
about 75:1. Fig 25, page 16-15, 17th edition, 1993.
--
cheers, CAM http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2408. Need: Plessey SL6700 HF radio IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 04:04:09 UTC
From: lagagnon@fakesprint.ca
Message-ID: <3d8a9e1b.11106601@news.sprint.ca>
Source record: 41371

I require a Plessey SL6700 mixer-HF radio integrated circuit (now obsolete). Does anyone know a supplier of this, or a substitute??

Larry Gagnon VE6MK
****
to send direct email remove "fake" from address

2409. Re: Need: Plessey SL6700 HF radio IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 04:09:56 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D8A9F14.760B@pop.removethistomailme.net>
Source record: 41372

Larry Gagnon wrote:
>
> I require a Plessey SL6700 mixer-HF radio integrated circuit (now
> obsolete). Does anyone know a supplier of this, or a substitute??
>
> Larry Gagnon VE6MK
> **********
> to send direct email remove "fake" from address

http://www.findchips.com says that an outfit called H & R Enterprises
has 2,085 of 'em.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2410. Re: single transistor transciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 06:11:32 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0209192211.4fdf8d9f@posting.google.com>
Source record: 41373

janaeanddoug@netzero.net (Doug) wrote in message
news:<360a820d.0209190753.47087e24@posting.google.com>...
> Sure, I have built superhets with frequency counters and even variable
> bandpass tuning, most of my own half hazzard design, and they worked
> quite well. I enjoyed every minute of it, and now Im just trying to
> make something work reasonably well with as few parts as possible. I
> guess you could say I like doing things that not many others have done
> before. I see that no one has any constructive words to say on this
> subject.
> I asked for a technical conversation and all I get is someone
> stating their opinion on why I shouldnt have fun and enjoy what I do
> in this hobby. But I suppose that there are those who would like to
> tell me what I can and cannot enjoy. Thank you very much. You are a
> real inspiration to amateur radio. Doug

Huh? If you've got only one transistor, you don't have much leeway.
Ian's comment was more interesting to me than the concept of making
a one-transistor transceiver.

You want to try things, yet you're looking for suggestions on how
to make your one-transistor transceiver receive better. If the
challenge is in doing it, then you should be the one telling
us how to do it, rather than griping about our comments about
how the fewest parts may not make for simplest construction or decent
performance.

Side issues are always important, because the fastest way between
two points may not be the most direct route.

You're set in a mindset of a "direct conversion' receiver, ie
an oscillator and mixer. So you're trying to get an oscillator
to also act as a mixer, rather than exploring other concepts.

In the beginning, or more or less, there was the regen receiver.
It was a big step beyond the coherers and cat-whisker detectors
that were pretty much the norm up to that point. When oscillating,
it isn't all that different from the concept of direct conversion.

But when Armstrong came across regeneration, he also came
across a means of electronically generating a signal. Look up
the Armstrong oscillator. Look up regen receivers, and all the comments
about how the signal they generated would often/sometimes interfere
with the neighbors reception.

So start with trying to make a good receiver, and then do whatever
it takes to radiate a signal, rather than starting with a signal

source and trying to also use it as a mixer.

It's all been done, long ago. The issues of coupling to the antenna. The problems of blocking from strong signals, and the detector going out of regeneration when the antenna waved in the wind. There were quirks and there were problems, but people lived with them.

(One of Armstrong's other inventions, the superregenerative receiver, showed up in a lot of simple transceivers, where the same active element was used on both transmit and receive. Though I'm not sure how much was a simple change of something to go from receive to transmit and how much of it was outright switching the whole tube or transistor to the other circuit.)

Then when you've got a good one-transistor receiver, then go on and see how to get power out of it into the antenna. Since you've already got an oscillator (since a regen is an oscillator with controllable feedback or to look at it another way, an amplifier with controllable feedback), the issues are whether it will be stable enough, with a varying load, and whether you can get enough power out of it to be half-way useable.

Look up Charles Kitchin's articles in Communications Quarterly, Electronics Now, and QST. He's gone back and looked at the regen receiver, examining it's benefits and faults, and then has created various designs using solid-state components. Usually, they are relatively simple, but he has taken the path that a few extra components are worthwhile if they will improve operation. So instead of the one-tube receiver of the 1920's, built with as few components as possible, he may throw in a voltage regulator, and be using a decent oscillator design (and mechanically built it like an oscillator). He's made a point of understanding the regen, and going right back to the beginning, so he can make an attempt at improving on things. This is a far cry from the regens of the past forty years, where someone picked a tube circuit, put in a transistor or FET instead of the tube, and lived with the imperfections.

Charles Kitchin even wrote about a crystal controlled regen receiver, for listening to W1AW code practice runs. Of course, he cheats and uses an external diode detector, so in some ways it's on the verge of being less regen and more "direct conversion" as we know it. But it would give you a stable oscillator for the sending part, which would take a lot more effort if you started with an LC oscillator. This was in QST, sometime in the past ten years, though I don't recall the exact date.

Michael VE2BVW

2411. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 06:47:13 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <0celouc6dptd7qpje06ga9kauoevnsrped@4ax.com>
Source record: 41374
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 18 Sep 2002 13:32:18 -0700, hj3ort@hotmail.com (jose luis) wrote:

>Hi all
>Does somebody knows where can i find a 2mt (vhf) antenna tuner schematic?
>or can scan it and send via Email to me?

One additional thing to remember is that wire dipoles (which are frequently used on HF with a tuner) have a quite simple radiation pattern and hence, the gain is quite low. Operating the antenna slightly off resonance (with a tuner) does not radically alter the radiation pattern or gain.

However, yagis with a large number of parasitic elements (as usually used on VHF/UHF) heavily depends on the various resonance frequencies of the various parasitic elements. Even if you operate the radiating element (with a tuner) slightly off the design frequency, all the parasitic elements are still operating at the original design frequency, thus the radiation pattern will quickly deteriorate when operating away from the design frequency. Since antenna gain is simply the ability to concentrate power to the desired direction (and multiplied by the antenna efficiency), the gain will also drop outside the design frequency. In the worst case, trying to use an antenna tuner (even at the antenna) with its internal losses will reduce the antenna efficiency and also reduce the true gain of the antenna even further.

Thus, this is an additional reason why antenna tuners are not used on VHF/UHF.

Paul OH3LWR

2412. Re: square- versus sine-wave LO to mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 06:47:15 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <bmfloustbl6hcqg8gp4o5fqtgdqdekce9b@4ax.com>
Source record: 41375

On Thu, 19 Sep 2002 22:57:56 GMT, Rob French <fulcrum99@earthlink.net>
wrote:

>I seem to recall reading (I don't have my books with me at this TDY
>unfortunately) some discussion of how the LO signal to a mixer should
>ideally be a square wave. Is this true for all mixers? As I understand
>it, this has to do with the switching function of the mixer.

This is true for a switching type mixers. However, such mixers also
produce mixing products with the harmonics of the LO drive. Thus, the
receiver will have strong spurious responses at 3*fLO +/- fIF and
5*fLO +/- fIF so that these frequencies must be prevented from
reaching the mixer by using sufficient front end selectivity.

With a high IF and the LO in the VHF, this is not usually an issue,
however front end filters designed for HF use might have quite high
parasitic inductances and capacitances, which may let VHF/UHF signals
through or the VHF/UHF signal may be directly coupled to a badly
shielded mixer, thus strong FM BC and TV signals could end up in the
IF.

However, if you can find an ideal four quadrant analog multiplier, you
could use a clean sine wave as the LO drive and directly use the
trigonometric relationship sin(fRF)*sin(fLO) = 0.5*(cos(fRF-fLO) -
cos(fRF+fLO)) , which does not have the spurious responses at the odd
harmonics of the LO. The problem is finding an ideal 4Q multiplier:-),
so it easier to approximate this with a switching mixer and a square
wave LO.

>If this is
>the case, I was wondering why not remove the spurs issue of a DDS by
>converting it to a square wave to drive the mixer. Or am I missing
>something significant here...

The problem is timing jitter (due to sampling and quantisation) which
can also viewed as phase noise, which can not be removed by running it
through an amplitude limiter.

Paul OH3LWR

2413. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 06:52:05 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <6qglou0mfn6tqoh7taviulk21l8n5qpf30@4ax.com>
Source record: 41376
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On 18 Sep 2002 13:32:18 -0700, hj3ort@hotmail.com (jose luis) wrote:

>Hi all
>Does somebody knows where can i find a 2mt (vhf) antenna tuner schematic?
>or can scan it and send via Email to me?
>
>Tnx de HJ3ORT Jose Luis

Hi Jose,

You will notice from the other responses, that many consider your request odd. There is little that readily translates from the discrete tuning elements of HF to VHF/UHF; and you would probably find the standard tuner of these bands more appropriate: the single or double stub tuner.

Laboratory models are coaxial, with variable length out to ï¿½ meter. You don't need to have much more variability than that, but you do need some freedom to move it (with a T connection) in relation to the load. This is the major difficulty with a single stub tuner being applied to a wide variety of loads. When you expect to encounter this variety, then double stub tuners (or simply two single stub tuners, separated by an arbitrary distance) are preferred.

73's
Richard Clark, KB7QHC

2414. Re: Repairing Conductive Rubber Touchpads

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 07:27:25 UTC
From: Ron Banks <rjb5@csinet.net>
Message-ID: <x5Ai9.2685$Xj4.2771492@newshog.newsread.com>
Source record: 41377

Hi Terry,

As others in this thread have mentioned, sometimes all that is needed is a good cleaning. If however the carbon coating is worn off the silicon rubber keypad, I use this method with good results. Wash your hands to remove any oils. Cut small pieces of aluminum foil to the proper size (a little larger than the pad) with an exacto knife or small scissors. Place a very small drop of 3M Plastic Emblem and Trim Adhesive on a piece of paper or cardboard. Pick up an even smaller amount from the drop of adhesive with a toothpick. Touch the sticky end of the toothpick to a piece of foil. The foil will stick to the toothpick. Place the toothpick with foil on the surface to be repaired toothpick down. With your oil free finger, push down on the foil to hold it in place and pull out the toothpick. It may take several tries to get the hang of it. The adhesive sets in about a minute and you may not get more than one or two foil pieces done before you need a fresh drop. If you get too much adhesive on the toothpick, it smushes around the edges of the foil and sticks the foil to your finger. The 3M adhesive sticks well enough to do the job but stays flexible enough to remove later without damage. I have an old big dish satellite receiver with RF remotes (3) that I can't live without. It keeps them working.

Regards,
Ron

"Terry Nixon" <TLNixon@mchsi.com> wrote in message
news:Ykbh9.332644$aA.58301@sccrnsc02...
> Has anyone ever had any success at repairing these?
>
> I have 2 Kenwood HT's and an Azden 2 meter rig that I'd liek to respore to
> operating condition. The pads have simply worn out.
>
> I know MCM Electronics sells a kit to repair these, however it is about
> $25.00. Does anyone know if the stuff works or not, or maybe if someone
else
> has a similar product?
>
> Thanks
> Terry-WB0VQP
>
>

2415. Re: Fox Hole Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 07:43:00 UTC
From: g3tmh@gb7abc.net
Message-ID: <g3tmh000204@hamradio>
Source record: 41379

Wow you built the posh version.

I used a Blue Gillete double edged blade (used)
and a straight pin.

No coil

It just took a while to find a good spot on the blade, then the
local radio station appeared...

I was told about it by an old gent who built one when he was a guest
at one of the camps during WW 2

>In article <qKPh9.12780$X7.370840@news4.srv.hcvlny.cv.net>, "Mike Kulyk"
><mkulyk@optonline.net> writes:
>
>>I am looking for info on a fox hole radio. Using a razor blade, pencil lead,
>>ear phones, and wire.
>>
>>What razors and what pencils work best. And how much wire?
>
>I built one of those as my first receiver, almost 40 years ago. Built many
>others over the years. Mine was copied from the kid's book, "All About Radio
>And Television". Never had a problem getting any of them to work.
>
>The coil is wound on a toilet-tissue roll, with the paper removed. 120 turns of
>#26 enamel wire, close wound, was the book specification.
>
>Detector used a plain (not blue) single edge razor blade. These are still
>available in hardware stores for use in cheap paint scrapers and such. Pencil
>lead was from a #2 pencil.
>
>The neat part of the "All About" rx was the use of a bent-up safety pin to hold
>the pencil lead, which was held to the pin by wrapping a piece of #26 around
>both of them.
>
>The real trick is having a good antenna and ground setup. For me it was the
>radiator pipe and the classic 70 feet of wire out the window to the crab apple
>tree.
>
>Of course living less than 3 miles from WPEN on 950 AM sure helped.
>
>73 de Jim, N2EY

--

Ken <g3tmh@gb7abc.net>.
For remote servers list
e-mail help@gb7abc.freeserve.co.uk
Web site. http://www.gb7abc.net

2416. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 08:29:35 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d8adc8b$0$207$ba620e4c@news.skynet.be>
Source record: 41378
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hi dear CAM,

We are not speaking about the same things. I never told about a SWR of 3 at the transmitter end of the line in the conditions of attenuation you described. I only told that if Jose Luis (as told in his original message) needs an antenna tuner, why putting it at the antenna end. It is common sense, if he has a very bad SWR at the aerial, he must first cure the problem at his antenna. In this case, my assumption of starting with a SWR of about 3 AT THE ANTENNA is quite reasonable. The rest is obvious and corresponds to my previous posts.

BTW I never found the chart you mentionned at the page / chapter / edition / book, indicated in your last message. Can you check and repost the reference. Thank you.

73 de ON5MJ.

2417. Re: single transistor transciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 10:37:24 UTC
From: Peter Parker <parkerp@alphalink.com.au>
Message-ID: <3d8afa8d@news.alphalink.com.au>
Source record: 41381

It's easy. Firstly build a one transistor xtal osc/tx using a 2N2222. Then build a regen receiver also using a 2N2222. Then take out both transistors, solder one transistor to the back of a three pole two position switch (TX/RX) and wire it so you switch between the two. If the emitter is a common earth, you could possibly get away with a DPDT switch.

The rx sensitivity & recovered audio would be way down, you'd have no way of netting, and your tx power would be very low and you'd be rockbound so your contacts would be few, far between (and probably prearranged), but if you like building more than operating, go for it!

But beginners seeking a practical QRP transceiver that will get you worthwhile contacts that are a pleasure rather than a chore should look elsewhere.

Peter VK3YE

2418. Re: A Single-Tube 75-Watt Novice Transmitter (6146) Coil Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 10:37:49 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <ametpt$5689i$1@ID-61331.news.dfncis.de>
Source record: 41380

I am using a 3.560 MHz crystal in my one-valve TX see http://www.hanssummers.com/radio/cwtx/index.htm. It's in a standard HC49 case and can get a little hot if the circuit isn't tuned well. This TX puts out about 10W on 80m. A variable capacitor pulls the frequency +/- 250 Hz which gives some flexibility.

Talking of how hard it is with calling CQ when rockbound: I have a short bit of bent wire in the attic, which my homebrewed ATU (http://www.hanssummers.com/radio/atu/atu.htm) manages to tune to 1.1:1 on 80m. I have a homebrew RX see http://www.hanssummers.com/radio/polyphase/index.htm. With this setup I don't find CQ'ing a problem, I get answers over 50% of the time and the quite a lot of the remaining unanswered CQ'ing is due to me being overoptimistic at the wrong times. On 80m in the UK I find it Ok between sunset and about 2200 UTC. I had 35 QSO's with this rig mostly UK (G, GM, GW, 2E, M, MM, MX) but also Europe (SM, PA, F, DL & DK).

Often finding disturbing QRM on 80m I want to add an extra crystal or two, in particular for 3.558 MHz. I am going to attempt a method of "homebrewing" your own crystal frequencies: apparently if you take the case off a nearby (higher) frequency e.g. the popular TV crystal 3.579545MHz and draw on the crystal surface with an indelible felt tip marker pen the weight of the ink lowers the frequency somewhat. With care it is said to be possible to get 40 KHz off the official crystal frequency without degrading crystal performance.

Hans Summers
http://www.HansSummers.Com

2419. Re: Fixing vintage amp with static/crackling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 10:49:37 UTC
From: "Mark D. Zacharias" <mzacharias@_null_cox.net>
Message-ID: <53Di9.64657$3k4.38996@news1.central.cox.net>
Source record: 41382
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

400 mV across the emitter resistors is WAY out of line. Fix this first, it
will cause the output transistors to fail.

mz

****
Remove _null_ to reply
****

"Gregg Horan" <chili_gATyahooDOTcom@skip.this> wrote in message
news:os1loucgtij5etu56t41bfi1otnii12thb@4ax.com...
> Thanks to everyone who responded to this. I did end up finding the
> culprit and it was a loose solder joint on a capacitor in the amp
> section. Unfortunately, it was pointed out to me that the amp heating
> up is also really an issue, and I should adjust the bias.
>
> I was able to adjust the 'good' channel fine. Unfortunately on the
> bad channel, adjusting the variable resistor allows me to go only as
> low as 400mv where a 50mv is desired (this measurement is across two
> resistors between the opposing power transistors... one supplying +
> and one -).
>
> I guess at this point, I can only assume that one of the diodes, caps
> or smaller transistors in that circuit is bad. The power transistors
> seem OK, since both pairs are behaving the same, and I believe that
> all the connections and resistors are fine. . I think I may be
> beyond my testing abilities at this point... any further
> recommendations? I did spray things with freeze spray with no effect.
>
> Thanks again.
> (what would you expect a shop to charge to fix something like that?)
> Gregg Horan
>
> So I attempted to set the bias
> >>I have a Pioneer sx939 reciever (1977 or so; 75wpc). It seems to work
> >>normally with the exception of this static or crackling sound on the
> >>right channel (verified by swapping speakers). The sound is almost
> >>like that of a record with a lot of dust or dirt on it. It is
> >>independant of the volume, and heard just as clearly with volume
> >>completely off. Removing the pre-amp jumpers does nothing to change
> >>it. It also isn't affected by which input is selected. Periodically,
> >>this crackling will show itself as more of a significant pop.
> >>
> >>As a (possibly related) note, the amp seems to be quite hot. The top

> >>plate, although you can touch it, is hot enough to seriously think
> >>twice about touching. .
>

2420. Re: Fixing vintage amp with static/crackling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 10:50:36 UTC
From: "Mark D. Zacharias" <mzacharias@_null_cox.net>
Message-ID: <04Di9.64662$3k4.27829@news1.central.cox.net>
Source record: 41383
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

P.S.

Check the voltage across the bias diode and compare to the other channel.

mz

****
Remove _null_ to reply
****

"Gregg Horan" <chili_gATyahooDOTcom@skip.this> wrote in message
news:os1loucgtij5etu56t41bfi1otnii12thb@4ax.com...
> Thanks to everyone who responded to this. I did end up finding the
> culprit and it was a loose solder joint on a capacitor in the amp
> section. Unfortunately, it was pointed out to me that the amp heating
> up is also really an issue, and I should adjust the bias.
>
> I was able to adjust the 'good' channel fine. Unfortunately on the
> bad channel, adjusting the variable resistor allows me to go only as
> low as 400mv where a 50mv is desired (this measurement is across two
> resistors between the opposing power transistors... one supplying +
> and one -).
>
> I guess at this point, I can only assume that one of the diodes, caps
> or smaller transistors in that circuit is bad. The power transistors
> seem OK, since both pairs are behaving the same, and I believe that
> all the connections and resistors are fine. . I think I may be
> beyond my testing abilities at this point... any further
> recommendations? I did spray things with freeze spray with no effect.
>
> Thanks again.
> (what would you expect a shop to charge to fix something like that?)
> Gregg Horan
>
> So I attempted to set the bias
> >>I have a Pioneer sx939 reciever (1977 or so; 75wpc). It seems to work
> >>normally with the exception of this static or crackling sound on the
> >>right channel (verified by swapping speakers). The sound is almost
> >>like that of a record with a lot of dust or dirt on it. It is
> >>independant of the volume, and heard just as clearly with volume
> >>completely off. Removing the pre-amp jumpers does nothing to change
> >>it. It also isn't affected by which input is selected. Periodically,
> >>this crackling will show itself as more of a significant pop.
> >>

> >>As a (possibly related) note, the amp seems to be quite hot. The top
> >>plate, although you can touch it, is hot enough to seriously think
> >>twice about touching. .
>

2421. B&W Ap-10A antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 12:45:14 UTC
From: "IK5ZTT, Paolo" <ik5ztt@libero.it>
Message-ID: <uLEi9.20107$Av4.378687@twister2.libero.it>
Source record: 41384

Hallo everybody,
I'm looking for someone using B&W AP-10A antenna,
short and telescopic HF mobile antenna.
I'd like to know more about the A verison...
I'm using now the 5 coils version... it's quite boring.

bye for now
pse personal answer
==========
73s de IK5ZTT Paolo Barsotti, Pisa, ik5ztt@amsat.org
Pse visit www.qsl.net/ik5ztt: with 300 Links
nice for OM or not !

2422. 603 beam 4sale/ TRADE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 12:54:31 UTC
From: Me <j.dauphinais@worldnet.att.net>
Message-ID: <bUEi9.32571$1C2.1735724@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41385
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I have for sale 1 full size "HY-Gain" beam 10 meters. fully assembled
for your inspection. 13' Boom and longest element is 22' $75.00 I also
have a steel tower totaling 25'. this is in 3 sections 1 10 foot st8 and 1
5foot st8 and 1 10 foot top section. I don't not have a rotator. $50.00.
pickup only from Nashua,NewHampshire. I am selling these because they are to
big for my new QTH. This beam has spent a large portion of its life in
storage. 73's Jeff AA1GR

2423. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 14:32:35 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <amfbi3$3jv$0@208.207.71.146>
Source record: 41387
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

JC wrote:
>
> Hi dear CAM,
>
> We are not speaking about the same things. I never told about a SWR of 3 at
> the transmitter end of the line in the conditions of attenuation you
> described. I only told that if Jose Luis (as told in his original message)
> needs an antenna tuner, why putting it at the antenna end. It is common
> sense, if he has a very bad SWR at the aerial, he must first cure the
> problem at his antenna. In this case, my assumption of starting with a SWR
> of about 3 AT THE ANTENNA is quite reasonable. The rest is obvious and
> corresponds to my previous posts.
>
> BTW I never found the chart you mentionned at the page / chapter / edition /
> book, indicated in your last message. Can you check and repost the
> reference. Thank you.
>
> 73 de ON5MJ.

A ham I know tested the loss at 2 meters through 100 feet of cheap RG8X
coax into a dummy load. Driving the input with 45 watts he found the
wattmeter at the load end measured 5 watts.
That was into a MATCHED load, 1:1 with nothing reflected.

DIck

2424. Re: square- versus sine-wave LO to mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 14:37:31 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3d8b30bd$0$31812@echo-01.iinet.net.au>
Source record: 41386

To clarify - the phase spurs are due to variations in the timing of the transitions of the square wave. If the jitter is random you get phase noise, if it is coherent (ie regular) then you will get spurs.

Richard

"Jim Pennell" <NoSpam@killspam.com> wrote in message news:amdpno$j6h$1@slb3.atl.mindspring.net...
> In most cases, spurs and noise from the DDS LO in mixer applications are
> phase types of signals.... Converting to a square wave can't change that.
>
> It can improve amplitude noise from an LO, but this is usually not the
> problem in modern DDS synthesizers. The older generation VFO type LO
> usually was also fine in this regard. Once an LO drive saturates the mixer,
> amplitude noise on the LO drive is much less likely to occur and any decent
> LO design provides enough output drive.
>
> =================
>
> However, a square wave into the mixer can improve strong signal handing
> ability by transiting THROUGH the zero crossing point quickly and that zero
> crossing point in the LO drive is where the mixer is most prone to intermod.
>
> This doesn't alter the spurs a DDS generates, but it does improve the
> third order intermod to some degree.
>
>
> Jim Pennell
> N6BIU
>
>

2425. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 15:35:37 UTC
From: Pie`` IK2VTJ <picarusoNONVOGLIOSPAM@writeme.com>
Message-ID: <amfki6$5gtlu$1@ID-83989.news.dfncis.de>
Source record: 41393
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"JC" <jacques.culot@skynet.be> ha scritto nel messaggio
news:3d8adc8b$0$207$ba620e4c@news.skynet.be...
> Hi dear CAM,
>
> BTW I never found the chart you mentionned at the page / chapter / edition
/
> book, indicated in your last message. Can you check and repost the
> reference. Thank you.
>
> 73 de ON5MJ.
>

Don't worry, you're not alone! I checked on the same 17th edition and only
found a 'drilling template for...'.
But I found my 17th edition is a second print of '94.
Fantastic! I suppose the first print of '94 is something different too!
--
73 de IK2VTJ, Piero.

http://www.qsl.net/ik2vtj
http://www.ardf.it

Togli / Remove
NONVOGLIOSPAM
dall'indirizzo / from address

2426. Re: single transistor transciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 15:43:57 UTC
From: mcalhoun@ksu.edu
Message-ID: <amffnt$80a@unix2.cc.ksu.edu>
Source record: 41388

>It's easy. Firstly build a one transistor xtal osc/tx using a 2N2222. Then
>....[snip]....

Although I don't recall ever seeing a one-transistor transceiver in the literature, the September, 1945, issue of QST described a one (if you don't count the rectifier!) TUBE transceiver; a dual triode serving as a regenerative receiver and a simple crystal oscillator, respectively.

A British QRP club's bulletin (SPRAT? I have no citation, just a torn-out page 20) once described RV3GM's "Micro-80", in which the TOTAL part count beyond the obvious crystal, key, phones, antenna, ground, and power supply was only 19! (4 transistors: a crystal osc., a power amplifier/mixer, and a Darlington pair as an audio amplifier), 1 tapped inductor, 1 RF choke, 5 resistors, 8 capacitors! Someday I want to build one just to see how it works!

The November, 1990, issue of "73 Amateur Radio Today" described WB0NQM's "TTL Transceiver for 40 Meters" which used three IC's (a 74LS00N xtal oscillator, a 74LS03N amplifier, and an LM386 audio amplifier, with two diodes acting as detector/mixer, if I read the schematic correctly).

Finally (at least in my article collection) was G4ADJ's November, 1975, "Ham Radio" article "Using TTL ICs in single-sideband equipment" which showed a complete SSB transceiver using only three SN7400 NAND IC's! Since each 7400 has four two-input gates, there were 12 active devices, and they were used as:
2 in a crystal oscillator
2 as oscillator buffers (one each for xmtr and rcvr)
2 as control gates (one each for xmtr and rcvr)
2 in the PTT circuit (one each for xmtr and rcvr)
1 modulator
1 clipper/amplifier
1 RF amplifier
1 demodulator
There were a few resistors and capacitors spread around, the power output was only about 10 mW PEP, and receiver sensitivity was only about 50 mV, but "Hey!", what do you expect with so few parts? Just add a preselector with some gain....

--Myron, W0PBV.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

2427. Re: square- versus sine-wave LO to mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 15:53:21 UTC
From: Rick Karlquist <richard@karlquist.remove.this.com>
Message-ID: <RvHi9.155957$Jo.48524@rwcrnsc53>
Source record: 41389

If the mixer is a passive one with transformers, then
the trouble with trying to drive it with a square wave
is that the square wave tends to get distorted passing
through the transformers. OTOH, a sine wave will not
get distorted by a transformer. Another problem with
square wave excitation is that the square wave you generate
must have exactly 50% duty cycle for optimum performance
of the mixer. This requires using balanced drive circuits and
is non-trivial. With a sine wave, you merely filter out the
harmonics with a low pass filter to guarantee 50% duty cycle.

Rick Karlquist N6RK
"Rob French" <fulcrum99@earthlink.net> wrote in message
news:pan.2002.09.19.18.58.26.860253.2273@earthlink.net...
> I seem to recall reading (I don't have my books with me at this TDY
> unfortunately) some discussion of how the LO signal to a mixer should
> ideally be a square wave. Is this true for all mixers? As I understand
> it, this has to do with the switching function of the mixer. If this is
> the case, I was wondering why not remove the spurs issue of a DDS by
> converting it to a square wave to drive the mixer. Or am I missing
> something significant here...
>
> -Rob

2428. Re: Fixing vintage amp with static/crackling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 16:00:07 UTC
From: Gregg Horan <chili_gATyahooDOTcom@skip.this>
Message-ID: <j4hmoucd2be0aa084ljosjhaf9p18ak096@4ax.com>
Source record: 41390
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

On Fri, 20 Sep 2002 10:50:36 GMT, "Mark D. Zacharias"
<mzacharias@_null_cox.net> wrote:

Hey Mark,

Thanks for the response. I definately haven't been using the reciever
since I noted how hot it ran and the bad bias.

I checked the voltage across this diode (actually I think it is a
varistor... or am I checking the wrong thing?) With the reciever
powered off, my multimeter's diode tester (manual says .5mA @ .6V),
the good channel reads 1.28V, while the bad channel reads 0.73V. An
ohmmeter across both reads the same (12Mohms). These readings are
with them still soldered to the board... dunno if secondary circuits
are affecting that reading.

The varistor is has the number '50' on it, with a tiny tan dot also.
Labeled STV4H in the manual. I can't seem to find any references
anywhere to figure out what to replace that with if it is even the
problem.

Thanks again for your input.
Gregg Horan

>P.S.
>
>Check the voltage across the bias diode and compare to the other channel.
>
>mz
>
>
>**************************
>Remove _null_ to reply
>**************************
>
>
>"Gregg Horan" <chili_gATyahooDOTcom@skip.this> wrote in message
>news:os1loucgtij5etu56t41bfi1otnii12thb@4ax.com...
>> Thanks to everyone who responded to this. I did end up finding the
>> culprit and it was a loose solder joint on a capacitor in the amp
>> section. Unfortunately, it was pointed out to me that the amp heating
>> up is also really an issue, and I should adjust the bias.
>>
>> I was able to adjust the 'good' channel fine. Unfortunately on the
>> bad channel, adjusting the variable resistor allows me to go only as

>> low as 400mv where a 50mv is desired (this measurement is across two
>> resistors between the opposing power transistors... one supplying +
>> and one -).
>>
>> I guess at this point, I can only assume that one of the diodes, caps
>> or smaller transistors in that circuit is bad. The power transistors
>> seem OK, since both pairs are behaving the same, and I believe that
>> all the connections and resistors are fine. . I think I may be
>> beyond my testing abilities at this point... any further
>> recommendations? I did spray things with freeze spray with no effect.
>>
>> Thanks again.
>> (what would you expect a shop to charge to fix something like that?)
>> Gregg Horan
>>
>> So I attempted to set the bias
>> >>I have a Pioneer sx939 reciever (1977 or so; 75wpc). It seems to work
>> >>normally with the exception of this static or crackling sound on the
>> >>right channel (verified by swapping speakers). The sound is almost
>> >>like that of a record with a lot of dust or dirt on it. It is
>> >>independant of the volume, and heard just as clearly with volume
>> >>completely off. Removing the pre-amp jumpers does nothing to change
>> >>it. It also isn't affected by which input is selected. Periodically,
>> >>this crackling will show itself as more of a significant pop.
>> >>
>> >>As a (possibly related) note, the amp seems to be quite hot. The top
>> >>plate, although you can touch it, is hot enough to seriously think
>> >>twice about touching. .
>>
>

2429. Re: Fixing vintage amp with static/crackling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 16:19:26 UTC
From: Bill M <exray@no>
Message-ID: <uomikgjro869e3@corp.supernews.com>
Source record: 41391
Cross-posted to: rec.audio.tech,rec.radio.amateur.homebrew,sci.electronics.repair

Gregg Horan wrote:
>
> On Fri, 20 Sep 2002 10:50:36 GMT, "Mark D. Zacharias"
> <mzacharias@_null_cox.net> wrote:
>
> Hey Mark,
>
> Thanks for the response. I definately haven't been using the reciever
> since I noted how hot it ran and the bad bias.

I don't have much experience with such units but recently had a problem with an 70s vintage Sansui 8080 DB receiver of mine.
Three major things I noted....
1. Many small electrolytics were on the verge of being officially bad. I replaced the worst of the lot in the AF/PS sections with a mind to go back sometime and do them all.
2. All of one certain value/type of resistor had drifted way off value. Others seemed to be fine but exery example of that particular type was bad in varying degrees.
3. The solder in this Sansui is horrible. It is like it has dry rotted anywhere there is heat nearby. For instance, I thought all of my dial lamps were burnt out but it was bad solder on every joint. I found my main problem on the PS board where one end of a large resistor had 'jumped' completely off the output protection board since the solder no longer held it. It had overheated due to a bad resistor in #2.

Any of the above can result in weird/noisy operation.

Hope this helps.

-Bill M

2430. Meter faces

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 16:51:43 UTC
From: Fred Ruckser <whru@email.msn.com>
Message-ID: <#voWYaMYCHA.1636@cpimsnntpa03>
Source record: 41392

I need some sort of a software program to create a new panel meter face for an analog panel meter.

73
wb6iiq

2431. Re: Meter faces

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 17:13:00 UTC
From: Dale Parfitt <parinc@verizon.net>
Message-ID: <3D8B5099.A8D0BDC7@verizon.net>
Source record: 41394

Fred Ruckser wrote:

> I need some sort of a software program to create a new panel meter face for
> an analog panel meter.
>
> 73
> wb6iiq

A Google search of "custom meter faces" turned up loads of hits- including the one featured in this month's QST: http://www.realhamradio.com/Meter.htm

If you are not using Google- you might wish to consider it. Accurate, fast/

Dale W4OP

2432. Re: square- versus sine-wave LO to mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 17:37:35 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <3cmmou8mvv0jmvddhdumg97r8uc4bhvq9s@4ax.com>
Source record: 41395

On Fri, 20 Sep 2002 15:53:21 GMT, "Rick Karlquist"
<richard@karlquist.remove.this.com> wrote:

>If the mixer is a passive one with transformers, then
>the trouble with trying to drive it with a square wave
>is that the square wave tends to get distorted passing
>through the transformers. OTOH, a sine wave will not
>get distorted by a transformer.

Rick, I sense a rather thin argument here. While I don't disagree with what you claim, I do want to point out that some mixer transformers are better than others. If you choose with care, you may find that you can pass many octaves of harmonic energy through the mixer transformers with very little distortion.

Second, although I agree that group delay through the transformer can distort a square wave, I think it's a secondary effect at best. After all, the goal is to driving a mixer diode or JFET in to saturation or cut-off. The differences, if there are any to be measured, must be pretty small.

I would be very curious if anyone has a real-world comparison example of what happens in each case. I'll be surprised if there is more than a 1 dB of performance difference in spurious products.

>Another problem with
>square wave excitation is that the square wave you generate
>must have exactly 50% duty cycle for optimum performance
>of the mixer. This requires using balanced drive circuits and
>is non-trivial. With a sine wave, you merely filter out the
>harmonics with a low pass filter to guarantee 50% duty cycle.

No disagreement there.

73,

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

2433. Re: Need: Plessey SL6700 HF radio IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 17:45:31 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D8B5F31.6968@pop.removethistomailme.net>
Source record: 41396

Dan Rae wrote:
>
> And with due respect they probably have a $100 minimum order John,
> like most of the obsolete IC dealers.....
>
> Barend Hendriksen in the Netherlands, who is truly ham friendly, has a
> lot of the old Plessey ICs including the one you want at 18 Euros odd.
> Not cheap either.

Sadly, I can't remember the last time I ordered less than $100 worth of
parts from ANYONE. This 'hobby' is too damned expensive. :)

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2434. Re: Navstar Systems Ltd - Timing GPS Receiver info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 19:11:41 UTC
From: Bruno I6YPK <i6ypk#nospam#@yahoo.it>
Message-ID: <NpKi9.140262$pX1.4978315@news2.tin.it>
Source record: 41297

Hi Allan,
many thanks for information. No I didn't ask to the newsgroup that you
mentioned.
I will do it.

73
Bruno, I6YPK

"Allan Gibbs" <allan@prescot.demon.co.uk> ha scritto nel messaggio
news:npR5gTFBrhi9Ewqt@prescot.demon.co.uk...
> In a message dated Tue, 17 Sep 2002 at 20:28:52,
> Bruno I6YPK writes.....
>
> Description of interesting bit of gear snipped...
> >
> >If anyone has information about this receiver please help.
> >
> >You can see photos of this strange object here :
> >
> >http://www.qsl.net/i6ypk/navsymm_gtr.htm
> >
> >Thanks and 73.
> >Bruno, I6YPK
>
> Bruno,
>
> Could I suggest you ask the question - if you haven't already - in
> sci.geo.satellite-nav and/or alt.satellite.gps ??
>
> That is, of course, if no-one here is able to help....
>
> Regards,
>
> Allan.
> --
> Allan Gibbs - Prescot, Merseyside, U.K.

2435. Re: square- versus sine-wave LO to mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 20:37:27 UTC
From: "Sverre Holm (LA3ZA)" <0junk4me@qsl.net>
Message-ID: <bGLi9.24058$sR2.412952@news4.ulv.nextra.no>
Source record: 41298

"Paul Keinanen" <keinanen@sci.fi> wrote in message
news:bmfloustbl6hcqg8gp4o5fqtgdqdekce9b@4ax.com...
>
> With a high IF and the LO in the VHF, this is not usually an issue,
> however front end filters designed for HF use might have quite high
> parasitic inductances and capacitances, which may let VHF/UHF signals
> through or the VHF/UHF signal may be directly coupled to a badly
> shielded mixer, thus strong FM BC and TV signals could end up in the
> IF.

I have experienced VHF feed-through in a receiver using a diode mixer. The effect was that FM BC signals would mix with the firfth harmonic of the LO and end up in the IF. In that case the receiver seemed to be sensitive to direct coupling to the circuit in the vicinity of the mixer. Does anyone have any experiene for when a mixer is badly shielded as opposed to well shielded?

Sverre Holm LA3ZA
www.qsl.net/la3za

2436. Re: substituting new toroids for noise gate circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 21:18:35 UTC
From: Al <aburzynski@swri.nojunk.edu>
Message-ID: <uon45c99m08i48@corp.supernews.com>
Source record: 41299
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.basics

Some additional information and a different schematic are available here

http://www.ussc.com/~turner/syn_blank.html

Al
KA5JGV

"AJ Sanderson" <ajsand@nospam.com> wrote in message
news:am6vl6$7vm$1@nntp9.atl.mindspring.net...
> I'd like to build a noise gate circuit for my HF receiver,

2437. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 21:23:15 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8B91C3.891202EF@ieee.org>
Source record: 41300
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

JC wrote:
>
> Hi dear CAM,
>
> We are not speaking about the same things. I never told about a SWR of 3 at
> the transmitter end of the line in the conditions of attenuation you
> described. I only told that if Jose Luis (as told in his original message)
> needs an antenna tuner, why putting it at the antenna end. It is common
> sense, if he has a very bad SWR at the aerial, he must first cure the
> problem at his antenna. In this case, my assumption of starting with a SWR
> of about 3 AT THE ANTENNA is quite reasonable. The rest is obvious and
> corresponds to my previous posts.

OK, let's work backwards. If the SWR at the antenna is 3:1 and the loss in
the coax is 3dB, the SWR at the transmitter is less than 2:1 and there is
no need for an antenna tuner.

If the losses due to SWR in the coax feedline at vhf/uhf are not enough to
worry about, then the impedance seen by the transmitter is probably not far
enough away from 50 ohms to require an antenna tuner. This is one thing that
makes vhf/uhf somewhat different from HF.

> BTW I never found the chart you mentionned at the page / chapter / edition /
> book, indicated in your last message. Can you check and repost the
> reference. Thank you.

The ARRL Antenna Book, 15th edition, page 24-13, Fig 18.
The ARRL Handbook, 17th edition, page 16-15, Fig 25.
--
cheers, CAM http://www.qsl.net/w5dxp

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2438. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 21:28:22 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8B92F6.B14C5848@ieee.org>
Source record: 41301
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Dick Carroll wrote:
> A ham I know tested the loss at 2 meters through 100 feet of cheap RG8X
> coax into a dummy load. Driving the input with 45 watts he found the
> wattmeter at the load end measured 5 watts.
> That was into a MATCHED load, 1:1 with nothing reflected.

Wow, that was cheap RG8x. The wireman says the loss in RG8x on 2m
should be about 4.5dB. Your buddy's loss was about 9.5dB.
--
cheers, CAM http://www.qsl.net/w5dxp

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2439. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 21:34:54 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8B947E.9BDFE04@ieee.org>
Source record: 41302
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

"Pieï¿½ï¿½ IK2VTJ" wrote:
> Don't worry, you're not alone! I checked on the same 17th edition and only
> found a 'drilling template for...'.
> But I found my 17th edition is a second print of '94.
> Fantastic! I suppose the first print of '94 is something different too!

I was looking at two publications. I might have gotten them mixed up.
The ARRL Antenna Book, 15th edition, page 24-13, Fig. 18 and
The ARRL Handbook, 17th edition, page 16-15, Fig. 25
Sorry if I got them mixed up.
--
cheers, CAM http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
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2440. spurious oscillations

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 22:08:43 UTC
From: Gabriel Horner <ghorner@mail.cern.ch>
Message-ID: <Pine.LNX.3.95a.1020920234028.9096A-100000@lxplus008.cern.ch>
Source record: 41303
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.repair,sci.electronics.misc,rec.radio.amateur.misc,sci.engr,sci.electronics.design

Hi,
I'm trying to repair a pulse generator which for now only oscillates at
10 MHz. I've verified that the spikes which trigger the pulses are correctly
made when I vary the frequency knob but I've also discovered a 500 mV
peak to peak 10 MHz oscillation. As I trace the signal down further, the
spikes die away and the generator ends up triggering on these
oscillations. The whole problematic section is composed of transistors and
includes a Schmitt trigger. Any ideas on how to find the troublemaker if
my diagnosis is right?
Thanks,
Gabriel

2441. Paradise Datacom P900 Universal Clock Synthesiser

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 22:39:33 UTC
From: la8ak.xnd@online.no
Message-ID: <3d8ba269.86300795@news.online.no>
Source record: 41304

Just wonder if somebody knows about it or has any information about
this unit?
It also has BNC connectors for RF in/out and some G703 connectors,
possibly 2.048Mbit/s
Believe it is a synthesiser covering up to few MHz

73
Jan_Martin
LA8AK (in JO38XC)
N4623-Kristiansand (tel.: +47-380-87178)

--
remove ,xnd to reply

2442. Parts needed for Heathkit DC power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 22:57:52 UTC
From: aa8wl <aa8wl@comcast.net>
Message-ID: <3D8BA7B1.C1528AB3@comcast.net>
Source record: 41305

I would like to locate (5) capacitors for an older Heathkit DC power supply I just bought. It is the HP-13 and I opened the case and one of the capacitors had a hole in the end and material coming out of the hole. I have never seen anything like this happen before so I have decided to replace all (5) Five at the same time. The Heathkit part number is: 25-207 and they are 20 ufd @ 500V electrolytic . I would like to find some at the original cost 85 cents each (hi hi) but with inflation I would expect them to be somewhat higher these days. Also, if you might have an old unit for parts I would be interested. Thanks in advance, 73' de aa8wl Sam

2443. Re: Meter faces

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 23:16:08 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <uonasfr3olbm43@corp.supernews.com>
Source record: 41306

I use my flatbed scanner, and Adobe PhotoShop Le, takes a little trial and error, but it works nice.
Remove the meter scale, and scan it, then work it over in your image editing software, then save it at a high dpi rate like 600-1200dpi, and print it on your inkjet or laser printer. Sizing it correctly will take a few tries.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Fred Ruckser" <whru@email.msn.com> wrote in message
news:#voWYaMYCHA.1636@cpimsnntpa03...
> I need some sort of a software program to create a new panel meter face
for
> an analog panel meter.
>
> 73
> wb6iiq
>
>

2444. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-20 23:32:34 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <meOi9.167567$z91.6920517@bin3.nnrp.aus1.giganews.com>
Source record: 41307
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

The SWR is usually the ratio of the transmission line and antenna. Unless using part of the transmission line to match the antenna, then the swr should be measured at the antenna. I ahve seen where sometimes a 1/4 wavelenght 70 ohm coax will be used right at the antenna to match the antenna to a 50 ohm line. Also a 50 ohm 1/4 wavelength will be used to match to a 70 ohm trannsmission line. Then the swr will be measured at the end of the 1/4 wavelength matching section that is actually part of the antenna system and not the transmission line. I hope that comes out the way I ment it to.

Most people measuer the swr at the transmitter because it is easy to get to and also it should be checked there to be sure the transmitter is loading into the usually 50 ohm load it is designed for. If the coax loss is low as at 40 meters and below it does not make much differance as the swr at either end will be close to the same provided the lenght is not near a 1/4 wavelenght or other multiple that turns the line into a 'matching segment'. As the losses go up in the coax the swr measured at the transmitter will seem to be lower. You can take about 300 feet (probably less but I did it at this length) of rg-58 and leave one end open at two meters and see almost a perfect 1:1 swr when it should be infiniate.

"JC" <jacques.culot@skynet.be> wrote in message
news:3d8a5bda$0$195$ba620e4c@news.skynet.be...
> Thank you Ralph for your reply. About the exemple, I haven't see yet in
> those books if the SWR is supposed to be mesured at the antenna or at the
> transmitter end. I think I will put this example in a Smith' diagram just
> for seing what will happen. Anyway an SWR of 20 at the antenna is not
> realistic because it would require first some adjustment at the aerial. So
> my assumption of a SWR of 3 or even 5 could be reasonably good and in this
> case the books are right.
>
> 73 de ON5MJ
>
>

2445. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 00:00:31 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d8bb6a3$0$180$ba620e4c@news.skynet.be>
Source record: 41308
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

> through 100 feet of cheap RG8X

Maybe the "X" in RG8x is for "barbed wire" :-))

73

2446. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 00:22:54 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d8bbbe1$0$219$ba620e4c@news.skynet.be>
Source record: 41309
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

It's a pity I don't have the same editions than you. I also didn't find this damn' chart in the editions I have. If you have the opportunity to scan it, I would appreciate to have a look on it through my personal e-mail address.

BTW, edition 17th of the ARRL handbook was released before WW2 8-x)

73.

2447. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 00:30:12 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d8bbd97$0$207$ba620e4c@news.skynet.be>
Source record: 41310
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

>If the losses due to SWR in the coax feedline at vhf/uhf are not enough to worry about, then the impedance seen by the transmitter is probably not far
enough away from 50 ohms to require an antenna tuner. This is one thing that
makes vhf/uhf somewhat different from HF.

I do agree 100%. Even an OM replied me privately a few days ago and we arrived at the conclusion that an antenna tuner is not necessary. And he added:

> A tuner for 2M would, I think, have to face some rather nasty design tradeoffs. You'd probably need to use physically-small components, to keep the tuner's parasitics under control... but such small components would be very limited in the amount of loss energy they could dissipate. If you try pushing 50 watts through small inductors and trimmer caps, in a tuner with 5-10% losses (not unusual for a tuner) you'll probably fry the inductors.

73 de ON5MJ.

2448. Re: Fixing vintage amp with static/crackling

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 00:31:44 UTC
From: "Mark D. Zacharias" <mzacharias@_null_cox.net>
Message-ID: <Q5Pi9.67428$3k4.27469@news1.central.cox.net>
Source record: 41311
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

Well. I think you need to open it up from the circuit and test it. These usually go open, not leaky, which is what your reading would indicate. There may be something nearby shorted or leaky. If the STV4H is really bad, you can probably find one or rig a diode stack in it's place. Stay in touch. We can probably get you through this.

mz

--
****
Remove _null_ to reply
****
"Gregg Horan" <chili_gATyahooDOTcom@skip.this> wrote in message news:j4hmoucd2be0aa084ljosjhaf9p18ak096@4ax.com...
> On Fri, 20 Sep 2002 10:50:36 GMT, "Mark D. Zacharias"
> <mzacharias@_null_cox.net> wrote:
>
> Hey Mark,
>
> Thanks for the response. I definately haven't been using the reciever
> since I noted how hot it ran and the bad bias.
>
> I checked the voltage across this diode (actually I think it is a
> varistor... or am I checking the wrong thing?) With the reciever
> powered off, my multimeter's diode tester (manual says .5mA @ .6V),
> the good channel reads 1.28V, while the bad channel reads 0.73V. An
> ohmmeter across both reads the same (12Mohms). These readings are
> with them still soldered to the board... dunno if secondary circuits
> are affecting that reading.
>
> The varistor is has the number '50' on it, with a tiny tan dot also.
> Labeled STV4H in the manual. I can't seem to find any references
> anywhere to figure out what to replace that with if it is even the
> problem.
>
> Thanks again for your input.
> Gregg Horan
>
>
> >P.S.
> >
> >Check the voltage across the bias diode and compare to the other channel.
> >
> >mz

> >
> >
> >**************************
> >Remove _null_ to reply
> >**************************
> >
> >
> >"Gregg Horan" <chili_gATyahooDOTcom@skip.this> wrote in message
> >news:os1loucgtij5etu56t41bfi1otnii12thb@4ax.com...
> >> Thanks to everyone who responded to this. I did end up finding the
> >> culprit and it was a loose solder joint on a capacitor in the amp
> >> section. Unfortunately, it was pointed out to me that the amp heating
> >> up is also really an issue, and I should adjust the bias.
> >>
> >> I was able to adjust the 'good' channel fine. Unfortunately on the
> >> bad channel, adjusting the variable resistor allows me to go only as
> >> low as 400mv where a 50mv is desired (this measurement is across two
> >> resistors between the opposing power transistors... one supplying +
> >> and one -).
> >>
> >> I guess at this point, I can only assume that one of the diodes, caps
> >> or smaller transistors in that circuit is bad. The power transistors
> >> seem OK, since both pairs are behaving the same, and I believe that
> >> all the connections and resistors are fine. . I think I may be
> >> beyond my testing abilities at this point... any further
> >> recommendations? I did spray things with freeze spray with no effect.
> >>
> >> Thanks again.
> >> (what would you expect a shop to charge to fix something like that?)
> >> Gregg Horan
> >>
> >> So I attempted to set the bias
> >> >>I have a Pioneer sx939 reciever (1977 or so; 75wpc). It seems to
work
> >> >>normally with the exception of this static or crackling sound on the
> >> >>right channel (verified by swapping speakers). The sound is almost
> >> >>like that of a record with a lot of dust or dirt on it. It is
> >> >>independant of the volume, and heard just as clearly with volume
> >> >>completely off. Removing the pre-amp jumpers does nothing to change
> >> >>it. It also isn't affected by which input is selected.
Periodically,
> >> >>this crackling will show itself as more of a significant pop.
> >> >>
> >> >>As a (possibly related) note, the amp seems to be quite hot. The top
> >> >>plate, although you can touch it, is hot enough to seriously think
> >> >>twice about touching. .
> >>
> >
>

2449. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 01:14:56 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <amgh6gpco0@208.206.142.96>
Source record: 41312
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

CAM wrote:
>
> Dick Carroll wrote:
> > A ham I know tested the loss at 2 meters through 100 feet of cheap RG8X
> > coax into a dummy load. Driving the input with 45 watts he found the
> > wattmeter at the load end measured 5 watts.
> > That was into a MATCHED load, 1:1 with nothing reflected.
>
> Wow, that was cheap RG8x. The wireman says the loss in RG8x on 2m
> should be about 4.5dB. Your buddy's loss was about 9.5dB.

Rethinking, it may have been a bit more than 100 feet. But it was that
cheapie silver jacketed stuff that was the rage for awhile. I checked
some of it once for braid coverage and you could see lots of center
insulation through it. Sure wasn't usable on 2 meters except for very
short runs.
Dick

2450. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 01:17:10 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8BC896.B1467262@ieee.org>
Source record: 41313
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

JC wrote:
> It's a pity I don't have the same editions than you. I also didn't find this
> damn' chart in the editions I have. If you have the opportunity to scan it,
> I would appreciate to have a look on it through my personal e-mail address.

I'll see if it is on the ARRL Antenna Book CD and try to send you a copy.
My scanner is a sheet scanner, not a flatbed scanner, so I prefer not to
tear a sheet out of my books.

> BTW, edition 17th of the ARRL handbook was released before WW2 8-x)

Welp, blame it on 65 year old eyeballs. I looked at "seventieth" and
read it as "seventeenth". Guess I didn't see one of the dits. :-)
Sorry about that. It's the 70th edition from 1993.
--
cheers, CAM http://www.qsl.net/w5dxp

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2451. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 01:22:35 UTC
From: CAM <Cecil.A.Moore@ieee.org>
Message-ID: <3D8BC9DB.1F432F9B@ieee.org>
Source record: 41314
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

JC wrote:
> A tuner for 2M would, I think, have to face some rather nasty design
> tradeoffs.

I don't remember the part number, but MFJ once made an antenna tuner
for VHF. I actually bought one about 15 years ago (plus or minus).
--
cheers, CAM http://www.qsl.net/w5dxp

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2452. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 01:37:58 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <amgihmrlm0@208.206.142.96>
Source record: 41315
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Ralph Mowery wrote:
>
You can take about 300 feet (probably less but I did it
> at this length) of rg-58 and leave one end open at two meters and see almost
> a perfect 1:1 swr when it should be infiniate.
>

And the boss didn't want to believe me when I told him there was a
defective DB24 antenna on the other end of that 265 foot run of one and
a half inch hard line up on the tower with an SWR of less than 2:1! The
transmitter couldn't be heard out of town where it normally worked over
a hundred miles at 155mHz.
(Installation of a new DB24 took care of the problem. Old one had lost a
couple of weather seals and was waterlogged)

Dick

2453. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 01:39:29 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <amgikhrlm1@208.206.142.96>
Source record: 41316
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

JC wrote:
>
> It's a pity I don't have the same editions than you. I also didn't find this
> damn' chart in the editions I have. If you have the opportunity to scan it,
> I would appreciate to have a look on it through my personal e-mail address.
>
> BTW, edition 17th of the ARRL handbook was released before WW2 8-x)
>

I think he's referring to the ARRL Antenna Manual.

Dick

2454. Re: single transistor transciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 03:05:20 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0209201905.1545d52b@posting.google.com>
Source record: 41317

mcalhoun@ksu.edu (Myron A Calhoun) wrote in message news:<amffnt$80a@unix2.cc.ksu.edu>...
>
> Finally (at least in my article collection) was G4ADJ's November, 1975,
> "Ham Radio" article "Using TTL ICs in single-sideband equipment" which
> showed a complete SSB transceiver using only three SN7400 NAND IC's!
> Since each 7400 has four two-input gates, there were 12 active devices,
> and they were used as:
> 2 in a crystal oscillator
> 2 as oscillator buffers (one each for xmtr and rcvr)
> 2 as control gates (one each for xmtr and rcvr)
> 2 in the PTT circuit (one each for xmtr and rcvr)
> 1 modulator
> 1 clipper/amplifier
> 1 RF amplifier
> 1 demodulator
> There were a few resistors and capacitors spread around, the power output
> was only about 10 mW PEP, and receiver sensitivity was only about 50 mV,
> but "Hey!", what do you expect with so few parts? Just add a preselector
> with some gain....
>
> --Myron, W0PBV.

That was kind of a bizarre scheme, though it did qualify as trying
new things.

He was linearizing the TTL gates either by feedback resistors or
by biasing the inputs. That gave him his active elements. But he
didn't come up with a balanced modulator, so he just used a TTL
gate as a regular AM modulator, and the crystal filter was supposed
to strip out not only the opposite sideband, but the carrier.

Memory tells me it was just an IF strip, and that unless you were
willing to build a crystal filter on the desired signal frequency,
you'd need a pair of mixers and an oscillator to make it useful.

By that time CMOS was well around, though it had more speed
limitations than the straight TTL. If you could accept putting
it in the 455KHz or so range, one could have gone to CMOS,
and used cmos switches for the balanced modulator and product
detector.

Michael VE2BVW

2455. The Space/Time Paradox...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 03:43:20 UTC
From: newsdesk@aeonsciltd.net
Message-ID: <869eda69.0209201943.6ceea0ab@posting.google.com>
Source record: 41318

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traveling near the speed of light, and if mass is relative to heat,
space/time is quazi-linear. The speed of any object is given as G...

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2456. motorola business band to ham help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 03:47:07 UTC
From: Steve Bossert <KC2GOG@optonline.net>
Message-ID: <fZRi9.35913$P77.669753@news4.srv.hcvlny.cv.net>
Source record: 41319

i have acquired some old motorola pageboy pagers that operate on 153.110. i would like to use them as a weather alert reciever or as a 2M repeater monitor. these units have the tone reeds in them that only allow the squelch to be broken when the 2 tones are received. i took them out thinking it would make it like a regular "carrier present equals open squelch" but this did not work. has any one else tried this or can it be done? (changing the frequency is not the problem i just need to figure out the squelch system

the second question i have is on a motorola radio that radioshack used to make. catalog 19-1216 uhf business band radio. is it possible to change it to a 70cm repeater or simplex freq. i checked batlabs.com and couldnt find anything

any help would be appreciated

steve

2457. Re: Santa Barbara/Goleta -- Electronic Junque stores

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 04:21:56 UTC
From: Norm Mann <folder0735@hotmail.com>
Message-ID: <3d8bf12f$0$189@news.impulse.net>
Source record: 41320

"Allodoxaphobia" <QSB@QRM-QRN.net> wrote in message
news:slrnaokta3.kb.QSB@animas.frontier.net...
> The wife and I are going out to S.B. to visit her mom for a
> coupl'o days. I can usually get off on some 'personal time'
> on these visits. I've found 3 or 4 used books stores that I
> like to visit.
> But, I'd like to trawl through some used/surplus/mystery
> electronic stores -- if there be any. In all my previous
> trips I've never found any.
> Are there any?

Most of the stores you're looking for dried up and blew away a long time
ago. However, last I knew, Marvac Electronics in the Walnut Center (east of
Patterson/Hollister Ave. intersection) was still in business.
The only other one I know of is in Santa Maria.

-CB

2458. Re: A Single-Tube 75-Watt Novice Transmitter (6146) Coil Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 06:38:38 UTC
From: "Geoffrey G. Rochat" <geoff777@777pkworks.com>
Message-ID: <amh37v$9f1$1@news.utelfla.com>
Source record: 41321

Deos wrote in message ...

Can anyone help me out with any information about the coil data of L2
and L3
in this schematic
it from ARRL 1957 Handbook

Thanks in advance
--
http://deosiereas.virtualave.net

From the '57 Handbook, pp 173-174:

"Standard coil stock (B&W 3900, 2-inch diam., 8 turns per inch, No. 14 wire) is used for L2L3. A total of 38 turns is cut from the original stock. At one end of the piece, a single turn is unwound from the support bars. From this end, count up 7 1/2 turns and cut the seventh turn. The cut should be made at the support bar opposite the bar from which the first lead extends. The leads from the cut point are separated from the side support bars and brought around to the same bar as the first lead. At the other end of the coil, which will be the top, a lead is unwound from the support bar and extended from the bar opposite the one with the three leans. This coil is shown in one of the photographs.
Counting from the top, the 15th and 17th turns are bent in, allowing access to the 16th turn. This is for the 40-meter tap. A four-inch length of wire can be soldered to this point. The other end should be connected to the switch terminal on S4."

The photograph referred to is Fig. 6-41, "Close-up view of the coil construction.", on page 175. The schematic chows that this is a link-coupled circuit, and the point of all the written directions is to use one piece of B&W coil stock as both the tapped primary and as the secondary, separating the two by removing one turn of wire. Using one piece of B&W stock for both the primary and the secondary, which in the photograph is shown mounted vertically on ceramic insulators via lugs soldered to the secondary, makes for a clean, compact and mechanically-stable package.

2459. Re: Santa Barbara/Goleta -- Electronic Junque stores

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 06:58:08 UTC
From: Norm Mann <folder0735@hotmail.com>
Message-ID: <3d8c15a6$0$189@news.impulse.net>
Source record: 41322

"Norm Mann" <folder0735@hotmail.com> wrote in message
news:3d8bf12f$0$189@news.impulse.net...
>
> "Allodoxaphobia" <QSB@QRM-QRN.net> wrote in message
> news:slrnaokta3.kb.QSB@animas.frontier.net...
> > The wife and I are going out to S.B. to visit her mom for a
> > coupl'o days. I can usually get off on some 'personal time'
> > on these visits. I've found 3 or 4 used books stores that I
> > like to visit.
> > But, I'd like to trawl through some used/surplus/mystery
> > electronic stores -- if there be any. In all my previous
> > trips I've never found any.
> > Are there any?
>
> Most of the stores you're looking for dried up and blew away a long time
> ago. However, last I knew, Marvac Electronics in the Walnut Center (east
of
> Patterson/Hollister Ave. intersection) was still in business.
> The only other one I know of is in Santa Maria.

Whoops! Marvac is in Magnolia Shopping Center. (Only name was wrong, not
place. - shows what happens when you drive on autopilot.)

-CB

2460. Re: spurious oscillations

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 07:31:53 UTC
From: Robert Baer <robertbaer@earthlink.net>
Message-ID: <3D8C206B.9AA03111@earthlink.net>
Source record: 41323
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.repair,sci.electronics.misc,rec.radio.amateur.misc,sci.engr,sci.electronics.design

Gabriel Horner wrote:
>
> Hi,
> I'm trying to repair a pulse generator which for now only oscillates at
> 10 MHz. I've verified that the spikes which trigger the pulses are correctly
> made when I vary the frequency knob but I've also discovered a 500 mV
> peak to peak 10 MHz oscillation. As I trace the signal down further, the
> spikes die away and the generator ends up triggering on these
> oscillations. The whole problematic section is composed of transistors and
> includes a Schmitt trigger. Any ideas on how to find the troublemaker if
> my diagnosis is right?
> Thanks,
> Gabriel

Nominally speaking, a pulse generator does not oscillate.
I would suggest that you get a schematic or make one, so you have
something to follow.
Look at the method of generating the pulse: (1) dump energy into a
delay line (which determines max width) and another switch turns it off;
(2) turn on and then of the output driver, (3) ??.
Start at the beginning and go stage by stage; look for bad capacitors,
burnt or cracked resistors, bad transistors.
Try to figure out if something else went bad and that part was thereby
destroyed so the cause gets fixed, not the symptom (ie: do *not* work
like a doctor).

2461. Re: single transistor transciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 12:04:21 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2109020805160001@c-66-176-144-254.se.client2.attbi.com>
Source record: 41324

In article <6447bcd3.0209201905.1545d52b@posting.google.com>,
blackm00@cam.org (Michael Black) wrote:

> mcalhoun@ksu.edu (Myron A Calhoun) wrote in message
news:<amffnt$80a@unix2.cc.ksu.edu>...
> >
> > Finally (at least in my article collection) was G4ADJ's November, 1975,
> > "Ham Radio" article "Using TTL ICs in single-sideband equipment" which
> > showed a complete SSB transceiver using only three SN7400 NAND IC's!
> > Since each 7400 has four two-input gates, there were 12 active devices,
> > and they were used as:
> > 2 in a crystal oscillator
> > 2 as oscillator buffers (one each for xmtr and rcvr)
> > 2 as control gates (one each for xmtr and rcvr)
> > 2 in the PTT circuit (one each for xmtr and rcvr)
> > 1 modulator
> > 1 clipper/amplifier
> > 1 RF amplifier
> > 1 demodulator
(snip)

> By that time CMOS was well around, though it had more speed
> limitations than the straight TTL. If you could accept putting
> it in the 455KHz or so range, one could have gone to CMOS,
> and used cmos switches for the balanced modulator and product
> detector.
>
> Michael VE2BVW

I've been following the thread and one thing is troubling me. The concept
of a one device transceiver is probably acheivable, but very difficult to
pull off. It is really a project for those of us with the experience and
patience which takes years to develope. I would hate to know that we gave
some new kid, who was eager to get on the air, the idea that it was a
piece of cake and then have him fail. The experiencd person would, number
one recognize when there was a problem and then, number two, would have
the patience and experience to correct it. I remember when I was starting,
that I bearly know what a rectifier was and relied on "Electronics
Illustrated" and other mags to give me guidance. I know that the
alternative is to guide them into more complicated circuits, but with a
little explaination as to the why's, at least when their project is done,
it'll work to a point where they will be encouraged to go beyond that
rather than hang their head down in disappointment. My first project had a
$2.00 electrolytic that I bought from Allied after saving four weeks for
it, which caught fire when my circuit was turned on. It wasn't fun.

Electronics should be and is fun. Let's keep it that way.

My $0.02.

Happy Trails,

Steve WB4CZR

2462. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crackling)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 12:58:22 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <amhqde$e5s$0@208.206.142.71>
Source record: 41325
Cross-posted to: rec.audio.tech,rec.audio.opinion,rec.radio.amateur.homebrew,sci.electronics.repair

James wrote:
>
> John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:<3D87E6D2.10E7@pop.removethistomailme.net>...
> > jakdedert wrote:
> > > Don't you know it. As an experiment, try cooling some individual
> > > components--especially semiconductors--on a *working* circuit. One can
> > > completely shut down a perfectly functional device (usually temporarily)
> > > with freeze spray. I guess there's an art to using it....
> > >
> >
> > This is most likely due to condensation, I think. Unless the board is
> > squeaky clean, spraying freeze-mist onto it will have the effect of
> > instantly drenching it in a conductive aqueous solution of
> > who-knows-what.
> in digital circuits, it's very common to use freezer spray (or a hair
> dryer) on a circuit where timing marginality is suspected (e.g.
> setup/hold violation). It's more appropriate when there are many
> discrete components, where changes in temperature will tip dodgy
> timing over the edge - and you can see which component is having
> trouble.
>

All this reminds me of an early troubleshooting experience. While
assigned to the educational TV station at the U S Army Signal School at
Fort Monmouth, NJ about 40 years ago, I was a videotape technician
working on one of the early videotape machines, which bore not even a
vague resemblence to anything seen today.
It consisted of three 6 foot racks of equipment in slide-out drawers
with an open tape transport deck that used 2 inch magnetic tape running
through a large open headwheel assembly. It was monochrome, of course,
all solid state, but IC's were still in the future, and all circuitry
was of discrete components.
One day suddenly the monitor displayed a horizontal black stripe across
the middle of the screen that stayed there. Tracing the flow to a
particular board, I unlocked that drawer and pulled it out, intending to
troubleshoot with a scope. In short order the trouble disappeared. When
the drawer was replaced into the rack, it would reappear. The relatively
small temperature change between the rack air and room air would heal
the fault!
How to find the defective component? I used a desk lamp with a 60 watt
bulb, and a file card. Holding the lamp close to the extended circuit
board would heat it up and quickly introduce the fault. Using the file

card, I covered each diode on the board in turn, shielding it from the lamp's heat, and when I covered the the third diode, the fault disappeared. Removing the card would bring it back. So I Changed out that diode and viola, no more problem.

Not exactly high tech, but quick and effective. The whole repair took less than 15 minutes.

Dick

2463. Re: spurious oscillations

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 13:26:53 UTC
From: Boris Pinson <Boris@bed-wetter.com>
Message-ID: <3D8C206B.9AA03111@bed-wetter.com>
Source record: 41326
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.repair,sci.electronics.misc,rec.radio.amateur.misc,sci.engr,sci.electronics.design

On Sat, 21 Sep 2002 07:31:53 GMT, Robert Baer <robertbaer@earthlink.net> wrote:
> Gabriel Horner wrote:
> >
> > Hi,
> > I'm trying to repair a pulse generator which for now only oscillates at
> > 10 MHz. I've verified that the spikes which trigger the pulses are correctly
> > made when I vary the frequency knob but I've also discovered a 500 mV
> > peak to peak 10 MHz oscillation. As I trace the signal down further, the
> > spikes die away and the generator ends up triggering on these
> > oscillations. The whole problematic section is composed of transistors and
> > includes a Schmitt trigger. Any ideas on how to find the troublemaker if
> > my diagnosis is right?
> > Thanks,
> > Gabriel
>
> Nominally speaking, a pulse generator does not oscillate.

Sure they do (or can). An astable multivibrator is nothing but an oscillator, and a Schmitt trigger is a variation on the monostable multivibrator design. In all cases, very high gain is employed in order to drive the transistors into saturation -- to make them go to one and only one state, rather than to amplify their input current.

When one of the circuit components drifts, or when one of the transistors starts to fail, it is common for the high gain to be lost, and for oscillations to set in via the feedback mechanism which is already present. There is no longer complete saturation of one of the stages, and that allows some conventional amplification to take place.

Usually, the designer adds additional circuitry intended to suppress such oscillations, but it may not be present in simpler equipment. In any case, the old tried and true methods will apply.

Check out the passive components (resistors, inductors, capacitors) first, and see if one of them has drifted or failed with time. If you have a voltage chart (as in a Sam's Photofact schematic), start with a check for correct operating voltages at the various solder points. You can also try "freezing" various components by means of a special spray can you can purchase. Sometimes, lowering the temperature of a resistor or a capacitor will reveal the problem part.

In these days of printed circuit boards and VLSI, it is common to swap out the board rather than to test components, but it looks as though the old methods will be needed here instead. I'll bet that a passive

component has changed value, or that a solder joint is bad. (I'd suspect the transistors last.)

2464. Re: looking for old style electrolytic cans, carbon comp resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 13:29:52 UTC
From: rob34 <rob34@infinet.com>
Message-ID: <3d8c745a$0$1427$4c5ecdc7@news.erinet.com>
Source record: 41327

Have you tried www.tubesandmore.com ? Rob WB8VWI
" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
news:sbJg9.29393$TX5.895742@news1.east.cox.net...
> I restore vintage radios and boatanchors, and have a need for
> some older nut-mount style electrolytic can capacitors. These
> can be defective, old parts, or new-old-stock. I open them
> up and restuff with modern replacements. The electrical condition
> doesn't matter, as the shell is used for appearances.
>
> I also am running low on some values of carbon compostion
> resistors, 1/2, 1 and 2 watts sizes.
>
> Contact me at:
>
> radioconnection@juno.com
>
> Or...
>
> remove NOSPAM in this header...
>
>

2465. August, 1952, QST article....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 13:54:48 UTC
From: mcalhoun@ksu.edu
Message-ID: <amhtn8$as0@unix1.cc.ksu.edu>
Source record: 41328

The "50 years ago" column of the August, 2002, QST (referencing the August, 1952, issue) mentioned (but did not cite page numbers) a transceiver which used 6SN7 (IIRC) tubes. I have lots of 6SN7 tubes and would like to read that article, but as luck would have it, that particular issue is one I don't have for that year!-(

If some kind person does have that issue and is willing send me a photocopy, please write me <mcalhoun at ksu dot edu> so we can work out the details.

--Myron, W0PBV.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

2466. New DATEK VFO kit- Any experience?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 14:25:37 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <amhvh1$re2$0@208.206.142.71>
Source record: 41329

New direction for this thread...

The new issue of Worldradio Magazine (Oct '02) page 59 shows a new VFO kit from Datek (<www.philmore-datek.com> click on new products, look for part number 80-1410) that is said to eliminate virtually thousands of crystals. Frequency change is made by changing resistance, using a potentiometer. Suggested price is $15.99.

Blurb: "This new Basic VFO is intended to be used in place of crystals in transmitter and receiver circuits.....will provide a low cost precision oscillator that could be used as a switching power supply clock reference, in addition to use as a fixed crystal oscillator replacement.....can be assembled in about 20 minutes and is supplied with parts for using the circuit in the 40 meter band. It will tune from approximately 6.9 to 7.2 MHz as supplied. Instructions are supplied on how to swap out a resistor and capacitor making the circuit usable from 100 kHz to 33Mhz. Also included is a circuit schematic for a 40 meter 5 watt transmitter than can be used with the VFO circuit. It will operate on any DC voltage from six to fourteen volts and draws approximately 140mA.....it employs the new LTC1799 IC."

If this thing is anywhere near as good as advertised, it will surely be a great aid homebrewers. Coming up with a simple, cheap, stable quality VFO has always been problematical.

Further reading on the quoted website indicates this unit supplies square wave output. That looks to me like a potential problem for use in the radio applications noted, without some "cleanup" circuitry following.

Any out there with experience in this area care to comment?

I have a crystal controlled Motorola 2-20 mHz HF transceiver for which I would like to adapt one of these units to substitute for the crystals. This would entail creating three VFO frequency ranges. If the square wave output will cause lots of spurs and birdies, it wouldn't be worth the effort - I don't want to put RF trash on the air. I need input from someone with experience in this area before deciding how to proceed as I have no experience with using square waves in RF. Of course it's done extensively in factory built rigs these days.
Thanks.

Dick W0EX

Hans Summers wrote:
>
> I am using a 3.560 MHz crystal in my one-valve TX see

> http://www.hanssummers.com/radio/cwtx/index.htm. It's in a standard HC49
> case and can get a little hot if the circuit isn't tuned well. This TX puts
> out about 10W on 80m. A variable capacitor pulls the frequency +/- 250 Hz
> which gives some flexibility.........
>

2467. Re: spurious oscillations

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 14:35:32 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <DaL1AtA0OIj9EwVy@jmwa.demon.co.uk>
Source record: 41336
Cross-posted to:
rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.repair,sci.electronics.misc,sci.engr,sci.electronics.design

I read in sci.electronics.design that Boris Pinson <Boris@bed-
wetter.com> wrote (in <3D8C206B.9AA03111@bed-wetter.com>) about
'spurious oscillations', on Sat, 21 Sep 2002:
>(I'd
>suspect the transistors last.)

Indeed. Unless any of them (diodes and zeners as well) has gold-plated
leads. These give rise to high-resistance joints between the lead wire
and the plating, which can be a right PITA to find.
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

2468. Re: New DATEK VFO kit- Any experience?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 14:55:13 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d8c8961$0$189$ba620e4c@news.skynet.be>
Source record: 41330

It's only a pity that their website is out.

2469. Re: The Space/Time Paradox...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 15:00:41 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D8C8999.2C5F5D5D@clifto.com>
Source record: 41331

Eugene wrote:
> If electro-magnetic waves exist, then planes of parallel space
> traveling near the speed of light, and if mass is relative to heat,
> space/time is quazi-linear. The speed of any object is given as G...

The teachers produce *this*, and then demand more money?

--
.signature in flux

2470. Re: A Single-Tube 75-Watt Novice Transmitter (6146) Coil Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 15:05:24 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D8C8AB4.192C4916@clifto.com>
Source record: 41332

Stephen C. Robbins wrote:
> Posters should feel free to post in HTML. Those who run archaic systems
> with non HTML capable readers may quietly exclude themselves from the
> intended audience and refrain from bashing the more technically competent
> posters/readers who have no problems with it.

And those in other countries who can't afford better than a 6 MHz
computer can just go scratch. You're much too good for the underprivileged.

Better people than you shaped the rules of netiquette. HTML posting is
just downright rude. So is posting binaries to non-binary newsgroups.

--
.signature in flux

2471. Design for 2M 1/2 wave for bicycle ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 15:11:13 UTC
From: lagagnon@fakesprint.ca
Message-ID: <3d8c8bb4.608469@news.sprint.ca>
Source record: 41333

I would like to build a 2M 1/2wave antenna for use on a bicycle. Can anyone point me to an appropriate design or article to build such?

Larry VE6MK
****
to send direct email remove "fake" from address

2472. Re: motorola business band to ham help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 16:32:45 UTC
From: Bruce Lane <feedspammerstothebalrog.4.spamvac@spamgourmet.com>
Message-ID: <MPG.17f63f06669c487a9899ee@news.drizzle.com>
Source record: 41334

In article <fZRi9.35913$P77.669753@news4.srv.hcvlny.cv.net>,
KC2GOG@optonline.net says...

<snip>

> the second question i have is on a motorola radio that radioshack used to
> make. catalog 19-1216 uhf business band radio. is it possible to change it
> to a 70cm repeater or simplex freq. i checked batlabs.com and couldnt find
> anything

If Motorola made is specifically for Radio Shack/Tandy, your
chances of getting service data on it from anyone but RS/T are slim at
best. Motorola takes their contract manufacturing -very- seriously. I
know this from having spent 7 years with them back when there were
company-owned service centers and a Comm Sector. Heck, we were the
company shops and not even we could get service data on some units!

My advice, if you want to put up a repeater, would simply be to
hunt around at hamfests or on E-pay. Anything from an old Motran repeater
on up to an MSF5000 would probably do just fine.

Can't help you on the pagers. No service manual for them.

Good hunting.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

2473. TCXO/OCXO sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 17:00:53 UTC
From: Rob French <fulcrum99@earthlink.net>
Message-ID: <pan.2002.09.21.13.00.38.224745.22987@earthlink.net>
Source record: 41335

Hello,

Anyone know of any suppliers from whom I can get TCXO's or OCXO's in single-unit quantities? Neither Allied or Newark appear to have them. Alternatively, maybe someone could comment on the utility of TCXO's or OCXO's? How stable do modern "tin-can" (the little sealed oscillators, like computer clock oscillators) oscillators tend to be?

Thanks
-Rob

2474. FA: Transmitter Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 17:07:11 UTC
From: zoxx@my-deja.com
Message-ID: <ami8vvkpn1@news.netmar.com>
Source record: 41337
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Now on Ebay...

(6) JAN 837/VT-101 transmitting pentodes - used in the ART-13 & other WWII military xmttrs. Great for replacements, experimenting, or projects. New in boxes, no reserve:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1381092374

(6) GE 6JE6C output tubes - used in many Ham xmttrs, linears, and some high powered audio amps. New in boxes. Retail at over $40 each:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1381586821

International bidders OK. Auctions end Soon.

..Thanks for looking.

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http://newsone.net/ -- Free reading and anonymous posting to 60,000+ groups
NewsOne.Net prohibits users from posting spam. If this or other posts
made through NewsOne.Net violate posting guidelines, email abuse@newsone.net

2475. Quadrature Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 18:00:19 UTC
From: Rob French <fulcrum99@earthlink.net>
Message-ID: <pan.2002.09.21.13.04.43.451934.22987@earthlink.net>
Source record: 41338

Correct me if I'm wrong here. As I understand it, I can generate quadrature signals from RF in one of two ways.

A) Split the incoming RF and feed it to two different mixers. The mixers are fed with the same LO frequency, but 90 degrees out of phase.

B) Split the incoming RF and feed it to two different mixers, but shift the RF input to one mixer by 90 degrees. The mixers each get the same LO frequency, with no phase shift.

If I am correct, my next question is, which is typically easier to do well? Assuming this is used at the backside of an IF (rather than a wideband RF), I'll have a constant IF frequency and a constant LO frequency, so in either case, the phase shift doesn't have to be wideband. My thought, though, is that I can probably make a more consistent 90 degree shifted LO signal from a crystal osc divided a couple of times and shifted using some flip-flops.

Thoughts?

-Rob

2476. Re: TCXO/OCXO sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 18:57:39 UTC
From: Bruno I6YPK <i6ypk#nospam#@yahoo.it>
Message-ID: <Di3j9.144855$pX1.5171383@news2.tin.it>
Source record: 41339

Look at Ebay.com for "OCXO" or "oscillator".

73
Bruno, I6YPK

"Rob French" <fulcrum99@earthlink.net> ha scritto nel messaggio
news:pan.2002.09.21.13.00.38.224745.22987@earthlink.net...
> Hello,
>
> Anyone know of any suppliers from whom I can get TCXO's or OCXO's in
> single-unit quantities? Neither Allied or Newark appear to have them.
> Alternatively, maybe someone could comment on the utility of TCXO's or
> OCXO's? How stable do modern "tin-can" (the little sealed oscillators,
> like computer clock oscillators) oscillators tend to be?
>
> Thanks
> -Rob

2477. Re: Quadrature Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 19:03:39 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2109021504340001@c-66-176-144-254.se.client2.attbi.com>
Source record: 41340

In article <pan.2002.09.21.13.04.43.451934.22987@earthlink.net>, Rob French <fulcrum99@earthlink.net> wrote:

> Correct me if I'm wrong here. As I understand it, I can generate
> quadrature signals from RF in one of two ways.
>
> A) Split the incoming RF and feed it to two different mixers. The mixers
> are fed with the same LO frequency, but 90 degrees out of phase.
>
> B) Split the incoming RF and feed it to two different mixers, but shift
> the RF input to one mixer by 90 degrees. The mixers each get the same LO
> frequency, with no phase shift.
>
> If I am correct, my next question is, which is typically easier to do
> well? Assuming this is used at the backside of an IF (rather than a
> wideband RF), I'll have a constant IF frequency and a constant LO
> frequency, so in either case, the phase shift doesn't have to be
> wideband. My thought, though, is that I can probably make a more
> consistent 90 degree shifted LO signal from a crystal osc divided a
> couple of times and shifted using some flip-flops.
>
> Thoughts?
>
> -Rob

Your idea with the LO seems to be the more viable. Shifting 90 degrees in the analog sense is not easily achieved. Even so, it doesn't have to be perfect to get good results either way.

Happy Trails and Experimentation,
Steve WB4CZR

2478. Re: The Space/Time Paradox...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 20:45:55 UTC
From: ogrowup@webtv.net
Message-ID: <6163-3D8CDA83-79@storefull-2236.public.lawson.webtv.net>
Source record: 41342

If I'd produced a paragraph like this in my one college physics class,
the professor would have wanted to use me as a target in his upcoming
laser experiments... :)

"Eagles may soar but weasels aren't sucked into jets."

2479. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crack...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 21:02:53 UTC
From: ogrowup@webtv.net
Message-ID: <6163-3D8CDE7D-84@storefull-2236.public.lawson.webtv.net>
Source record: 41343

PArdon me for intruding, but...
I seem to remember that carbon dioxide (CO2) exists only as a gas or a solid ('dry ice'); it can exist as a liquid only under extreme pressure..what sort of pressure are you talking here?

"Eagles may soar but weasels aren't sucked into jets."

2480. Rookie needs your help.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 21:08:54 UTC
From: Ron <rfred45@charter.net>
Message-ID: <uopnur50lra805@corp.supernews.com>
Source record: 41341

I found an old 20's homebrew radio in grandpa's attic and would like some hook up information. I've read a number of books and have tried to apply the information to this unit. Before it's juiced up I'd like to be sure I don't fry anything.

A wiring diagram and a couple of questions can be found at:
http://www.bmara.com/radio.htm

reply via this newsgroup or e-mail..... rfred45@charter.net

If you could help me out it will surly be appreciated..Thanks

Ron

2481. Re: Quadrature Mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 21:17:02 UTC
From: jos <soj@sympatico.ca>
Message-ID: <3D8CE1CD.CCFC98F8@sympatico.ca>
Source record: 41344

Hello!

Are you trying to generate a single sideband signal or a image free converter? In both cases, the LO signal and the other signal (IF or Audio) must both have 90 degrees shift.
As you mention 90 degrees shift for the LO is easily obtained from FF dividers. In fact many converters IC's use this technology up to 2.5 Ghz (Maxim). 90 degrees can also be obtained for the LO of each mixer by splitting with a 3 db quadrature coupler (or splitter). Jos!

Rob French wrote:

> Correct me if I'm wrong here. As I understand it, I can generate
> quadrature signals from RF in one of two ways.
>
> A) Split the incoming RF and feed it to two different mixers. The mixers
> are fed with the same LO frequency, but 90 degrees out of phase.
>
> B) Split the incoming RF and feed it to two different mixers, but shift
> the RF input to one mixer by 90 degrees. The mixers each get the same LO
> frequency, with no phase shift.
>
> If I am correct, my next question is, which is typically easier to do
> well? Assuming this is used at the backside of an IF (rather than a
> wideband RF), I'll have a constant IF frequency and a constant LO
> frequency, so in either case, the phase shift doesn't have to be
> wideband. My thought, though, is that I can probably make a more
> consistent 90 degree shifted LO signal from a crystal osc divided a
> couple of times and shifted using some flip-flops.
>
> Thoughts?
>
> -Rob

2482. Re: TCXO/OCXO sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 21:27:51 UTC
From: jos <soj@sympatico.ca>
Message-ID: <3D8CE456.B0BF2A91@sympatico.ca>
Source record: 41345

Hi!
You did not state which frequency you are looking for! Look at DIGI-KEY catalog.
They have a line or two of programmable crystal oscillators up to 130 Mhz with stability of plus/minus 25 PPM over a wide temp. range in DIP and other packages! They cost less than a single crystal manufactured to your frequency. Their device can be programmed twice. You just give the frequency over the phone and you get your oscillator the next day in north America!

Regards! Jos

Rob French wrote:

> Hello,
>
> Anyone know of any suppliers from whom I can get TCXO's or OCXO's in
> single-unit quantities? Neither Allied or Newark appear to have them.
> Alternatively, maybe someone could comment on the utility of TCXO's or
> OCXO's? How stable do modern "tin-can" (the little sealed oscillators,
> like computer clock oscillators) oscillators tend to be?
>
> Thanks
> -Rob

2483. Re: TCXO/OCXO sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 21:38:50 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3D8CE6EA.3E0AE923@nettally.com>
Source record: 41346

Check DigiKey and Mouser catalogs for small unit quantities. Also surplus sellers like MECI, Hosfelt, BG Micro etc., sometimes have limited quantities of certain models.

Computer applications don't call for a lot of frequency stability,
Try to get one with smallest ppm/ degree for less temp drift.
The frequency tolerence in parts per million (PPM) is published for the models in the DigiKey and Mouser catalogs. Usually not to good for VHF or UHF applications.

Another problem is that most models don't have a tuning adjustment, although the pricier ones have a voltage controlled tuning lead. Without a means to tune them they can start off many ppm from where you want them.

Most have TTL output square wave so you need to filter the harmonics.

Hope this helps.

Rob French wrote:

> Hello,
>
> Anyone know of any suppliers from whom I can get TCXO's or OCXO's in
> single-unit quantities? Neither Allied or Newark appear to have them.
> Alternatively, maybe someone could comment on the utility of TCXO's or
> OCXO's? How stable do modern "tin-can" (the little sealed oscillators,
> like computer clock oscillators) oscillators tend to be?
>
> Thanks
> -Rob

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

2484. Re: Choosing receiver IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 21:52:29 UTC
From: jos <soj@sympatico.ca>
Message-ID: <3D8CEA1D.A95EFD67@sympatico.ca>
Source record: 41247

Hi!

Plessey used to have a good mixer for this purpose; (SL.......)
Unfortunately, it has been discontinued. But Analog Devices came out with the
500 Mhz AD831 Mixer which is very efficient in designs similar to yours; the
output frequency range is 250 Mhz so there is no problem with high frequency
IF. Jos!

Rob French wrote:

> Hello,
>
> I'm looking for some resources about selecting an IF frequency for a
> receiver. I'm looking at the idea of building an upconverting HF receiver
> which would convert the HF signals to a high IF (>100 MHz), perform wide
> filtering there, then directly convert it to baseband I and Q channels
> for demodulation via DSP. I'm trying to figure out what some standard
> high IF's are... I've seen the rule of thumb regarding at least 3 times
> the maximum frequency to be received, but looking for more specifics.
>
> -Rob

2485. Re: TCXO/OCXO sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 22:03:33 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3D8CECB5.CD865530@nettally.com>
Source record: 41248

The programmables are reportedly "dirtier" than the standard ones so might not be good for RF projects.

jos wrote:

> Hi!
> You did not state which frequency you are looking for! Look at DIGI-KEY
> catalog.
> They have a line or two of programmable crystal oscillators up to 130 Mhz
> with stability of plus/minus 25 PPM over a wide temp. range in DIP and
> other packages! They cost less than a single crystal manufactured to your
> frequency. Their device can be programmed twice. You just give the
> frequency over the phone and you get your oscillator the next day in north
> America!
>
> Regards! Jos
>
> Rob French wrote:
>
> > Hello,
> >
> > Anyone know of any suppliers from whom I can get TCXO's or OCXO's in
> > single-unit quantities? Neither Allied or Newark appear to have them.
> > Alternatively, maybe someone could comment on the utility of TCXO's or
> > OCXO's? How stable do modern "tin-can" (the little sealed oscillators,
> > like computer clock oscillators) oscillators tend to be?
> >
> > Thanks
> > -Rob

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

2486. Re: motorola business band to ham help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 22:12:02 UTC
From: "Philip L. Carter" <pcarter@gcfn.org>
Message-ID: <amiqtqgsj1@ronco.freenet.columbus.oh.us>
Source record: 41249

The pageboy II has no squelch circuit if it is tone and voice. The audio is on if the decoder opens the audio amp. 5-10 minutes and your battery would probably be dead. If they are not tone and voice but tone only, there is no audio section, just an oscillator and a transducer for generating the beep. Look for the Minitor series, as these are monitor receivers with audio and squelch systems. Director series has audio sections but no squelch circuit, so use as a monitor receiver is limited. They can be converted to be like a minitor, but somewhat costly to do.

I don't think Radio Shack ever made radios for Motorola, I believe it is the other way around. If that is the case, check the Motorola model number (or type acceptance number) and run it thru the compliance database at the FCC to see what it really is. Motorola Parts ID may be able to tell you what it is, or a Motorola Service Shop may be able to recognize it. Once that is done you can probably (if it is still in print) get a service manual. Be advised parts may not be available.

Good Luck on the hunt.

Phil
wd8qwr

2487. Re: Freeze spray tip (was: Re: Fixing vintage amp withstatic/crack...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 22:24:06 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3D8CF17F.FFA4BF2@rica.net>
Source record: 41250

"P.L. O'Connor" wrote:
>
> PArdon me for intruding, but...
> I seem to remember that carbon dioxide (CO2) exists only as a gas or a
> solid ('dry ice'); it can exist as a liquid only under extreme
> pressure..what sort of pressure are you talking here?

Only about a hundred pounds absolute at -50 degrees C.
Phase diagram near bottom of:
http://scifun.chem.wisc.edu/chemweek/CO2/CO2.html

--
John Popelish

2488. Re: August, 1952, QST article....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 22:42:30 UTC
From: n2ey@aol.com
Message-ID: <20020921184230.11404.00001011@mb-ct.aol.com>
Source record: 41251

In article <amhtn8$as0@unix1.cc.ksu.edu>, mcalhoun@ksu.edu (Myron A Calhoun) writes:

>The "50 years ago" column of the August, 2002, QST (referencing the
>August, 1952, issue) mentioned (but did not cite page numbers) a
>transceiver which used 6SN7 (IIRC) tubes.

It's not a transceiver in the modern sense. It's a simple flea-power (old term for QRP) 40 meter CW station.

Receiver is a one-tube regen using a 6SL7 dual triode. Transmitter uses a 6SN7 running 2-3 watts, xtal controlled. Whole thing is built in a small box and could run on batteries or power stolen from a BC set.

73 de Jim, N2EY

2489. Re: The Space/Time Paradox...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 22:56:07 UTC
From: newsdesk@aeonsciltd.net
Message-ID: <869eda69.0209211456.20502e9f@posting.google.com>
Source record: 41252

"Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message
news:<3D8C8999.2C5F5D5D@clifto.com>...
> Eugene wrote:
> > If electro-magnetic waves exist, then planes of parallel space
> > traveling near the speed of light, and if mass is relative to heat,
> > space/time is quazi-linear. The speed of any object is given as G...
>
> The teachers produce *this*, and then demand more money?

GREAT CAESERS GAOST

Take for example, a pebble it tries and tries to soak up water,
but to no avail. Casting the pebble into the water causing it to
sink, is the pebble invisable?

http://www.aeonsciltd.net

2490. Re: TCXO/OCXO sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 23:13:00 UTC
From: Rob French <fulcrum99@earthlink.net>
Message-ID: <pan.2002.09.21.19.13.24.533377.22987@earthlink.net>
Source record: 41253

Actually, I'm looking for a square wave output that will be driving a switching mixer built using high-speed CMOS.

2491. Re: Freeze spray tip (was: Re: Fixing vintage amp withstatic/crack...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-21 23:14:11 UTC
From: Fred <fred@clara.net>
Message-ID: <GY6j9.2668$b_1.1982@fe01>
Source record: 41254

"P.L. O'Connor" <ogrowup@webtv.net> wrote in message
news:6163-3D8CDE7D-84@storefull-2236.public.lawson.webtv.net...
> PArdon me for intruding, but...
> I seem to remember that carbon dioxide (CO2) exists only as a gas or a
> solid ('dry ice');

At one atmosphere of pressure.

> it can exist as a liquid only under extreme
> pressure..what sort of pressure are you talking here?

The critical point of carbon dioxide is 31.1 C and 73.0 atmospheres. So it must be below 88 F and above 1073 pounds per square inch.

2492. Re: TCXO/OCXO sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-22 00:25:54 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D8D0E86.6859@pop.removethistomailme.net>
Source record: 41255

Rob French wrote:
>
> Actually, I'm looking for a square wave output that will be driving a
> switching mixer built using high-speed CMOS.

Buy a TCXO on eBay (not necessarily an OCXO, unless you can tolerate
long warmup times and/or can leave it on 24/7), then run it through an
LT1016 or something similar. High-grade crystal oscillators with
square-wave outputs are pretty rare.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2493. Re: New DATEK VFO kit- Any experience?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-22 01:42:37 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <amj76dlhd0@208.206.142.112>
Source record: 41256

JC wrote:
>
> It's only a pity that their website is out.

Very sorry, my error. The correct URL is <www.philmore-datak.com>

That one is active now, I just checked it. I misspelled the name.

Dick

2494. Re: TCXO/OCXO sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-22 02:53:25 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uoqc5kh8hmd563@corp.supernews.com>
Source record: 41257

"Joe Leikhim" <jleikhim@nettally.com> wrote in message
news:3D8CECB5.CD865530@nettally.com...
> The programmables are reportedly "dirtier" than the standard
> ones so might not be good for RF projects.

There is a certain amount of phase noise, which may or may not be a problem for some applications, but hey, for three bucks! The amount of phase noise seems to be a function of the frequency, which I suppose you would expect.

The other problem is that they aren't actually available on ANY frequency. You can get awfully close, but if you need a pair of oscillators a few hundred hertz apart it could be noticeable. It's not entirely clear to me what their resolution is in programming the rascals, but it seems to be in the neighborhood of 200-300 Hz. If you call DigiKey before about 6 PM their time, they will be able to tell you how close to your frequency they can get.

I've used them quite a bit, and they have their charm, and their limitations.

For a mixer, especially for CW, I think I would stick to one of the little cans if you can get one in an appropriate frequency. They are more expensive, but they are not going to break the bank. DigiKey has them, as well as VCXOs, but only in a limited frequency selection.

..

2495. Re: single transistor transciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-22 03:14:05 UTC
From: janaeanddoug@netzero.net
Message-ID: <360a820d.0209211914.1c2cbd2a@posting.google.com>
Source record: 41258

Thanks to all the posts on here, I appreciate it. My main desire for this project has been (1) as little parts count as possible and still make a cw qso that is fairly reliable, which to me, a couple hundred milliwatts goes a long ways, which is easy enough to achieve with one trx.(2) stability...a good xtal controlled reciever, also. (3) compact, small enough to put in a little asprin bottle. I realize surface mount cant handle as many mills, but sure would condense things! (4) Above all, different...Ive not seen this in any of the qrp mags! So this would be a little rig that is rock solid, and can have fun with anywhere. Im still working on it! Its just that I cant get it to detect as well as a regenerative rx!I can barely hear loud stations. Ive built lots of things, a g-g 4-1000 amp from the ground up, worked on first try, digital readout receivers, AM transmitters, ya know just having a blast with this hobby. Sure , I could ask myself, why do I bother with such things? I can go out and buy a hot performing radio for a couple thou, right!? And then what? Blab to everyone about how many knobs there are on the front panel? One could also make the point of why even use amateur radio for communication when there is a phone sitting on the operating table that has no trouble with the ionosphere, and you dont have to take turns talking. Its all got to do with what you enjoy! So enjoy it! 73 Doug

2496. my experiment with ultra-sonic transducers as an i-f

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-22 03:30:24 UTC
From: janaeanddoug@netzero.net
Message-ID: <360a820d.0209211930.2adc4fbd@posting.google.com>
Source record: 41259

Recently took a d-c reciever and put a "transmit" transducer in place of the speaker. Transducer was around 40 kc. Next to this I put the "recieve" transducer. So I had an i.f. of 40 k.c. After this, the signal went into a diode ring mixer, which used audio transformers and 4 1N914 diodes. I injected a signal from a 555 timer(bfo signal) into the mixer and adjusted its frequency until I could hear signals. The results were really impressive, very steep and selective, and even passed one sideband! but images were really close cause of the low i.f.. None of this is really new, cause its the basis of a mechanical filter, but what had me baffled was the fact that with the bfo off, The transducers stripped the carrier off all the signals and am sounded normal!

2497. Re: TCXO/OCXO sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-22 06:41:50 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <amjoneoga0@208.206.142.99>
Source record: 41260

Rob French wrote:
>
> Actually, I'm looking for a square wave output that will be driving a
> switching mixer built using high-speed CMOS.

This info from another post on another thread might be of interest...

The new issue of Worldradio Magazine (Oct '02) page 59 shows a new VFO kit from Datak (<www.philmore-datak.com> click on new products, look for part number 80-1410) that is said to eliminate virtually thousands of crystals. Frequency change is made by changing resistance, using a potentiometer. Suggested price is $15.99.

Adv. Blurb: "This new Basic VFO is intended to be used in place of crystals
in transmitter and receiver circuits.....will provide a low cost precision oscillator that could be used as a switching power supply clock reference, in addition to use as a fixed crystal oscillator replacement.....can be assembled in about 20 minutes and is supplied with parts for using the circuit in the 40 meter band. It will tune from approximately 6.9 to 7.2 MHz as supplied. Instructions are supplied on how to swap out a resistor and capacitor making the circuit usable from 100 kHz to 33Mhz. Also included is a circuit schematic for a 40 meter 5 watt transmitter than can be used with the VFO circuit. It will operate on any DC voltage from six to fourteen volts and draws approximately 140mA.....it employs the new LTC1799 IC."

Dick

2498. Re: Rookie needs your help.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-22 07:10:40 UTC
From: JC <jacques.culot@skynet.be>
Message-ID: <3d8d6cf1$0$221$ba620e4c@news.skynet.be>
Source record: 41261

I replied personally to Rookie with the schematic in attachment as it seems it's not possible to post it on the NG. Why?

2499. Re: Rookie needs your help.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-22 07:32:24 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D8D7285.2FFA@pop.removethistomailme.net>
Source record: 41262

JC wrote:
>
> I replied personally to Rookie with the schematic in attachment as it seems
> it's not possible to post it on the NG. Why?

You can try, but a lot of news servers don't carry binary files in
non-binary groups like this one. Try posting in
alt.binaries.schematics.elctronics instead... or better yet, stick it on
a web page somewhere and post a link.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2500. Re: The Space/Time Paradox...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-22 09:13:09 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d8d8914.608457@news.freeserve.net>
Source record: 41263

On 21 Sep 2002 15:56:07 -0700, newsdesk@aeonsciltd.net (Eugene) wrote:

>"Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message
news:<3D8C8999.2C5F5D5D@clifto.com>...
>> Eugene wrote:
>> > If electro-magnetic waves exist, then planes of parallel space
>> > traveling near the speed of light, and if mass is relative to heat,
>> > space/time is quazi-linear. The speed of any object is given as G...
>>
>> The teachers produce *this*, and then demand more money?
>
>GREAT CAESERS GAOST
>
> Take for example, a pebble it tries and tries to soak up water,
>but to no avail. Casting the pebble into the water causing it to
>sink, is the pebble invisable?
>
percieved Colour is reflected light, therefore if there is no light
there cannot be colour, therefore my mug of tea is transparent in the
dark. But I can't proove this as I need light to see it ;-(

2501. Re: New DATEK VFO kit- Any experience?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-22 09:15:08 UTC
From: Dave Turner <dmturner@primenet.com>
Message-ID: <jn1rouop1knd5er647orbso4a8aeuanbqv@4ax.com>
Source record: 41264

Dick Carroll <dixie@townsqr.com> wrote:
> The new issue of Worldradio Magazine (Oct '02) page 59 shows a new VFO
>kit from Datek (<www.philmore-datek.com> click on new products, look
>for part number 80-1410) that is said to eliminate virtually thousands
>of crystals. Frequency change is made by changing resistance, using a
>potentiometer. Suggested price is $15.99.

That should be: www.philmore-datak.com

Regards,

Dave

2502. [AD] Mini DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-22 10:35:26 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <amk6dd$29v$1@paris.btinternet.com>
Source record: 41265

If anyone is interested in building Jesper's Mini DDS:

http://www.myplace.nu/avr/minidds/

I've designed a PCB for my own version of it:

http://www.geocities.com/leon_heller/minidds.html

and can supply the schematic and PCB artwork (free) if you want to build
your own.

I could put together a kit with all the components, including a PCB, a
pre-programmed AVR microcontroller and detailed instructions for $55
including airmail postage. Unless I'm flooded with orders, the PCB will be
home-made. I won't include sockets. The AVR is user-programmable via the
5-pin Molex connector, BTW, so you can put your own code in it, or modify
Jesper's, if you wish.

Some applications are: precision LF signal generator, reference oscillator
for a very high-res PLL synthesiser and an exciter for an LF transmitter.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2503. 3.4Ghz Solid State Power Amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-22 11:53:54 UTC
From: Amplifiers <Amps@sbrs.org.uk>
Message-ID: <uorbqhmlg94933@corp.supernews.com>
Source record: 41266
Cross-posted to: alt.radio.amateur,es.rec.radio.amateur,fr.rec.radio.amateur,free.uk.amateur-radio,nl.radio.amateur,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

SSPAs:
* Original frequency range: 3,475-3,493 MHz, but usable on 3,400 MHz
without modification.
* Gain at 3400 MHz: ~42dB using 4 stages.
* 1 dB compression point: >11 watts @ 9.4v.
* Saturated output: >14 watts (>20 watts may be possible, see below).
* RF connectors: Female SMA.
* DC connector: 15 pin D-type.
* DC supply: +9.4v @ 5-7A (pins 7, 8 & 15), +12v @ 25 mA (pin 12),
-12v @ 75 mA (pin 5) and 0v (pins 2, 6, 13 & 14).
* Control: mute i/p (pin 4), PSU reset o/p (pin 3) temp monitor o/p
(pin 10) and error O/P (pin 11)
* RF O/P power Monitor: upto 10v (pin 1) into hi-z and return (pin 9)
* Size, excluding connectors: 180 x 112 x 26 mm, milled box.
* Weight: 750g.
* Originally the unit was designed for digital modulation, rather than
SSB, a number of people have modified the bias arrangements (not tried at
the radio club) and increased the supply to 10v when it has been suggested
that 18-20 watts is possible. We have increased the supply voltage to 14v
on some units when over 20 watts saturated obtained, but perhaps not
recommended for a long life. The +9.4v supply should not be applied without
the -12v supply on. We also have isolators available, which perform okay at
3400 MHz. It is interesting to note that the unit tested performed better
at 3400 MHz than the intended frequencies.

The club is selling the SSPAs c/w one isolator and DC cable for £50 each
plus UK P&P (@£5)

For photographs of the units go to www.sbrs.org.uk/amps

2504. Solder

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-22 15:03:49 UTC
From: "Clyde R. Shappee" <clydes@world.std.com>
Message-ID: <3D8DDBD5.4AB6B79F@world.std.com>
Source record: 41267

Hi,

I bought a roll of 0.020 diameter solder at a flea market. This is
Kester Sn63 core 66 flux 282.

Can anyone tell me about the flux? I tried the Kester web page and old
catalogs, but have no idea what kind of flux this is.

Is it suitable for SMT work? Washing?

Thanks for any help.

Clyde
KA1CRV

2505. Re: Solder

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-22 15:37:54 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D8DE3D2.550EFE46@clifto.com>
Source record: 41268

Clyde R. Shappee wrote:
> I bought a roll of 0.020 diameter solder at a flea market. This is
> Kester Sn63 core 66 flux 282.
>
> Can anyone tell me about the flux? I tried the Kester web page and old
> catalogs, but have no idea what kind of flux this is.

Google on "kester flux 282" and you'll find out lots.

--
.signature in flux

2506. Re: The Space/Time Paradox...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-22 15:46:09 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D8DE5C1.3951903D@clifto.com>
Source record: 41269

Eugene wrote:
> "Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message
news:<3D8C8999.2C5F5D5D@clifto.com>...
> > Eugene wrote:
> > > If electro-magnetic waves exist, then planes of parallel space
> > > traveling near the speed of light, and if mass is relative to heat,
> > > space/time is quazi-linear. The speed of any object is given as G...
> >
> > The teachers produce *this*, and then demand more money?
>
> GREAT CAESERS GAOST

HOLY JUPMNIG KATPHESH

Try "Hooked On Phonics", okay?

> Take for example, a pebble it tries and tries to soak up water,
> but to no avail. Casting the pebble into the water causing it to
> sink, is the pebble invisable?

Any potential is automatically a true negative resistor, since it is a
free harmonic set of bidirectional flows of EM energy (due to its dipolarity
and the broken symmetry of same; it takes the energy right out of the vacuum
via the broken symmetry of the source charge or dipolarity). Hence you can
collect as much energy from it as you wish, from its "flowing rivers of
energy", if you arrange for enough charges (buckets) to collect it (to
collect the water). Nothing says you have to use just one kind of charge
(the electron). You can use -- as Bedini does -- both the ions between the
plates and the electrons in the external circuit. And you can use them
both, and potentialize them both simultaneously with the same potential.
HOW MUCH EXCESS ENERGY YOU CATCH IN BOTH DIRECTIONS DEPENDS SOLELY ON THE
MAGNITUDE OF THE PHI AND THE MAGNITUDE OF THE Q's.

http://www.icehouse.net/john1/

--
.signature in flux

2507. Re: TCXO/OCXO sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-22 16:59:32 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <qymj9.2448$a%6.865@fe02>
Source record: 41270

> For a mixer, especially for CW, I think I would stick to one of the little
> cans if you can get one in an appropriate frequency. They are more
> expensive, but they are not going to break the bank. DigiKey has them, as
> well as VCXOs, but only in a limited frequency selection.

I have the internal schematic of at least one of those, it's very little
really.
Two transistors, and a few Rs and Cs, and of course a crystal.
http://www.dvanhorn.org/Micros/All/Cans.php

2508. Re: Solder

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-22 17:47:59 UTC
From: "Clyde R. Shappee" <clydes@world.std.com>
Message-ID: <3D8E024F.8C0FC29F@world.std.com>
Source record: 41271

Thanks for the help, guys...

I guess I got good solder that I can use at a good price.

Clyde

Max Foo wrote:

> Should be fine... just use a product called "Flux Off" to remove any
> residual flux on the PCB. Comes in a spray can same company that makes
> "Dust Off", can't remember co. name though... Technitool and maybe
> Digi-Key stocks it.
>
> On Sun, 22 Sep 2002 11:03:49 -0400, "Clyde R. Shappee"
> <clydes@world.std.com> wrote:
>
> >Hi,
> >
> >I bought a roll of 0.020 diameter solder at a flea market. This is
> >Kester Sn63 core 66 flux 282.
> >
> >Can anyone tell me about the flux? I tried the Kester web page and old
> >catalogs, but have no idea what kind of flux this is.
> >
> >Is it suitable for SMT work? Washing?
> >
> >Thanks for any help.
> >
> >Clyde
> >KA1CRV

2509. PANEL METERS FS/T

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-22 19:42:30 UTC
From: ni4l@msn.com
Message-ID: <d4a0748e.0209221142.74530d11@posting.google.com>
Source record: 41272

PANEL METERS ALL VINTAGE BLACK MILITARY STYLE UNLESS NOTED

DC KILOVOLTS 0-4KV WESTINGHOUSE 3 1/2" ROUND $20.00

DC AMPERES 0-600 3 SCALES 4 3/4" SQUARE $10.00

DC AMPERES 0-1 SHURITE 2 1/2" SQUARE $10.00

DC AMPERES 0-50 SHURIE 2 1/2" SQUARE $10.00

DC VOLTS 0-5 SHURITE 2 1/2" SQUARE $10.00

DC VOLTS 0-50 SHURITE 2 1/2" SQUARE $10.00

DC VOLTS 0-1 SHURITE 2 1/2" SQUARE $10.00

MAIN LOAD AMPS 0-50 2 SCALES WESTON 3" SQUARE $10.00

DC MICROAMPERES 0-500 2 3/4" ROUND $10.00

AMPS 0-300 3 1/4" ROUND $10.00

HICKOK MODEL 56R 0-2 F.S.=50UA 2 3/4" ROUND $10.00

DC AMPERES SIMPSON 0-50 3" SQUARE $10.00

INPUT AMPS DC 0-200 3 SCALES 3" SQUARE $10.00

DC VOLTS 0 CENTER 50 0-250 2 SCALES DEJUA R330 3 1/2" ROUND
$10.00

DC AMPERES 0-600 3 1/2" ROUND $10.00

AC MILLIAMPERES 0-10 SIMPSON 3 1/4" SQUARE $10.00

RF MILLIAMPERES 0-500 SIMPSON 3 1/4" SQUARE $10.00

DC MILLIAMPERES 0-25 SIMPSON 3 1/4" SQUARE $10.00

DC MICROAMPERES 0-50 SIMPSON 2 1/2" SQUARE $10.00

AC AMPERES 0-1.5 SIMPSON 2 1/2" SQUARE $10.00

AC MILLIAPERES 0-50 SHURITE 2 1/2" SQUARE NEW CLEAR FACE $10.00

AC MILLIAPERES 0-500 SHURITE 2 1/2" SQUARE NEW CLEAR FACE $10.00

AC MILLIAPERES 0-100 SHURITE 2 1/2" SQUARE NEW CLEAR FACE $10.00

NOTE ALL IN GOOD SHAPE a few had some of those sticky labels on the
face but a little windex will take off the glue resisdue, All deflect
and work fine.

All prices include shipping. Might be willing to trade what do you have laying around?

I have pictures of the meters.

2510. Re: Meter faces

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-22 22:23:24 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <amlfippfo1@nic.grnet.gr>
Source record: 41273

A very nice program for making customized meter scales
http://www.qsl.net/wb6bld/meter.html

"Fred Ruckser" <whru@email.msn.com> wrote in message
news:#voWYaMYCHA.1636@cpimsnntpa03...
> I need some sort of a software program to create a new panel meter face
for
> an analog panel meter.
>
> 73
> wb6iiq
>
>

2511. transverter design for 20 meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 01:58:26 UTC
From: AJ Sanderson <ajsand@nospam.com>
Message-ID: <amlsoc$s83$1@slb5.atl.mindspring.net>
Source record: 41274
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

I'd like to use a transverter with a 10 meter HTX-100 for 20 and maybe 80 meter operation. Is this possible and where can I find plans?

Thank you,
AJ

2512. UHF+ SWR meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 02:46:30 UTC
From: Marc Passy <Marc#nospam#@passy.us>
Message-ID: <agvj9.512928$q53.17381016@twister.austin.rr.com>
Source record: 41275

Anyone have any links to plans for a homebrew SWR meter for 2m up? Everything i've found (which were few) and the ARRL handbook are customarily VHF down (<50 MHz).

thanks.

2513. HV CAPACITOR BANK/BOARD/EQ RESISTORS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 02:54:33 UTC
From: ni4l@msn.com
Message-ID: <d4a0748e.0209221854.2c939413@posting.google.com>
Source record: 41276

Really nice capacitor bank with board and eq resistors already
mounted.
It has the screw type filter capacitors. They are mounted on a
commercial made PC board with eq. resistors. It consist of 15 -
1500mfd @ 450vdc
computer grade capacitors in series. There is room for one more cap,
of
which I have a couple of spares 17 total caps. There are also some
extra resistors mounted on the board you could use to add the last
one.
That would give 93 mf at 7200wvdc. That is nothing to sneeze at! Most
of the HARD work is already done for you.
Great for your next high powered project. It will fit in a standard
19" rackmount chassis it is 6" tall 9 3/4" depth
Figure about 25lbs packed weight shipped from 28681 would like 150.00
+ shipping open to offers I could use 2 oil capacitors around 20mfd @
5000vdc each Ok if cap is higher. ni4l@charter.net

2514. Re: TCXO/OCXO sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 03:44:43 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <ammvnd$ht8$1@slb6.atl.mindspring.net>
Source record: 41282

I think the big question is, how precise of a reference is needed for
this project?

The computer timebase oscillators are usually something like +/-100 PPM
which is a rather large error if you are using it to synthesize a 100 MHz
LO.

Potentually up to 10 KHz error which is pretty poor by todays standards
for a synthesized radio.

==========

OK, so if you are using a DDS which I think I recall from one of the
other posts, a trick I've seen is to measure the actual error and then
program a correction factor into the microprocessor you are using to program
the DDS. You can program in any correction factor required and more or
less hide the off frequency timebase.

Although, this doesn't compensate for how the cheap oscillator is likely
to wander around over temperature.

Hmmm.... Now that I think about it, if you have a temperature sensor and
feed it into the control computer, you could also program in a correction
factor for temperature.

I've seen designs that use a temperature sensor to detect the crystal
temperature and use that to look up a correction factor in a prom which then
controls a DAC to pull the crystal back on frequency.

A homebrew version of this takes a fair amount of time to measure the
correction factors and then program them into a prom lookup table, but it
isn't TOO hard to do and it'd allow you to have a very precise TCXO.

Yeah, I know.... What do you use to verify the frequency while plotting
the correction factors?

Well, the simplest is to zero beat against WWV. Not super accurate,
but with the right setup you ought to be able to do somewhere around 1 PPM.

==========

This would hide a lot of evils in the reference crystal oscillator by
using software.

Although I make no promises for phase noise, that's a function of the
crystal orscillator itself and you can't fix that through software.
Still, for an HF radio, it should be good enough.

==========

However, I think a more accurate, or at the very least settable, oscillator would be a good choice. For a one-off homebrew project you may find a TCXO on ebay. Those are usually pretty good, and they generally have a way to set them precisely on frequency.

Remember to check the synthesizer you intend to use, a lot of the designs allow for setting the synthesizer IC for different reference frequencies by changing the internal reference divider chain. This would allow a larger choice for the frequency of the TCXO you'd look for on ebay.

Seems to me, cellphones are supposed to have pretty good reference oscillators but I have no idea what frequency they usually use.....

Alternatively, you could buy just a crystal and construct your own oscillator circuit. You may have trouble setting it up to allow setting on frequency, but you can get a heck of a lot closer than +/-100 PPM.

Jim Pennell
N6BIU

2515. Re: transverter design for 20 meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 04:36:49 UTC
From: JC <on5mjREMOVE@skynet.be>
Message-ID: <3d8e9a65$0$213$ba620e4c@news.skynet.be>
Source record: 41277
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

I think transverters are used for increasing the working frequency not decreasing it, i.e. passing from HF to VHF. I never saw plans for passing from 10m to 20m or even 80m. The contrary would be easier as 10m is an harmonic of 20m or 80m.

73 de ON5MJ

2516. Re: UHF+ SWR meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 06:15:26 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <fj7tou4951rjkm50ucpu4ek4ga6b9p0sou@4ax.com>
Source record: 41278

On Mon, 23 Sep 2002 02:46:30 GMT, "Marc Passy" <Marc#nospam#@passy.us>
wrote:

>Anyone have any links to plans for a homebrew SWR meter for 2m up?
>Everything i've found (which were few) and the ARRL handbook are
>customarily VHF down (<50 MHz).

For low to medium power applications you can make a directional
coupler by running the signal through a microstrip transmission line.
On both sides, parallel to the main transmission line two coupler
links are also etched. The parallel section of the link must be well
below 1/4 wavelength (remember the velocity factor in the stripline),
one end of the coupler link is grounded through a 100 ohm termination
resistor, while the other end goes through a diode and low pass filter
capacitor to the meter.

The termination resistor and diode should be good quality surface
mount components. One coupler link will have the terminating resistor
close to the transmitter side connector of the main transmission line,
while the other link has the terminating resistor near the same end as
the antenna connector of the main transmission line. In this way both
the forward and reflected power can be measured simultaneously.

For higher powers, insert the links just under the braid of a section
of coaxial cable and connect the terminating resistor as described
above. For higher power and higher precision make a large 50 ohm
coaxial line of two concentric tubes with proper tapering at both
connectors. Make two slits in the outer tube and insert a coupler
running parallel with the main transmission line in through the slit.

For even higher precision, get a commercial directional coupler, which
usually have N-connectors in the main line and BNC/TNC/SMA connectors
for both ends of the coupling links (4 total). In one BNC plug, insert
a good quality 100 resistor to ground and in the other insert the
diode and the bypass capacitor in the other plug and get the rectified
voltage out. On the other side connect a terminating resistor and the
diode in the opposite ends and this way you will get both the forward
and reflected power.

I guess that you did not find anything if you searched for "SWR", but
try instead searching for "directional coupler" and "reflected power",
since VHF/UHF enthusiasts seldom talk about SWR.

Paul OH3LWR

2517. Re: transverter design for 20 meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 06:36:45 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <9ictou84e6eoeoej5gee4sm8jg4adijgdf@4ax.com>
Source record: 41279
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

On Mon, 23 Sep 2002 06:36:49 +0200, "JC" <on5mjREMOVE@skynet.be>
wrote:

>I think transverters are used for increasing the working frequency not
>decreasing it, i.e. passing from HF to VHF. I never saw plans for passing
>from 10m to 20m or even 80m.

At least in England, there has been kits for allowing 2 m multimodes
(such as FT-290) access to the HF bands using a transverter.

>The contrary would be easier as 10m is an
>harmonic of 20m or 80m.

This is just a situation you try to avoid.

For instance a transmitting converter from 28 Mhz to 144 MHz often
suffers from these harmonics. Assume you want to transmit on 145.100
MHz on a repeater input and you set the HF radio to 29.100 MHz. The
5th harmonic of that is 145.500 Mhz, which falls in the middle of the
FM calling channel :-).

Thus, you have to be very careful to filter out any 5th harmonic from
the HF signal and also take care that the mixer does not generate any
larger amounts of 5th harmonics of the input frequency.

In general you should design the frequencies in such a way that no
harmonics from the low frequency signal or the local oscillator signal
fall close to the desired output frequency band, since it would be
very hard to filter them out, once they have been created.

Paul OH3LWR

2518. Re: transverter design for 20 meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 07:31:27 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d8ec118.328201@news.freeserve.net>
Source record: 41280
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

On Sun, 22 Sep 2002 21:58:26 -0400, "AJ Sanderson" <ajsand@nospam.com>
wrote:

>I'd like to use a transverter with a 10 meter HTX-100 for 20 and maybe 80
>meter operation. Is this possible and where can I find plans?
>
Toko have these for I.F.'s of 6m or 2m. The difficulty of using 10m
I.F. is that of keeping mixing products out of the TX output. For
Example take IF of 28.000Mhz mixed with 31.5Mhz to give 3.5Mhz
(difference) and 59.5Mhz (sum). The Eighth harmonic of 3.5 is ?? what
?. Now work out other combinations for the n* sum +/- n*diff) etc etc.
And then do the same for all the other HF bands. Not a pretty sight.
The 2m I.F. version would be a lot easier to keep clean.
hth Mike W, G8NXD aka M3MSM qthr
--

2519. Re: transverter design for 20 meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 10:54:41 UTC
From: JC <on5mjREMOVE@skynet.be>
Message-ID: <3d8ef2f5$0$177$ba620e4c@news.skynet.be>
Source record: 41281
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

Completely right. My post was only general.

And I didn't know there was rigs transverting VHF to HF. I thought it was too hard in terms of filtering. Sorry for making confusion.

2520. About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 12:40:32 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <amn240$71o5b$1@ID-61331.news.dfncis.de>
Source record: 41283

I read a little about AGC and that audio-derived AGC is better than IF-derived in so far as the gain compensation is precisely according to what is actually heard, whereas with IF-derived signals that get through the IF passband but not the audio filtering can cause unwanted gain reduction of the heard signal. The disadvantage with AF-derived AGC being that low frequencies take a relatively long time to reach their peak and during this time the early RF stages of the receiver may already have been overloaded.

My receiver (http://www.hanssummers.com/radio/polyphase/index.htm) is direct conversion using a Tayloe switching detector and polyphase network for opposite sideband suppression. All the selectivity and all the gain are in the AF section, there is no RF amplifier and no IF. Therefore I HAVE to use audio-derived AGC. Since I have no earlier stages for strong signals to overload before the peak is reached, is there going to be a problem?

Alternatively, I had the idea that the post-audio-filter audio could be mixed back up to say a 50KHz "IF", band-pass filtered and rectified to provide the AGC - a simple switching mixer could be used and double-sideband wouldn't matter as all that is needed is the amplitude. 50KHz would be low enough to use ordinary opamps for a simple 50KHz band pass filter and rectifier. Does anyone think this would 1) work and 2) avoid the problems with AF-derived AGC? If there's even going to be a problem with a direct conversion receiver?

73 de Hans G0UPL

Hans Summers
http://www.HansSummers.Com

2521. Re: Design for 2M 1/2 wave for bicycle ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 13:17:24 UTC
From: Wayne Faris <wfaris@inebraska.com>
Message-ID: <3D8F1464.161C5EA6@inebraska.com>
Source record: 41284

Larry Gagnon wrote:

> I would like to build a 2M 1/2wave antenna for use on a bicycle. Can
> anyone point me to an appropriate design or article to build such?
>
> Larry VE6MK
> **********
> to send direct email remove "fake" from address

Build yourself a 2 meter "J-Pole" from 300 ohm twin lead. Seal it into
a piece of 1/2 pvc pipe and use hose clamps to fasten it to the bike.
Do a search on the web for j-pole and you should come up with many
suitable designs.

Wayne L. Faris, KEï¿½BZ

2522. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 15:30:00 UTC
From: bpasaric@mac.com
Message-ID: <1fiz3cr.7t6pitzinfaaN%bpasaric@mac.com>
Source record: 41285

Hans Summers <Hans.Summers@Tudor.Com> wrote:

> I read a little about AGC and that audio-derived AGC is better than
> IF-derived in so far as the gain compensation is precisely according to what
> is actually heard, whereas with IF-derived signals that get through the IF
> passband but not the audio filtering can cause unwanted gain reduction of
> the heard signal. The disadvantage with AF-derived AGC being that low
> frequencies take a relatively long time to reach their peak and during this
> time the early RF stages of the receiver may already have been overloaded.
>
> My receiver (http://www.hanssummers.com/radio/polyphase/index.htm) is direct
> conversion using a Tayloe switching detector and polyphase network for
> opposite sideband suppression. All the selectivity and all the gain are in
> the AF section, there is no RF amplifier and no IF. Therefore I HAVE to use
> audio-derived AGC. Since I have no earlier stages for strong signals to
> overload before the peak is reached, is there going to be a problem?
>
> Alternatively, I had the idea that the post-audio-filter audio could be
> mixed back up to say a 50KHz "IF", band-pass filtered and rectified to
> provide the AGC - a simple switching mixer could be used and double-sideband
> wouldn't matter as all that is needed is the amplitude. 50KHz would be low
> enough to use ordinary opamps for a simple 50KHz band pass filter and
> rectifier. Does anyone think this would 1) work and 2) avoid the problems
> with AF-derived AGC? If there's even going to be a problem with a direct
> conversion receiver?

Dear Hans,

I also have a home-made Tayloe receiver and it works fine. Now, about the AGC. The other day I found in the Italian magazine "CQ elettronica" for March 2002 an interesting solution which I tried and I am quite satisfied with it. It first amplifies the AF signal with a TL072, then rectifies it with two diodes (voltage doubler) and leads it to an emitter follower with a BC237 (which has an S-meter in the emmiter, and at the same time its feedback positive volatage is routed to the base of another BC237 transistor whose emitter is grounded. The signal shorts the collector-emitter channel when necessary. The collector is connected to the antenna through a 10000 pF capacitor, so in fact the antenna signal is weakened. (When working, the emitter-collector resistance of that transistor changes between 10 kohms and 20 ohms.) It can be added to any receiver without any changes in the receiver.

Unfortunatelly I do not have a scanner to send you the scheme, but if you wish I can send you the article by ordinary post. It has a PCB and a photo. If you are interested, send me an e-mail.

Best wishes, Bozidar, 9A2HL

2523. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 15:45:18 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3d8f3517$0$4170@echo-01.iinet.net.au>
Source record: 41286

I have built a polyphase DC RX some years ago which used NE602s in the front end mixers. It had an 8 pole network which gave good SSB suppression out to 8 KHz or so. It used an audio AGC system which seemed to work quite well - in fact Rod VK6KRG still has some boards somewhere. As a bonus the AGC volts gives quite a good approximation to a log detector for an S meter.
Due to the poor performance of the 602's with strong signals this was a problem on HF. I even used the polyphase network at RF to generate the quadrature LO signals - it was quite accuarte to 15 MHz or so but is rather lossy. However you didnt have to have the LO at 4 times the wanted freq.

Richard

"Hans Summers" <Hans.Summers@Tudor.Com> wrote in message news:amn240$71o5b$1@ID-61331.news.dfncis.de...
>
> I read a little about AGC and that audio-derived AGC is better than
> IF-derived in so far as the gain compensation is precisely according to what
> is actually heard, whereas with IF-derived signals that get through the IF
> passband but not the audio filtering can cause unwanted gain reduction of
> the heard signal. The disadvantage with AF-derived AGC being that low
> frequencies take a relatively long time to reach their peak and during this
> time the early RF stages of the receiver may already have been overloaded.
>
> My receiver (http://www.hanssummers.com/radio/polyphase/index.htm) is direct
> conversion using a Tayloe switching detector and polyphase network for
> opposite sideband suppression. All the selectivity and all the gain are in
> the AF section, there is no RF amplifier and no IF. Therefore I HAVE to use
> audio-derived AGC. Since I have no earlier stages for strong signals to
> overload before the peak is reached, is there going to be a problem?
>
> Alternatively, I had the idea that the post-audio-filter audio could be
> mixed back up to say a 50KHz "IF", band-pass filtered and rectified to
> provide the AGC - a simple switching mixer could be used and double-sideband
> wouldn't matter as all that is needed is the amplitude. 50KHz would be low
> enough to use ordinary opamps for a simple 50KHz band pass filter and
> rectifier. Does anyone think this would 1) work and 2) avoid the problems
> with AF-derived AGC? If there's even going to be a problem with a direct
> conversion receiver?
>
> 73 de Hans G0UPL

>
> ------------------
> Hans Summers
> http://www.HansSummers.Com
>
>
>

2524. PET 200 Plugs & Sockets

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 16:26:57 UTC
From: Robert Offer <robert@g1zjp.freeserve.co.uk>
Message-ID: <amnfctjfs1@news7.svr.pol.co.uk>
Source record: 41287

Hi All,
Just preparing for those long winter nights (!!) and collecting parts for my linear and psu project.
Has any kind soul out there in the UK got a small supply of the PET 200 floating plugs and chassis mount sockets, please - at sensible prices?
Thanks for having a look.
Alternatively, anybody know who sells them as surplus?
Cheers,
Bob
G1ZJP

2525. Re: transverter design for 20 meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 16:48:35 UTC
From: kelly@dvol.com
Message-ID: <d22b54c3.0209230848.92d766e@posting.google.com>
Source record: 41288
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

"JC" <on5mjREMOVE@skynet.be> wrote in message
news:<3d8e9a65$0$213$ba620e4c@news.skynet.be>...
> I think transverters are used for increasing the working frequency not
> decreasing it, i.e. passing from HF to VHF. I never saw plans for passing
> from 10m to 20m or even 80m. The contrary would be easier as 10m is an
> harmonic of 20m or 80m.

Collins had an S-Line "downverter" to get on 160 from 80 or 40.

>
> 73 de ON5MJ

w3rv

2526. Re: Again - how do you clean old variable capacitors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 16:56:57 UTC
From: Robert Lyons <boblyons@umich.edu>
Message-ID: <3D8F47D9.72750141@umich.edu>
Source record: 41289

BEAR wrote:
>
> Don't forget to re-lube the bearings when you are done...

What's an appropriate lube for the bearings? Special-purpose product,
or is there a general-purpose lube that works well?

Bob, KI8AB

2527. Navy TCK-7 Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 18:18:06 UTC
From: paul332@iwvisp.com
Message-ID: <uoummu40f2ov18@corp.supernews.com>
Source record: 41290

This transmitter has been modified to a linear amp
for SSB. Can also be run class C.
1000 watts.
Above email or Tel: 760-375-4505

2528. Power transformers.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 18:25:00 UTC
From: paul332@iwvisp.com
Message-ID: <uoun3s1c6cdsb1@corp.supernews.com>
Source record: 41291

I have several power transformers in the 1 and 2
kilowatt range. 100 to 150 dollars plus shipping.
Email above or call 760-375-4505.

2529. Re: my experiment with ultra-sonic transducers as an i-f

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 19:14:05 UTC
From: la8ak.xnd@online.no
Message-ID: <3d8e2a0b.252119098@news.online.no>
Source record: 41292

On 21 Sep 2002 20:30:24 -0700, janaeanddoug@netzero.net (Doug) wrote:

>Recently took a d-c reciever and put a "transmit" transducer in place
>of the speaker. Transducer was around 40 kc. Next to this I put the
>"recieve" transducer. So I had an i.f. of 40 k.c. After this, the
>signal went into a diode ring mixer, which used audio transformers and
>4 1N914 diodes. I injected a signal from a 555 timer(bfo signal) into
>the mixer and adjusted its frequency until I could hear signals. The
>results were really impressive, very steep and selective, and even
>passed one sideband! but images were really close cause of the low
>i.f.. None of this is really new, cause its the basis of a mechanical
>filter, but what had me baffled was the fact that with the bfo off,
>The transducers stripped the carrier off all the signals and am
>sounded normal!

Interesting, but would be more so if you could give some figures about
the selectivity

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

2530. Re: TCXO/OCXO sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 19:14:05 UTC
From: la8ak.xnd@online.no
Message-ID: <3d8e285b.251687613@news.online.no>
Source record: 41293

On Sun, 22 Sep 2002 11:59:32 -0500, "Dave VanHorn"
<dvanhorn@cedar.net> wrote:

>
>> For a mixer, especially for CW, I think I would stick to one of the little
>> cans if you can get one in an appropriate frequency. They are more
>> expensive, but they are not going to break the bank. DigiKey has them, as
>> well as VCXOs, but only in a limited frequency selection.
>
>I have the internal schematic of at least one of those, it's very little
>really.
>Two transistors, and a few Rs and Cs, and of course a crystal.
>http://www.dvanhorn.org/Micros/All/Cans.php
>
>
>
on a VHF newsreflector was also mentioned DF9LN oven-controlled
crystal oscillator. More details found on internet, but I've
forgotten the URL for DF9LN's site

Believe DF9LN's oscillator was only supposed to operate on 10MHz, but
his ideas might be useful for other frequencies like 96MHz

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

2531. Re: my experiment with ultra-sonic transducers as an i-f

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 20:32:08 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2309021633040001@c-66-176-144-254.se.client2.attbi.com>
Source record: 41294

In article <3d8e2a0b.252119098@news.online.no>, LA8AK,xnd@Online.NO wrote:

> On 21 Sep 2002 20:30:24 -0700, janaeanddoug@netzero.net (Doug) wrote:
>
> >Recently took a d-c reciever and put a "transmit" transducer in place
> >of the speaker. Transducer was around 40 kc. Next to this I put the
> >"recieve" transducer. So I had an i.f. of 40 k.c. After this, the
> >signal went into a diode ring mixer, which used audio transformers and
> >4 1N914 diodes. I injected a signal from a 555 timer(bfo signal) into
> >the mixer and adjusted its frequency until I could hear signals. The
> >results were really impressive, very steep and selective, and even
> >passed one sideband! but images were really close cause of the low
> >i.f.. None of this is really new, cause its the basis of a mechanical
> >filter, but what had me baffled was the fact that with the bfo off,
> >The transducers stripped the carrier off all the signals and am
> >sounded normal!
>
> Interesting, but would be more so if you could give some figures about
> the selectivity
>
> 73
> Jan-Martin
> LA8AK
> --
> remove ,xnd to reply

Hi Jan,

Long time. No conversations.

I agree with you, but I would also like to see the block diagram of this beast. An IF this low is bound to have image problems. BTW, I haven't seen Kcs in 30 years. :-)

Steve Carlton WB4CZR

2532. Re: UHF+ SWR meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 21:14:11 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <DuLj9.236099$z91.9962826@bin3.nnrp.aus1.giganews.com>
Source record: 41295

Some of the old VHF handboks had a plan for one that is made out of a copper plumming T.

"Marc Passy" <Marc#nospam#@passy.us> wrote in message news:agvj9.512928$q53.17381016@twister.austin.rr.com...
> Anyone have any links to plans for a homebrew SWR meter for 2m up?
Everything i've found (which were few) and the ARRL handbook are customarily VHF down (<50 MHz).
>
> thanks.
>

2533. I shell 2 valbes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 21:33:49 UTC
From: Pepe EC4ACP <job00002@terra.es>
Message-ID: <1NLj9.101339$sI1.969018@telenews.teleline.es>
Source record: 41296

2 of 4CX2500 with all accesories..
Filament transformer abt 15Kg.
I don�t know if it works or not..
Anyone want try it?
EC4ACP
JOB00002@terra.es

2534. Re: Design for 2M 1/2 wave for bicycle ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 22:01:34 UTC
From: ZZZjim_cronin@juno.comZZZ
Message-ID: <sl3vouo9tu1q91hjt49863u8a55k9117ev@4ax.com>
Source record: 41197

On Mon, 23 Sep 2002 08:17:24 -0500, Wayne Faris <wfaris@inebraska.com>
wrote:

>
>
>Larry Gagnon wrote:
>
>> I would like to build a 2M 1/2wave antenna for use on a bicycle. Can
>> anyone point me to an appropriate design or article to build such?
>>
>> Larry VE6MK
>> **********
>> to send direct email remove "fake" from address
>
>Build yourself a 2 meter "J-Pole" from 300 ohm twin lead. Seal it into
>a piece of 1/2 pvc pipe and use hose clamps to fasten it to the bike.
>Do a search on the web for j-pole and you should come up with many
>suitable designs.
>
>Wayne L. Faris, KEï¿½BZ

I tried the same thing and got a lot of detuning from being close to
the antenna when riding.

Q: What types of antennas are less prone to detuning from nearby
objects? There's not a lot of room on a bicycle.

73,
Jim

2535. Re: Santa Barbara/Goleta -- Electronic Junque stores

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 22:17:22 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnaov4ng.mao.QSB@animas.frontier.net>
Source record: 41198

On Fri, 20 Sep 2002 23:58:08 -0700, Norm Mann scribbled:
>
> "Norm Mann" <folder0735@hotmail.com> wrote in message
> news:3d8bf12f$0$189@news.impulse.net...
>>
>> "Allodoxaphobia" <QSB@QRM-QRN.net> wrote in message
>> news:slrnaokta3.kb.QSB@animas.frontier.net...
>> > The wife and I are going out to S.B. to visit her mom for a
>> > coupl'o days. I can usually get off on some 'personal time'
>> > on these visits. I've found 3 or 4 used books stores that I
>> > like to visit.
>> > But, I'd like to trawl through some used/surplus/mystery
>> > electronic stores -- if there be any. In all my previous
>> > trips I've never found any.
>> > Are there any?
>>
>> Most of the stores you're looking for dried up and blew away a long time
>> ago. However, last I knew, Marvac Electronics in the Walnut Center (east
>> of Patterson/Hollister Ave. intersection) was still in business.
>> The only other one I know of is in Santa Maria.
>
> Whoops! Marvac is in Magnolia Shopping Center. (Only name was wrong, not
> place. - shows what happens when you drive on autopilot.)
>
> -CB

OK, I'll check'em out. My taxi duties will have me running
up and down Hollister quite a few times while I'm there.
Thank you.

73
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

2536. sorry

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 22:30:19 UTC
From: Quark <jp_net@teleline.es>
Message-ID: <%BMj9.103023$sI1.982234@telenews.teleline.es>
Source record: 41199

[No readable article body recovered]

2537. Re: TCXO/OCXO sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 22:55:01 UTC
From: gaschafer@attbi.com
Message-ID: <3d8f9bf5.7177091@netnews.attbi.com>
Source record: 41200

Find an old marine LORAN receiver. People are dumping them in favor of GPS. The LORAN
receivers had some pretty good tcxo's in them.

73
Gary K4FMX

2538. CTCSS connector in Kenwood TM201B

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 23:32:44 UTC
From: Chetan Bhargava <Post@news.group>
Message-ID: <uwNj9.1$8E4.1338@news.sjc.globix.net>
Source record: 41201
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hi All,

Has anyone tried to connect a ctcss encoder to Kenwood TM201B 2m xceiver?

TIA

--

73,

Chetan Bhargava
KG6NFG
www.bhargavaz.net

2539. WTB: Coil Forms

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-23 23:40:35 UTC
From: Doug and Cindy Deutsch <cindyd1@enter.net>
Message-ID: <3D8FA6D4.2E5DE7C9@enter.net>
Source record: 41202
Cross-posted to: rec.radio.swap,rec.radio.amateur.equipment,rec.radio.amateur.swap,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.shortwave

Hi,

A friend is looking for coil forms such as Hammarlund XP-53 1 1/2" diameter; SWF-4,5 or 6 pin; Bud 1 1/4 and 1 1/2 mica filled bakelite 4,5 or 6 pin; Amphenol 24-4P, 24-5P and/or 24-6P polystyrene 1 1/4 form.

If you have any of the above please send me your contact information as well as what you have and I will pass it along.

Thanks,

Doug W3IIY

2540. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 00:18:42 UTC
From: n7ws@nowhere.com
Message-ID: <3d8fae1c.23411871@news.triconet.org>
Source record: 41203

On Mon, 23 Sep 2002 13:40:32 +0100, "Hans Summers"
<Hans.Summers@Tudor.Com> wrote:

|
|I read a little about AGC and that audio-derived AGC is better than
|IF-derived in so far as the gain compensation is precisely according to what
|is actually heard, whereas with IF-derived signals that get through the IF
|passband but not the audio filtering can cause unwanted gain reduction of
|the heard signal.

I believe it is exactly the opposite. Strong signals that do not get
through AF filtering and thus do not generate audio-derived AGC
voltage can overload preceeding stages. AGC should be used to
maintain appropriate gain distribution and SNR and not necessarily to
maintain constant audio output.

|The disadvantage with AF-derived AGC being that low
|frequencies take a relatively long time to reach their peak and during this
|time the early RF stages of the receiver may already have been overloaded.

Exactly.

2541. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 00:59:47 UTC
From: yeti@REMOVEcet.com
Message-ID: <3d8fb2cb.4985926@news.cet.com>
Source record: 41204

In <amn240$71o5b$1@ID-61331.news.dfncis.de>, "Hans Summers"
<Hans.Summers@Tudor.Com> wrote:

>
>I read a little about AGC and that audio-derived AGC is better than
>IF-derived in so far as the gain compensation is precisely according to what
>is actually heard, whereas with IF-derived signals that get through the IF
>passband but not the audio filtering can cause unwanted gain reduction of
>the heard signal. The disadvantage with AF-derived AGC being that low
>frequencies take a relatively long time to reach their peak and during this
>time the early RF stages of the receiver may already have been overloaded.
>
>My receiver (http://www.hanssummers.com/radio/polyphase/index.htm) is direct
>conversion using a Tayloe switching detector and polyphase network for
>opposite sideband suppression. All the selectivity and all the gain are in
>the AF section, there is no RF amplifier and no IF. Therefore I HAVE to use
>audio-derived AGC. Since I have no earlier stages for strong signals to
>overload before the peak is reached, is there going to be a problem?

I'm not sure what you are asking. Are you debating between pre-filter
and post-filter AGC? I would think that you would want to feed your
AGC with whatever you are hearing (post-filter) because that's why you
have AGC in the first place. If the previous stages overload, add an
attenuator or use a smaller antenna, don't try to control the gain one
RF cycle at a time. You could also add an FET on the RF input as an
AGC-controlled attenuator, and in combination with the post-audio AGC
should solve the problem before it's a problem.

But the best idea would be to just build it and find out what really
happens -- no point in solving problems that may not exist.

>Alternatively, I had the idea that the post-audio-filter audio could be
>mixed back up to say a 50KHz "IF", band-pass filtered and rectified to
>provide the AGC - a simple switching mixer could be used and double-sideband
>wouldn't matter as all that is needed is the amplitude. 50KHz would be low
>enough to use ordinary opamps for a simple 50KHz band pass filter and
>rectifier. Does anyone think this would 1) work and 2) avoid the problems
>with AF-derived AGC? If there's even going to be a problem with a direct
>conversion receiver?

It would probably work. I may be missing something here, but it sure
seems like a mighty extensive kludge when you can get the same results
with a much simpler design: If you are trying to prevent RF overload,
add an RF limiter on the front end.

2542. Re: Parts needed for Heathkit DC power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 02:29:27 UTC
From: Jerry Oxendine <joxendi@bellsouth.net>
Message-ID: <UWPj9.6080$J91.611668@e3500-atl1.usenetserver.com>
Source record: 41205

aa8wl <aa8wl@comcast.net> wrote in message
news:3D8BA7B1.C1528AB3@comcast.net...
> I would like to locate (5) capacitors for an older Heathkit DC power
> supply I just bought. It is the HP-13 and I opened the case and one of
> the capacitors had a hole in the end and material coming out of the
> hole. I have never seen anything like this happen before so I have
> decided to replace all (5) Five at the same time. The Heathkit part
> number is: 25-207 and they are 20 ufd @ 500V electrolytic . I would
> like to find some at the original cost 85 cents each (hi hi) but
> with inflation I would expect them to be somewhat higher these days.
> Also, if you might have an old unit for parts I would be interested.
> Thanks in advance, 73' de aa8wl Sam

Sam,

I have an HP-13 that I *think* works. Don't know if you would be
interested, but I would
sell it for $35.00 including shipping. I don't know if you want to put that
much into one, but it is
surplus to me.

73
Jerry
K4KWH
>

2543. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 03:32:38 UTC
From: "Bob G. Mahrenholz" <bobm@edge.net>
Message-ID: <3D8FDCD6.F9B47ED5@edge.net>
Source record: 41206

I believe that the AGC voltage you get when you rectify the 50kHz modulated signal will represent the amplitude of the carrier (which is constant) and not that
of the modulation.

K4QQK

Hans Summers wrote:

> I read a little about AGC and that audio-derived AGC is better than
> IF-derived in so far as the gain compensation is precisely according to what
> is actually heard, whereas with IF-derived signals that get through the IF
> passband but not the audio filtering can cause unwanted gain reduction of
> the heard signal. The disadvantage with AF-derived AGC being that low
> frequencies take a relatively long time to reach their peak and during this
> time the early RF stages of the receiver may already have been overloaded.
>
> My receiver (http://www.hanssummers.com/radio/polyphase/index.htm) is direct
> conversion using a Tayloe switching detector and polyphase network for
> opposite sideband suppression. All the selectivity and all the gain are in
> the AF section, there is no RF amplifier and no IF. Therefore I HAVE to use
> audio-derived AGC. Since I have no earlier stages for strong signals to
> overload before the peak is reached, is there going to be a problem?
>
> Alternatively, I had the idea that the post-audio-filter audio could be
> mixed back up to say a 50KHz "IF", band-pass filtered and rectified to
> provide the AGC - a simple switching mixer could be used and double-sideband
> wouldn't matter as all that is needed is the amplitude. 50KHz would be low
> enough to use ordinary opamps for a simple 50KHz band pass filter and
> rectifier. Does anyone think this would 1) work and 2) avoid the problems
> with AF-derived AGC? If there's even going to be a problem with a direct
> conversion receiver?
>
> 73 de Hans G0UPL
>
> ------------------
> Hans Summers
> http://www.HansSummers.Com

2544. Re: Again - how do you clean old variable capacitors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 07:17:53 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d901161.1090877@news.freeserve.net>
Source record: 41207

On Mon, 23 Sep 2002 12:56:57 -0400, Robert Lyons <boblyons@umich.edu>
wrote:

>BEAR wrote:
>>
>> Don't forget to re-lube the bearings when you are done...
>
>
>What's an appropriate lube for the bearings? Special-purpose product,
>or is there a general-purpose lube that works well?
>
I have used "sewing machine" oil as this does'nt clog or get stickey

2545. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 08:48:29 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <amp8su$7oje1$1@ID-61331.news.dfncis.de>
Source record: 41208

"Wes Stewart" <n7ws@nowhere.com> wrote in message
news:3d8fae1c.23411871@news.triconet.org...
> On Mon, 23 Sep 2002 13:40:32 +0100, "Hans Summers"
> <Hans.Summers@Tudor.Com> wrote:
>
> |
> |I read a little about AGC and that audio-derived AGC is better than
> |IF-derived in so far as the gain compensation is precisely according to
what
> |is actually heard, whereas with IF-derived signals that get through the
IF
> |passband but not the audio filtering can cause unwanted gain reduction of
> |the heard signal.
>
> I believe it is exactly the opposite. Strong signals that do not get
> through AF filtering and thus do not generate audio-derived AGC
> voltage can overload preceeding stages. AGC should be used to
> maintain appropriate gain distribution and SNR and not necessarily to
> maintain constant audio output.
>
In my case all the gain is at audio and I do not think there is much risk of
overloading the mixer etc since it is a FST3253 switch. My main reason for
AGC is just to maintain constant audio output.

2546. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 08:51:43 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <amp92v$7rnb2$1@ID-61331.news.dfncis.de>
Source record: 41209

"Richard Hosking" <zaprichardh@iinet.net.au(remove the zap)> wrote in
message news:3d8f3517$0$4170@echo-01.iinet.net.au...
> I have built a polyphase DC RX some years ago which used NE602s in the
front
> end mixers. It had an 8 pole network which gave good SSB suppression out
to
> 8 KHz or so. It used an audio AGC system which seemed to work quite well -
> in fact Rod VK6KRG still has some boards somewhere. As a bonus the AGC
volts
> gives quite a good approximation to a log detector for an S meter.
> Due to the poor performance of the 602's with strong signals this was a
> problem on HF. I even used the polyphase network at RF to generate the
> quadrature LO signals - it was quite accuarte to 15 MHz or so but is
rather
> lossy. However you didnt have to have the LO at 4 times the wanted freq.

I think the Tayloe mixer is great, it doesn't seem to have any strong signal problems. I built my 8-column polyphase network according to design guidelines in a 1995 QEX article. Unlike most networks which either use a constant resistance value or constant capacitance value, in this case both vary in such a way that the network can be made lossless. I measured the loss of the network and it was essentially 0dB within a couple of dB, see my graph at the bottom of http://www.hanssummers.com/radio/polyphase/index.htm. It seems doing this overcomes a common objection to polyphase networks i.e. that they are lossy.

>
> Richard
>

2547. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 08:55:14 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <amp99i$7lh59$1@ID-61331.news.dfncis.de>
Source record: 41210

<yeti@REMOVEcet.com> wrote in message news:3d8fb2cb.4985926@news.cet.com...
> In <amn240$71o5b$1@ID-61331.news.dfncis.de>, "Hans Summers"
> <Hans.Summers@Tudor.Com> wrote:
>
> >
> >I read a little about AGC and that audio-derived AGC is better than
> >IF-derived in so far as the gain compensation is precisely according to
what
> >is actually heard, whereas with IF-derived signals that get through the
IF
> >passband but not the audio filtering can cause unwanted gain reduction of
> >the heard signal. The disadvantage with AF-derived AGC being that low
> >frequencies take a relatively long time to reach their peak and during
this
> >time the early RF stages of the receiver may already have been
overloaded.
> >
> >My receiver (http://www.hanssummers.com/radio/polyphase/index.htm) is
direct
> >conversion using a Tayloe switching detector and polyphase network for
> >opposite sideband suppression. All the selectivity and all the gain are
in
> >the AF section, there is no RF amplifier and no IF. Therefore I HAVE to
use
> >audio-derived AGC. Since I have no earlier stages for strong signals to
> >overload before the peak is reached, is there going to be a problem?
>
> I'm not sure what you are asking. Are you debating between pre-filter
> and post-filter AGC? I would think that you would want to feed your
> AGC with whatever you are hearing (post-filter) because that's why you
> have AGC in the first place. If the previous stages overload, add an
> attenuator or use a smaller antenna, don't try to control the gain one
> RF cycle at a time. You could also add an FET on the RF input as an
> AGC-controlled attenuator, and in combination with the post-audio AGC
> should solve the problem before it's a problem.

I don't think previous stages are going to cause overload in my case as it
is direct conversion with a switching mixer. What I'm interested in is
keeping the perceived audio more constant, in which case it sounds like I
will be fine with audio derived AGC and a gain-controllable amplifier in the
audio path, I have some CA3086 transconductance opamps for this purpose.

>
> But the best idea would be to just build it and find out what really
> happens -- no point in solving problems that may not exist.

>
> >Alternatively, I had the idea that the post-audio-filter audio could be
> >mixed back up to say a 50KHz "IF", band-pass filtered and rectified to
> >provide the AGC - a simple switching mixer could be used and
double-sideband
> >wouldn't matter as all that is needed is the amplitude. 50KHz would be
low
> >enough to use ordinary opamps for a simple 50KHz band pass filter and
> >rectifier. Does anyone think this would 1) work and 2) avoid the problems
> >with AF-derived AGC? If there's even going to be a problem with a direct
> >conversion receiver?
>
> It would probably work. I may be missing something here, but it sure
> seems like a mighty extensive kludge when you can get the same results
> with a much simpler design: If you are trying to prevent RF overload,
> add an RF limiter on the front end.
>

True, true. Just a crazy idea I guess. I will stick to simple AF-derived
AGC and a CA3086 gain-controlled amplifier.

2548. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 08:57:40 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <amp9e5$7tv1a$1@ID-61331.news.dfncis.de>
Source record: 41211

"Bob G. Mahrenholz" <bobm@edge.net> wrote in message
news:3D8FDCD6.F9B47ED5@edge.net...
> I believe that the AGC voltage you get when you rectify the 50kHz
modulated
> signal will represent the amplitude of the carrier (which is constant) and
not
> that
> of the modulation.
>
> K4QQK

True, though I suppose if one used a balanced mixer the carrier would be mostly suppressed. You could also subtract the constant voltage representing the carrier amplitude. But I think it is all unnecessary complication and I am best off sticking with simple audio AGC.

--

Hans Summers
http://www.HansSummers.Com

2549. Mag Loop Antenna - optimum shape ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 09:09:22 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d902ab1.7572492@news.freeserve.net>
Source record: 41212

Have there been any studies on the optimum shape for magnetic loop
antennae ?
If so, can anyone supply a URL or their own observations?
tnks Mike W, G8NXD aka M3MSM qthr

2550. Re: transverter design for 20 meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 10:43:16 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <amppof$79e$1@nic.grnet.gr>
Source record: 41216
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

HI JC
i have used transverter for years (made some as well) from 10M to 40M it can be done!
"JC" <on5mjREMOVE@skynet.be> wrote in message news:3d8e9a65$0$213$ba620e4c@news.skynet.be...
> I think transverters are used for increasing the working frequency not
> decreasing it, i.e. passing from HF to VHF.

2551. Query... slow warmup for final tube.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 11:06:29 UTC
From: feralmet@dodo.com.au
Message-ID: <3d9044af.7388436@news.dodo.com.au>
Source record: 41213

Hi Homebrewers

A query from Allan VK3PA
vk3pa@vk3pa.com
www.vk3pa.com

As follows....

Does anyone know where to source a circuit
for ramping up heater and HT voltages nice and slowly.
Al wants to prolongue the life of his expensive tube if possible.

We have searched the fleshpots of the Internet to no avail.
Does anyone know of any DIY stuff that might fill the bill
(240 volts, transformer (reactive) load)....... ????

Thinking caps on chaps....

Thanks .... 73 de Chris VK3CJS

2552. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 11:30:25 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <up0j6mhrimjj00@corp.supernews.com>
Source record: 41214

One of the problems often encountered with audio derived AGC is that
the attact times are not fast enought to prevent a "pop" in the audio
when receiving strong signals.

2553. SSB Electronics Microwave Gear

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 11:46:27 UTC
From: b.chambers@sheffield.ac.uk
Message-ID: <ampjaj$db8$1@hermes.shef.ac.uk>
Source record: 41215

Does anyone know what GasFETS are used in the SSB Electronics 10 GHz transmit upconverter, type XTM-1?

Barry G8AGN

2554. Re: Query... slow warmup for final tube.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 13:38:59 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <SVZj9.246677$z91.10685746@bin3.nnrp.aus1.giganews.com>
Source record: 41217

This is a question frequently encountered on rec.audio.tubes and on www.diyaudio.com In my old Hallicrafters Linear, the mercury vapor rectifiers did the delay for you.

I would suggest the Amperite time delay relays -- these are often found on EBay for various time delays and voltages --

For one of my lab supplies, the manufacturer has placed a 10 ohm resistor in series with the transformer primary. There is a relay across the resistor, and the relay coil is actuated by an RC delay circuit.

"Chris Shaw" <feralmet@dodo.com.au> wrote in message news:3d9044af.7388436@news.dodo.com.au...
> Hi Homebrewers
>
> A query from Allan VK3PA
> vk3pa@vk3pa.com
> www.vk3pa.com
>
> As follows....
>
> Does anyone know where to source a circuit
> for ramping up heater and HT voltages nice and slowly.
> Al wants to prolongue the life of his expensive tube if possible.
>
> We have searched the fleshpots of the Internet to no avail.
> Does anyone know of any DIY stuff that might fill the bill
> (240 volts, transformer (reactive) load)..... ????
>
> Thinking caps on chaps....
>
> Thanks .... 73 de Chris VK3CJS
>
>
>

2555. 10KW GATES ROLLER INDUCTOR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 13:53:12 UTC
From: ni4l@msn.com
Message-ID: <d4a0748e.0209240553.72c3db5c@posting.google.com>
Source record: 41218

If you have been looking for the Ultimate Roller Coaster Inductor,
HERE IT IS !!!

Dimensions:
* Coil element diameter - 3/8"
* Coil winding diameter - 5 11/16" OD.
* Coil frame length -6 13/16"
* Overall length (shaft end to end) - 14 3/4"
* Overall height - 7 1/2".
* Shaft diameter - 3/8"
* Mounting length -13 1/2"
* Mounting width - 7"

37 COILS 103UH
COILS SILVER PLATED
SMOOTH ROLLER ACTION

This is a very well Built Heavy Duty roller inductor.
The name says it all Gates/Harris.
This came from a 10kw transmitter.
It is in excellent shape, no signs of any arcing, coils not pitted or
damaged in any way. Just right for your next project. 225.00

Buyer to pay postage/insurance figure around 17lbs shipped from 28681

2556. Re: transverter design for 20 meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 14:11:17 UTC
From: JB <ac6tk@nospamcybertime.net>
Message-ID: <ampup3$1uaq$1@madmax.keyway.net>
Source record: 41221
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

Actually, up-conversion has the advantage of fewer potential for birdies
from harmonics of the oscillators. Most of the better transceivers use
an IF higher than the Fo.

I have no experience with the 10m radio you mentioned, but it sounds
like your project has potential. Additional circuitry could be built into a
housing extension, replacing the bottom cover? The down side, It
could cost more than buying a used HF multi-band rig, but that idea
never scared any hot rodders from building. Sounds like a neat
project.

Jim, ac6tk
"Deos" <lineoffiretoday@yahoo.com> wrote in message news:amppof$79e$1@nic.grnet.gr...
: HI JC
: i have used transverter for years (made some as well) from 10M to 40M it can
: be done!
: "JC" <on5mjREMOVE@skynet.be> wrote in message
: news:3d8e9a65$0$213$ba620e4c@news.skynet.be...
: > I think transverters are used for increasing the working frequency not
: > decreasing it, i.e. passing from HF to VHF.
:
:

2557. Vs: Choosing receiver IF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 14:12:05 UTC
From: Micke <Mikael.Nordman@piuha.netspamxxx>
Message-ID: <3d905486$1@news.dnainternet.net>
Source record: 41219

Hi,
Hi quality DDS chips don't come cheap.
I have a design for a minimum parts count
DDS synthesizer on my home page.
It is for 45 MHz to 75 MHz operation.
It uses the cheap(:-) AD9835 as a programmable divider.

Have look in http://www.piuha.net/~mnordman/synth150.gif

/Micke

vvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvvv
Home page: http://www.piuha.net/~mnordman
^^

2558. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 14:37:53 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3d907727$0$5657@echo-01.iinet.net.au>
Source record: 41220

The AGC circuit we used was nothing special.
The gain control element was a T attenuator with a darlington pair to gnd as the control element (ie the vertical part of the T). This was followed by a standard opamp (TL081) for gain in the loop and a transistor/diodes for the DC rectifier at the output of this. It has a control range of better than 60 dB

Richard

"Hans Summers" <Hans.Summers@Tudor.Com> wrote in message news:amp9e5$7tv1a$1@ID-61331.news.dfncis.de...
>
> "Bob G. Mahrenholz" <bobm@edge.net> wrote in message
> news:3D8FDCD6.F9B47ED5@edge.net...
> > I believe that the AGC voltage you get when you rectify the 50kHz
> modulated
> > signal will represent the amplitude of the carrier (which is constant)
and
> not
> > that
> > of the modulation.
> >
> > K4QQK
>
> True, though I suppose if one used a balanced mixer the carrier would be
> mostly suppressed. You could also subtract the constant voltage
representing
> the carrier amplitude. But I think it is all unnecessary complication and
I
> am best off sticking with simple audio AGC.
>
>
> --
> ------------------
> Hans Summers
> http://www.HansSummers.Com
>
>
>
>

2559. best spectrum analyzer kit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 15:33:56 UTC
From: AJ Sanderson <asands44550@nospaml.com>
Message-ID: <amq0mj$rk0$1@slb0.atl.mindspring.net>
Source record: 41222
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.basics,sci.electronics.design

With the numerous spectrum analyzer kits on the web, which one is the best?
I'm interested in ones covering from 1-500 Mhz. Should have reasonable
accuracy and not cost a fortune to assemble.

Thanks, in advance, for your opinions.

AJ

2560. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 15:38:42 UTC
From: n7ws@nowhere.com
Message-ID: <3d9083dc.29162291@news.triconet.org>
Source record: 41223

On Tue, 24 Sep 2002 09:48:29 +0100, "Hans Summers"
<Hans.Summers@Tudor.Com> wrote:

|
|"Wes Stewart" <n7ws@nowhere.com> wrote in message
|news:3d8fae1c.23411871@news.triconet.org...
|> On Mon, 23 Sep 2002 13:40:32 +0100, "Hans Summers"
|> <Hans.Summers@Tudor.Com> wrote:
|>
|> |
|> |I read a little about AGC and that audio-derived AGC is better than
|> |IF-derived in so far as the gain compensation is precisely according to
|what
|> |is actually heard, whereas with IF-derived signals that get through the
|IF
|> |passband but not the audio filtering can cause unwanted gain reduction of
|> |the heard signal.
|>
|> I believe it is exactly the opposite. Strong signals that do not get
|> through AF filtering and thus do not generate audio-derived AGC
|> voltage can overload preceeding stages. AGC should be used to
|> maintain appropriate gain distribution and SNR and not necessarily to
|> maintain constant audio output.
|>
|In my case all the gain is at audio and I do not think there is much risk of
|overloading the mixer etc since it is a FST3253 switch. My main reason for
|AGC is just to maintain constant audio output.

I understand your situation, however, you are the one that brought up
the comparison between i-f and audio-derived AGC. I was responding to
your comparison, in which I believe that you came to a wrong
conclusion.

In your specific case, audio is the result of downconversion and can
be considered the "i-f." Even here, my comments about appropriate
gain distribution apply. You should have some delay (amplitude, not
time) in the application of gain reduction to allow the SNR to
increase. This means that you cannot maintain a completely flat audio
output. Nor should you want to. Stronger signals should sound
stronger than weak ones.

2561. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 16:23:15 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D909173.376AA432@clifto.com>
Source record: 41224

Bob G. Mahrenholz wrote:
> I believe that the AGC voltage you get when you rectify the 50kHz modulated
> signal will represent the amplitude of the carrier (which is constant) and not
> that
> of the modulation.

Depends on your time constant, no? I can picture great fun following the
BBC's six beeps on the hour. Any pause in speech/modulation will let the
smoothing capacitor discharge. Kinda like the breathing in some noise-
reduction hi-fi methods.

--
It is better to light just one little candle than to curse the darkness.
If everyone lit just one little candle, the EPA would outlaw candles.

2562. Re: Again - how do you clean old variable capacitors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 16:24:43 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D9091CB.64B89169@clifto.com>
Source record: 41225

Robert Lyons wrote:
> What's an appropriate lube for the bearings? Special-purpose product,
> or is there a general-purpose lube that works well?

Lubriplate might be the best. There's also a light grease by Singer for
their sewing machines.

--
It is better to light just one little candle than to curse the darkness.
If everyone lit just one little candle, the EPA would outlaw candles.

2563. project boxes from circuit board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 16:46:18 UTC
From: Gary & Angela Belcaster <gbelcas@charter.net>
Message-ID: <gbelcas-7FCBA5.11461824092002@corp.supernews.com>
Source record: 41226

Quick question to the group. I am building a directional coupler and would like to fashion the box which houses it from some double sided circuit board I've got. Are there any 'gotchas' lurking for me with this approach (?? stray capacitance between the sides . . .) etc. Thanks much in advance.

gary

2564. Re: project boxes from circuit board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 17:29:29 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <QQ1k9.2247$hc1.20789@newsfep3-gui.server.ntli.net>
Source record: 41227

"Gary & Angela Belcaster" <gbelcas@charter.net> wrote in message
news:gbelcas-7FCBA5.11461824092002@corp.supernews.com...
> Quick question to the group. I am building a directional coupler and
> would like to fashion the box which houses it from some double sided
> circuit board I've got. Are there any 'gotchas' lurking for me with
> this approach (?? stray capacitance between the sides . . .) etc.
> Thanks much in advance.
>
> gary

No problems with that idea presuming we are not talking extremes of frequency. Solder the box inside and out to make sure that all the copper surfaces are connected. Assuming the sides sit atop the base and support the lid, then you may want to consider connecting the top and bottom faces of these bits together.

If all the faces are connected together then there is no capacitance to worry about. Soldering inside and out assures good short earth paths (the thickness of the board). It's for you to decide if these path lengths are significant at the frequency you're using.

I've used this method many times to create small screened enclosures with no problems.

Good luck

Alec Wood M1BNK
Teesside UK

2565. Re: Freeze spray tip (was: Re: Fixing vintage amp with static/crack...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 21:14:27 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D90D5B3.9060907@eznec.com>
Source record: 41228

At room temperature, it's a couple of hundred PSI, not extreme at all. You can get liquid CO2 in an ordinary compressed gas bottle (which normally hold gas at around 3000 psi as I recall). It comes with or without a dip tube.

Roy Lewallen, W7EL

P.L. O'Connor wrote:
> PArdon me for intruding, but...
> I seem to remember that carbon dioxide (CO2) exists only as a gas or a
> solid ('dry ice'); it can exist as a liquid only under extreme
> pressure..what sort of pressure are you talking here?
>
> "Eagles may soar but weasels aren't sucked into jets."
>

2566. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 21:24:54 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D90D826.8000800@eznec.com>
Source record: 41229

Hans Summers wrote:
>
> In my case all the gain is at audio and I do not think there is much risk of
> overloading the mixer etc since it is a FST3253 switch. My main reason for
> AGC is just to maintain constant audio output.

That's an important distinction. My experience is that if you try to control the RF or IF gain with an audio-derived signal, it's just about impossible to get decent operation. If the AF pickoff point is earlier than the audio filter, then the gain can be reduced by signals that are outside the AF filter bandpass. If you pick off after the AF filter, the delay in the filter makes it impossible to get fast AGC operation, and loop stability becomes a problem.

The only good solution I've seen is to design the receiver so that all stages before audio are strong enough to handle whatever signal gets in, and don't try to control the gain of these stages with the AGC. Then use an AGC controlled audio amplifier to maintain the audio output level. I know there are a number of satisfactory circuits around -- probably some in the form of a single IC -- hopefully someone can point you to one.

Roy Lewallen, W7EL

2567. Re: Mag Loop Antenna - optimum shape ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 21:29:45 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D90D949.2030209@eznec.com>
Source record: 41230

The optimum shape is a circle. The reason is that the loss is least for the shortest conductor length, and the radiation resistance is highest for the largest enclosed area. A circle gives you the most enclosed area for a given conductor length, so that shape gives you the best efficiency.

Roy Lewallen, W7EL

Mike W wrote:
> Have there been any studies on the optimum shape for magnetic loop
> antennae ?
> If so, can anyone supply a URL or their own observations?
> tnks Mike W, G8NXD aka M3MSM qthr
>

2568. Re: single transistor transciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-24 22:05:22 UTC
From: Peter Parker <parkerp@alphalink.com.au>
Message-ID: <3d90e1d6@news.alphalink.com.au>
Source record: 41231

"carltons" <motsteve@attbi.com> wrote in

> I've been following the thread and one thing is troubling me. The concept
> of a one device transceiver is probably acheivable, but very difficult to
> pull off.

Agreed. Beginners building from scratch should start with separate
transmitters and receivers.

It is really a project for those of us with the experience and
> patience which takes years to develope.

But even when it's finished, you'll need extraordinary patience to get any
contacts on the thing. Ultra simple transmitters are ultra simple until you
add the telephone needed to pre-arrange contacts! No fun at all!

See http://home.alphalink.com.au/~parkerp/qrpequ.htm

for the definitive words on what's required in a rig that is not only simple
but FUN to use. Unless you want a novely rig to show off to your ham mates
(but not to use) ignore any of the advice given at your peril!

Peter

2569. Re: single transistor transciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 03:54:32 UTC
From: "phil :)" <just_rtfm@yahooREMOVETHIS.com>
Message-ID: <up2ct413o9rpe8@corp.supernews.com>
Source record: 41232

hi Doug:

might this simple regen be a good starting place for you? it uses a JFET.
http://www.glynn.k12.ga.us/~opool/XTAL/fetgen.htm

phil :)

2570. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 09:24:38 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <amrvcm$8fmoh$1@ID-61331.news.dfncis.de>
Source record: 41233

"Wes Stewart" <n7ws@nowhere.com> wrote in message
news:3d9083dc.29162291@news.triconet.org...
> On Tue, 24 Sep 2002 09:48:29 +0100, "Hans Summers"
> <Hans.Summers@Tudor.Com> wrote:
>
[...]
> |In my case all the gain is at audio and I do not think there is much risk
of
> |overloading the mixer etc since it is a FST3253 switch. My main reason
for
> |AGC is just to maintain constant audio output.
>
> I understand your situation, however, you are the one that brought up
> the comparison between i-f and audio-derived AGC. I was responding to
> your comparison, in which I believe that you came to a wrong
> conclusion.

Sure. I don't know enough about AGC which is why I am asking the question
and trying to learn more. Whilst in my case I have to use some form of audio
derived AGC I am still interested in both methods and the comparisons
between them.

>
> In your specific case, audio is the result of downconversion and can
> be considered the "i-f." Even here, my comments about appropriate
> gain distribution apply. You should have some delay (amplitude, not
> time) in the application of gain reduction to allow the SNR to
> increase. This means that you cannot maintain a completely flat audio
> output. Nor should you want to. Stronger signals should sound
> stronger than weak ones.

I am interested in why you say I shouldn't want to maintain a flat audio
output. If I'm sitting there and there's QSB on the band surely it's nice
for me if the receiver compensates for it as far as possible by keeping the
audio relatively constant?

2571. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 09:25:53 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <amrvf2$8nh94$1@ID-61331.news.dfncis.de>
Source record: 41234

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:3D90D826.8000800@eznec.com...
> Hans Summers wrote:
> >
> > In my case all the gain is at audio and I do not think there is much
risk of
> > overloading the mixer etc since it is a FST3253 switch. My main reason
for
> > AGC is just to maintain constant audio output.
>
> That's an important distinction. My experience is that if you try to
> control the RF or IF gain with an audio-derived signal, it's just about
> impossible to get decent operation. If the AF pickoff point is earlier
> than the audio filter, then the gain can be reduced by signals that are
> outside the AF filter bandpass. If you pick off after the AF filter, the
> delay in the filter makes it impossible to get fast AGC operation, and
> loop stability becomes a problem.
>
> The only good solution I've seen is to design the receiver so that all
> stages before audio are strong enough to handle whatever signal gets in,
> and don't try to control the gain of these stages with the AGC. Then use
> an AGC controlled audio amplifier to maintain the audio output level. I
> know there are a number of satisfactory circuits around -- probably some
> in the form of a single IC -- hopefully someone can point you to one.

Hopefully this is the situation I'm in - I think the earler stages in the
receiver are strong enough. The Tayloe detector + polyphase seems a very
clean design.

>
> Roy Lewallen, W7EL
>

2572. Re: transverter design for 20 meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 10:01:17 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <ams175djb1@nic.grnet.gr>
Source record: 41235
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design

actually it dose not cost more than 40$ ......
but in the long run I would have to agree that the time and the effort may
drive you to buy a nice new RIG :)
a lot of Italian used their multimode cb to go 'down' to 6.500 Mhz....

"JB" <ac6tk@nospamcybertime.net> wrote in message
news:ampup3$1uaq$1@madmax.keyway.net...
> Actually, up-conversion has the advantage of fewer potential for birdies
> from harmonics of the oscillators. Most of the better transceivers use
> an IF higher than the Fo.
>
> I have no experience with the 10m radio you mentioned, but it sounds
> like your project has potential. Additional circuitry could be built into
a
> housing extension, replacing the bottom cover? The down side, It
> could cost more than buying a used HF multi-band rig, but that idea
> never scared any hot rodders from building. Sounds like a neat
> project.
>
> Jim, ac6tk
> "Deos" <lineoffiretoday@yahoo.com> wrote in message
news:amppof$79e$1@nic.grnet.gr...
> : HI JC
> : i have used transverter for years (made some as well) from 10M to 40M it
can
> : be done!
> : "JC" <on5mjREMOVE@skynet.be> wrote in message
> : news:3d8e9a65$0$213$ba620e4c@news.skynet.be...
> : > I think transverters are used for increasing the working frequency not
> : > decreasing it, i.e. passing from HF to VHF.
> :
> :
>

2573. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 13:45:05 UTC
From: yeti@REMOVEcet.com
Message-ID: <3d91bc8e.668437@news.cet.com>
Source record: 41236

In <amrvcm$8fmoh$1@ID-61331.news.dfncis.de>, "Hans Summers"
<Hans.Summers@Tudor.Com> wrote:

<snip>
>I am interested in why you say I shouldn't want to maintain a flat audio
>output. If I'm sitting there and there's QSB on the band surely it's nice
>for me if the receiver compensates for it as far as possible by keeping the
>audio relatively constant?

What you could do is make an AGC circuit with variable attack and
release. Use a faster response for audio, and a slower response (or
switch it out) for CW. This should satisfy all your requirements.
Instead of an AGC circuit, you could probably just plug in a cheap
compressor, like an Alesis or something else along those lines.

2574. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 14:06:13 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <amsfsorge1@slb0.atl.mindspring.net>
Source record: 41239

> <Hans.Summers@Tudor.Com> wrote:
>
>
> I am interested in why you say I shouldn't want
> to maintain a flat audio output. If I'm sitting
> there and there's QSB on the band surely it's nice
> for me if the receiver compensates for it as far as
> possible by keeping the audio relatively constant?
>

One reason to NOT maintain a flat audio output is what happens to general band noise...

If you have massive AGC, then when you are not tuned to a station, the AGC will raise the background noise to the full audio level and you get constant noisy hissing and crackling in the speakers.

If you apply agc slightly to the really weak signals then it won't raise the noise so much when you are not recieving a signal.

Generally, most signals you want to hear will be loud enough to be in AGC range, but really weak ones will be 'fainter' since they may be just barely above the noise and that actually sounds better to the listener since the slight differences in how loud the signal is gives a sense of how powerful the other station is.

Jim Pennell
N6BIU

2575. Re: A Single-Tube 75-Watt Novice Transmitter (6146) Coil Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 14:10:58 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <amsg8oleo1@nic.grnet.gr>
Source record: 41237

in other words are HC25/U crystals out of the question ?

"Bill Janssen" <billj@ieee.org> wrote in message
news:3D8A5C6B.3AE3C49C@ieee.org...
>
>
> carltons wrote:
>
> > In article <3d89e78c$1@news.netacc.net>, "Stephen C. Robbins"
> > <srobbinsNoSPaMDUDES@netacc.net> wrote:
> >
> > > "Mike W" <mike@corn2.freeserve.co.uk> wrote in message
> > > news:3d89c664.377760@news.freeserve.net...
> > > > Not many people have the 1957 ARRL handbook these days.
> > > > a scan of the diagram might help us to assist you.
> > > > oh, and by the way, kill the HTML posting.
> > >
> > >
> > > Dont need the 1957 handbook. Schematic was perfectly readable.
Reason
> > > was.... he posted properly, complete with html and an excellent
graphic of
> > > the schematic.
> > >
> > > Posters should feel free to post in HTML. Those who run archaic
systems
> > > with non HTML capable readers may quietly exclude themselves from the
> > > intended audience and refrain from bashing the more technically
competent
> > > posters/readers who have no problems with it.
> > >
> > > And yes, I was able to come up with design for a 40/80 meter multi tap
coil
> > > that will work in his tank circuit and will email direct to him.
> > >
> > > Steve
> >
> > I saw the schematic fine also. I would not recommend this circuit.
It's
> > simple, but the crystal drive is so high that the transmitter would
> > probably chirp all over the place. I had the same experience with the
> > 6DQ6B circuit in a later edition of the handbook. It is best to have a
> > separate oscillator circuit with a buffer and then drive the 6146. I
> > would also advise getting a VFO, if possible, as a xtal is very limiting

> > to say the least. I had two xtals when I was a novice and spent a lot
of
> > time calling CQ with no answers. I had fun anyway, though. :-)
> >
> > Happy Trails,
> > Steve WB4CZR
>
> The crystal current would probably break the current style crystals. The
old
> ft243 style could handle a little more current and the still older and
bigger
> crystals
> would probably handle the current OK.
>
> Bill K7NOM
>
>

2576. Re: New DATEK VFO kit- Any experience?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 14:29:14 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <amsgtilpn1@nic.grnet.gr>
Source record: 41238

very promising this chip osc....
the data for the chip is here
http://www.linear.com/prod/datasheet.html?datasheet=732
"Dave Turner" <dmturner@primenet.com> wrote in message
news:jn1rouop1knd5er647orbso4a8aeuanbqv@4ax.com...
> Dick Carroll <dixie@townsqr.com> wrote:
> > The new issue of Worldradio Magazine (Oct '02) page 59 shows a new VFO
> >kit from Datek (<www.philmore-datek.com> click on new products, look
> >for part number 80-1410) that is said to eliminate virtually thousands
> >of crystals. Frequency change is made by changing resistance, using a
> >potentiometer. Suggested price is $15.99.
>
> That should be: www.philmore-datak.com
>
> Regards,
>
> Dave
>

2577. Re: The Space/Time Paradox...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 14:38:02 UTC
From: newsdesk@aeonsciltd.net
Message-ID: <869eda69.0209250638.5d6565@posting.google.com>
Source record: 41240

mike@corn2.freeserve.co.uk (Mike W) wrote in message
news:<3d8d8914.608457@news.freeserve.net>...
> On 21 Sep 2002 15:56:07 -0700, newsdesk@aeonsciltd.net (Eugene) wrote:
>
> >"Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message
news:<3D8C8999.2C5F5D5D@clifto.com>...
> >> Eugene wrote:
> >> > If electro-magnetic waves exist, then planes of parallel space
> >> > traveling near the speed of light, and if mass is relative to heat,
> >> > space/time is quazi-linear. The speed of any object is given as G...
> >>
> >> The teachers produce *this*, and then demand more money?
> >
> >GREAT CAESERS GAOST
> >
> > Take for example, a pebble it tries and tries to soak up water,
> >but to no avail. Casting the pebble into the water causing it to
> >sink, is the pebble invisable?
> >
> percieved Colour is reflected light, therefore if there is no light
> there cannot be colour, therefore my mug of tea is transparent in the
> dark. But I can't proove this as I need light to see it ;-(

GREAT CAESARS GAOST:

Suppose there exists a "group" within the group there exist a
"pac", and the pac is infinte in nature, the group is then undefined.
From a "deck" remove 54 playing cards and cut it in such a way as half
are face up and half are face down. The down cards are now undefined,
and flipping the top card over on the "pac" you are now invisible...
Flip that deck over and begin: is that your card and so on?
Experimental results are often circumstantial!

http://www.aeonsciltd.net

2578. Simple (I hope) transmitter help.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 15:13:47 UTC
From: Just Allan <justallan@COLDhotmail.com>
Message-ID: <e4k3puch8plv6c9kcireu39qauoeo5nt2c@4ax.com>
Source record: 41241

Hello!

How to make this as short as possible... I have neighbours who insist on playing their stereo at distortion levels. Anyway, I've been told the freq CD players work from is 4.2MHz. Can someone suggest/point me to a circuit for a simple transmitter. Cheap and nasty is fine - just something that say, plays a squeal @ 4.2MHz. Then we can switch it on when they are being unreasonable.

(There's a lot more to this story... Suffice to say the usual methods are of no use - the neighbour has a teenage daughter and both have mental problems - violent types.)

Thank you for reading...

Allan.

2579. Re: Simple (I hope) transmitter help.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 15:45:01 UTC
From: yeti@REMOVEcet.com
Message-ID: <3d91d84c.1862946@news.cet.com>
Source record: 41242

In <e4k3puch8plv6c9kcireu39qauoeo5nt2c@4ax.com>, Just Allan
<justallan@COLDhotmail.com> wrote:

>Hello!
>
>How to make this as short as possible... I have neighbours who insist
>on playing their stereo at distortion levels. Anyway, I've been told
>the freq CD players work from is 4.2MHz. Can someone suggest/point me
>to a circuit for a simple transmitter. Cheap and nasty is fine - just
>something that say, plays a squeal @ 4.2MHz. Then we can switch it on
>when they are being unreasonable.
>
>(There's a lot more to this story... Suffice to say the usual methods
>are of no use - the neighbour has a teenage daughter and both have
>mental problems - violent types.)
>
>Thank you for reading...
>
>Allan.

I'm sure you have other options other than resorting to intentional
RFI. Try looking up local laws regarding noise pollution and public
nuisances.

2580. Re: Excitment and Experience

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 15:57:18 UTC
From: Jason <kc7eip_nospam@shaw.ca>
Message-ID: <y1lk9.411215$Ag2.17765723@news2.calgary.shaw.ca>
Source record: 41243

I would definately like to post about my first qso but i am still without..
Not for lack of trying or help from others.. THere is a problem with my
rig...I am not hearing anyone sending back to me... Of coarse i've tracked
the problem down to a shorted switch i was using to switch in and out one of
the caps on my crystal.. But soon as i get some time hopefully soon i will
be able to fix that problem...
I'm reqiring all the off board conections and adding a riser for the board
instead of letting it sit at the bottom of my lunch box.. (lunch box is
coated with black elec tape) so i can easily switch the crystals and stop
breaking conection wires..
"Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message
news:3D7A1FA6.6E02CB2B@clifto.com...
> Jason wrote:
> > :)... it has been a fun experience and it sure was great to hear some
cw...
> > The knowledge i picked up has been invaluable. I can't thank everyone
here
> > and on the other lists enough for the help and assistance provided
during my
> > quest for fire (so to speak). It has really made my rebirth into the
hobby
> > a great one. Thanks for the bandwidth and hope to hear you all soon.
>
> It's a great feeling, isn't it? I wanna hear about your first QSO.
>
> --
> .signature in flux

2581. Noise Figure question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 16:15:29 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0209250815.393c5e39@posting.google.com>
Source record: 41244

In classic noise figure theory, the noise temperature at the output of a device is given by:

(Ta+Td+Ti)Gd

where Ta is the ambient temperature, Td is the noise temperature contributed by the device, Ti is the input noise temperature, and Gd is the gain of the device (linear units).

If a loss (attenuator) is used as the device, the noise temperature of the attenuator can be determined by:

Td = Ta/Gd-Ta

This allows you to treat an attenuator the same as an amplifier when analyzing a multi stage system for overall noise figure (which I will not go into here).

Plugging this into the first equation results in

(Ta+Ta/Gd-Ta+Ti)Gd = Ta+TiGd

...and the results would be as expected in a multistage system (noise figure degraded by amount of attenuation).

My question, however, is: What happens if one of the stages is an antenna? An attenuator is a 'passive' loss. By that, I mean that its noise is thermal noise, not caused by any active components.

I see nothing in equation 2 above that prevents Gd from being either greater or less than 1.0, so my conjecture is that, yes, an antenna can be treated the same as an attenuator in analyzing a multistage system.

Any thoughts?

Jim
N8EE

2582. Re: Simple (I hope) transmitter help.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 16:15:38 UTC
From: Just Allan <justallan@COLDhotmail.com>
Message-ID: <rbo30vgdrna6c9c7tbliup76ssf8di3kik@4ax.com>
Source record: 41245

On Wed, 25 Sep 2002 15:45:01 GMT, yeti@REMOVEcet.com
(yeti@REMOVEcet.com) wrote:

>In <e4k3puch8plv6c9kcireu39qauoeo5nt2c@4ax.com>, Just Allan
><justallan@COLDhotmail.com> wrote:
>
>>Hello!
>>
>>How to make this as short as possible... I have neighbours who insist
>>on playing their stereo at distortion levels. Anyway, I've been told
>>the freq CD players work from is 4.2MHz. Can someone suggest/point me
>>to a circuit for a simple transmitter. Cheap and nasty is fine - just
>>something that say, plays a squeal @ 4.2MHz. Then we can switch it on
>>when they are being unreasonable.
>>
>>(There's a lot more to this story... Suffice to say the usual methods
>>are of no use - the neighbour has a teenage daughter and both have
>>mental problems - violent types.)
>>
>>Thank you for reading...
>>
>>Allan.
>
>I'm sure you have other options other than resorting to intentional
>RFI. Try looking up local laws regarding noise pollution and public
>nuisances.

Yep - as I said, there's far more to the story. They're not the full
dollar and if they ever knew I'd called the police - or even (gasp)
TALKED to them and asked them to turn down the music... Let's just
say their friends are the town thieves/drug pushers etc. Really I'd
rather the low power transmitter solution. That way, they simply
think there's something wrong with their stereo - and as long as they
listen to it at a reasonable (not inaudible) level, IT doesn't play
up. No violence, no trouble. Also, we're in an area of Australia
where the "RFI" wouldn't affect anyone else. (A regional area.)

Thanks tho'.

Can anyone help?

Allan.

2583. Re: Query... slow warmup for final tube.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 16:19:27 UTC
From: Harvey Babb <WB5MCT@arrl.net>
Message-ID: <3D91E20F.7000004@arrl.net>
Source record: 41246

The method used in early color TV's might be most appropriate (IF you can find the parts!). They used a varistor (negative temperature coefficient thermistor) in series with the primary of the power transformer. On powerup, the varistor limited inrush while it heated up. After a few seconds the varistor heated up, dropped in resistance, and passed nearly full line voltage to the transformer.

Harvey
WB5MCT

Chris Shaw wrote:

> Hi Homebrewers
>
> A query from Allan VK3PA
> vk3pa@vk3pa.com
> www.vk3pa.com
>
> As follows....
>
> Does anyone know where to source a circuit
> for ramping up heater and HT voltages nice and slowly.
> Al wants to prolongue the life of his expensive tube if possible.
>
> We have searched the fleshpots of the Internet to no avail.
> Does anyone know of any DIY stuff that might fill the bill
> (240 volts, transformer (reactive) load)..... ????
>
> Thinking caps on chaps....
>
> Thanks .... 73 de Chris VK3CJS
>
>
>

2584. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 16:21:32 UTC
From: n7ws@nowhere.com
Message-ID: <3d91d6b4.3948832@news.triconet.org>
Source record: 41147

On Wed, 25 Sep 2002 10:24:38 +0100, "Hans Summers"
<Hans.Summers@Tudor.Com> wrote:

|
|"Wes Stewart" <n7ws@nowhere.com> wrote in message
|news:3d9083dc.29162291@news.triconet.org...
|> On Tue, 24 Sep 2002 09:48:29 +0100, "Hans Summers"
|> <Hans.Summers@Tudor.Com> wrote:
|>
|[...]
|> |In my case all the gain is at audio and I do not think there is much risk
|of
|> |overloading the mixer etc since it is a FST3253 switch. My main reason
|for
|> |AGC is just to maintain constant audio output.
|>
|> I understand your situation, however, you are the one that brought up
|> the comparison between i-f and audio-derived AGC. I was responding to
|> your comparison, in which I believe that you came to a wrong
|> conclusion.
|
|Sure. I don't know enough about AGC which is why I am asking the question
|and trying to learn more. Whilst in my case I have to use some form of audio
|derived AGC I am still interested in both methods and the comparisons
|between them.
|
|>
|> In your specific case, audio is the result of downconversion and can
|> be considered the "i-f." Even here, my comments about appropriate
|> gain distribution apply. You should have some delay (amplitude, not
|> time) in the application of gain reduction to allow the SNR to
|> increase. This means that you cannot maintain a completely flat audio
|> output. Nor should you want to. Stronger signals should sound
|> stronger than weak ones.
|
|I am interested in why you say I shouldn't want to maintain a flat audio
|output. If I'm sitting there and there's QSB on the band surely it's nice
|for me if the receiver compensates for it as far as possible by keeping the
|audio relatively constant?

Well, you're hedging a bit by saying, "relatively constant", where
before you said, "My main reason for AGC is just to maintain constant
audio output.."<g>

There are at least two possibilities.

One, your r-f/i-f subsystem cannot handle the full dynamic range of all possible incoming signal levels so you need some gain control on the front end. This could be in the form of an AGC-controlled PIN diode attenuator, etc.

Two, (your case I believe) the r-f hardware is strong enough to operate at full gain regardless of incoming signal strength. I'm dubious that this is possible but that is just my opinion.

In case one, there should be some threshold, below which no AGC is developed. This maintains the noise figure of the first r-f device, whatever it is. (I realize that at say 160 meters the SNR is set by external noise, but I'm speaking in the general sense.) This is what we mean by "delayed AGC"; the application of control is delayed until the signal level reaches some threshold. Clearly, if this is the case then you cannot maintain a completely constant output without major audio AGC and the resulting problems of loop stability and the effects that I describe next.

In case two, your ACG system becomes nothing more than an audio compressor. If your goal is constant output, then with no signal, you get max noise out. When a signal comes along it just punches a hole in the noise. For a good example of this listen to the guys (Italians leap to mind) that transmit using a lot of compression and set the audio gain wide open and sit across the room. You get to hear the blower on the 10 KW amplifier, the wife in the next room and the dogs barking in the street. When they finally say something the compression kicks in and the noise subsides.

If we use your hedging position, of "relatively constant", then we seem to be in agreement. There can be some area in the dynamic range where the system gain is constant, thus stronger signals sound stronger than weak ones.

Regards,

Wes

2585. Re: Fox Hole Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 16:24:52 UTC
From: donrm@soco.agilent.com
Message-ID: <1032971092.187031@cswreg.cos.agilent.com>
Source record: 41148

Leon Heller <leon_heller@hotmail.com> wrote:
>
> There's a US co. selling crystal sets and parts that has 'blue' razor blades
> in stock. google should find them.

Antique Electronic Supply (www.tubesandmore.com) item K-414.

Don K6LTS
donrm@soco.agilent.com

2586. Re: Simple (I hope) transmitter help.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 16:50:13 UTC
From: yeti@REMOVEcet.com
Message-ID: <3d91e878.6002698@news.cet.com>
Source record: 41149

In <rbo30vgdrna6c9c7tbliup76ssf8di3kik@4ax.com>, Just Allan
<justallan@COLDhotmail.com> wrote:

<snip>
>Yep - as I said, there's far more to the story. They're not the full
>dollar and if they ever knew I'd called the police - or even (gasp)
>TALKED to them and asked them to turn down the music... Let's just
>say their friends are the town thieves/drug pushers etc.

Charming neighborhood. Ever thought about moving?

> Really I'd
>rather the low power transmitter solution. That way, they simply
>think there's something wrong with their stereo - and as long as they
>listen to it at a reasonable (not inaudible) level, IT doesn't play
>up. No violence, no trouble. Also, we're in an area of Australia
>where the "RFI" wouldn't affect anyone else. (A regional area.)

I posted what I did because I have already been in a similar
situation. They are going to play whatever they want, whenever they
want, and as loud as they want -- behavior consistant with lawless
attitudes. If you cause RFI (whether they realize it or not) they are
just going to get a new CD player that isn't affected by RFI. If you
manage to jam that one, too, then you can bet they are going to get
suspicious, and you will be risking the violence you claim to be
avoiding.

But hey, if you want to do things the hard way, that's your choice.
Just find yourself a coarse metal or wood file, a screwdriver, and
some jumper cables. Hook the file and screwdriver up to a car battery
with the cables, and draw the screwdriver over the file. Makes a
really nasty hash that can be heard for a couple hundred feet.

2587. Re: Simple (I hope) transmitter help.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 17:26:06 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D91F232.6020@pop.removethistomailme.net>
Source record: 41150

yeti@REMOVEcet.com wrote:
>
> But hey, if you want to do things the hard way, that's your choice.
> Just find yourself a coarse metal or wood file, a screwdriver, and
> some jumper cables. Hook the file and screwdriver up to a car battery
> with the cables, and draw the screwdriver over the file. Makes a
> really nasty hash that can be heard for a couple hundred feet.

More likely to vaporize the screwdriver tip and send fragments of molten
metal into your eye. Bad idea.

He'll have to either call the police, or move.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2588. Re: Simple (I hope) transmitter help.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 17:41:29 UTC
From: ON5MJ <on5mjREMOVE@skynet.be>
Message-ID: <3d91f54d$0$185$ba620e4c@news.skynet.be>
Source record: 41151

This story reminds me when I was student. My neighbour was TV addict and this damn' box was playing very loud all the day. So during my examination days, I used to take my heterodyne (and microphone) set up on the IF frequency of the TV. She thought the police was speaking in the TV specially for her, found the sound too loud and that they will destroy the TV with their remote transmitter. So the problem was cured for one week.

bye.

2589. Re: A Single-Tube 75-Watt Novice Transmitter (6146) Coil Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 17:43:23 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2509021344190001@c-66-176-144-254.se.client2.attbi.com>
Source record: 41152

In article <amsg8oleo1@nic.grnet.gr>, "Deos" <lineoffiretoday@yahoo.com>
wrote:

> in other words are HC25/U crystals out of the question ?

I know this sounds extreme, but I don't think any xtal should be driven this hard. HC25's will be worse than FT243's, but they will both suffer from the large drive current/power. I was unfamiliar with this when I built my first rig, but I learned it later after many years of experience. A simple two tube approach should get you where you want to be. Try Bill Orr's book, "Radio Handbook" or look around for "Electronics Illustrated" or "Popular Electronics".

Steve WB4CZR

2590. Re: Simple (I hope) transmitter help.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 17:52:32 UTC
From: mcalhoun@ksu.edu
Message-ID: <amst50$3en@unix1.cc.ksu.edu>
Source record: 41154

Lotsa <snipping>....

>>Yep - as I said, there's far more to the story. They're not the full
>>....[snip]....
>>Really I'd rather the low power transmitter solution. That way, they
>>simply think there's something wrong with their stereo ....

>They are going to play whatever they want, whenever they want, and as
>loud as they want -- behavior consistant with lawless attitudes.....

That MIGHT not be true; I once had a roommate who insisted on turning his stereo up real loud right after I went to bed. But I found that I could "play" with the switch on my electric blanket, thereby creating "static" on his stereo, and he soon turned it off. To my knowledge, he never connected that "static" to my going to bed!

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

2591. Re: Simple (I hope) transmitter help.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 17:57:34 UTC
From: yeti@REMOVEcet.com
Message-ID: <3d91f776.345917@news.cet.com>
Source record: 41153

In <3d91f54d$0$185$ba620e4c@news.skynet.be>, "ON5MJ"
<on5mjREMOVE@skynet.be> wrote:

>This story reminds me when I was student. My neighbour was TV addict and
>this damn' box was playing very loud all the day. So during my examination
>days, I used to take my heterodyne (and microphone) set up on the IF
>frequency of the TV. She thought the police was speaking in the TV specially
>for her, found the sound too loud and that they will destroy the TV with
>their remote transmitter. So the problem was cured for one week.

Pretty neat trick, considering TV audio is FM.

2592. Re: Query... slow warmup for final tube.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 18:11:57 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3d91fa07.10452730@news.freeserve.net>
Source record: 41155

On Wed, 25 Sep 2002 11:19:27 -0500, Harvey Babb <WB5MCT@arrl.net>
wrote:

>The method used in early color TV's might be most appropriate (IF you
>can find the parts!). They used a varistor (negative temperature
>coefficient thermistor) in series with the primary of the power
>transformer. On powerup, the varistor limited inrush while it heated up.
>After a few seconds the varistor heated up, dropped in resistance, and
>passed nearly full line voltage to the transformer.
>
For a relativley high current homebrew 12v PSU (150A) using a
toroidal transformer. I took a second ,small, 12v Transformer to
switch a control relay through an RC network. the R was sized to give
a 5 second delay before the relay switched a ballast out of the
primary of the power transformer. for ballast I used a, IIRC, a 100w
tungsten filament lamp in series with the primary of the power
transformer.
I'll refer to my notes for specifics if requested.
hth Mike W G8NXD aka M3MSM

2593. Re: Simple (I hope) transmitter help.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 18:20:05 UTC
From: ON5MJ <on5mjREMOVE@skynet.be>
Message-ID: <3d91fe86$1$184$ba620e4c@news.skynet.be>
Source record: 41156

In Europe many TV modulation was AM.

2594. FS: Peter Dahl Hypersil Plate Transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 18:28:21 UTC
From: John <ki4nr@qsl.net>
Message-ID: <yfnk9.4005$V64.1769538@newsfeed.slurp.net>
Source record: 41157

New old stock hypersil Plate transformer. Never installed. Spec are 115/230 primary... 1100 @ 900 mils CCS output. Good for many types of tubes. Will give 3100 volts with Full wave doubler. More than enough power for the legal limit. Email for pics

Make reasonable offers

73 john

2595. Re: Mag Loop Antenna - optimum shape ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 19:05:19 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <amt1df$a06$1@knossos.btinternet.com>
Source record: 41158

Hello Mike,

Study completed some time back and put into the form of a small program.

Download program MAGLOOP4 from website below in a few seconds. Not zipped up. Run immediately. User friendly. A 2-week user training course is not needed.

In a list of other interesting characteristics, for given loop circumference and conductor diameter, this excellent program calculates efficiency of regular shaped loops: triangle, square, hexagon, octagon, circle.

As a little extra, for rough guidance on what might be expected under ordinary ionospheric conditions, for given transmitter power the receiver S-meter meter reading on 1-hop daylight and 3-hop darkness radio paths are estimated.

A complete magloop design program (except mechanical) - FREE to UK nationals. Recommend it to your friends.

For MAGLOOP4 click now on following website.

==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========

"Mike W" wrote
> Have there been any studies on the optimum shape for magnetic loop
> antennae ?
> If so, can anyone supply a URL or their own observations?
> tnks Mike W, G8NXD aka M3MSM qthr
>

2596. Re: Mag Loop Antenna - optimum shape ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 19:05:20 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <amt1dg$a06$2@knossos.btinternet.com>
Source record: 41159

"Roy Lewallen" wrote
> The optimum shape is a circle. The reason is that the loss is least for
> the shortest conductor length, and the radiation resistance is highest
> for the largest enclosed area. A circle gives you the most enclosed area
> for a given conductor length, so that shape gives you the best efficiency.
>

Hi Roy,

Do you have any measured data to support this ?

Reg, G4FGQ

2597. Re: Mag Loop Antenna - optimum shape ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 19:20:33 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D920C81.9030702@eznec.com>
Source record: 41160

Reg Edwards wrote:
> "Roy Lewallen" wrote
>
>>The optimum shape is a circle. The reason is that the loss is least for
>>the shortest conductor length, and the radiation resistance is highest
>>for the largest enclosed area. A circle gives you the most enclosed area
>>for a given conductor length, so that shape gives you the best efficiency.
>>
>
> ---
>
> Hi Roy,
>
> Do you have any measured data to support this ?
>
> Reg, G4FGQ

No. But I'll bet you have.

Roy Lewallen, W7EL

2598. Re: Noise Figure question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 19:45:32 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <Wq2fVKFcJhk9EAtt@ifwtech.co.uk>
Source record: 41161

JLB wrote:
>In classic noise figure theory, the noise temperature at the output of
>a device is given by:
>
> (Ta+Td+Ti)Gd
>
>where Ta is the ambient temperature, Td is the noise temperature
>contributed by the device, Ti is the input noise temperature, and Gd
>is the gain of the device (linear units).
>
Td is the device's effective noise temperature (referred to the input),
and Ti is the effective noise temperature of the termination at the
input port. Both of these are added.

Multiplying the sum by Gd moves the effective noise temperature to the
output. The output noise temperature To then becomes the Ti figure for
the next stage.

Therefore: To = (Ti + Td)*Gd (eq 1)

Ta doesn't enter directly into the basic equation at all. Td usually
depends indirectly on the Ta that the device is in, but that's a
different thing.

If the input is a resistive load, then its noise temperature is equal to
Ta... but that's another different thing. You still don't get Ti and Ta
together in the same equation.

>If a loss (attenuator) is used as the device, the noise temperature of
>the attenuator can be determined by:
>
> Td = Ta/Gd-Ta
>
You're confusing gain and loss. In these equations, Gd is >1 for gain
and <1 for loss, but the equation doesn't change.

The effective noise temperature of a purely resistive attenuator is its
physical temperature, so Ta *does* appear here.

The same equation 1 then applies:

To = (Ti + Td)*Gd

which in this particular case translates to:

To = (Ti + Ta)*Gd where Gd<1 because it's an attenuator.

>My question, however, is: What happens if one of the stages is an
>antenna?

An antenna is not a "stage" - it can only be the input to the system, so the antenna's noise temperature is your Ti for the first stage. This is usually written as:

Tsystem = Tant + Trx

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2599. Re: Nimh battery charger circuit.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 21:28:55 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <rUpk9.72060$S32.4463857@news2.west.cox.net>
Source record: 41163

Well I use a power supply -- fed to an LM Voltage regulator chip configured
as a constant current source
adjust the resistor values for a chage current of 1/10 C e.g 1000
milliampere cell -- charge at 100 milliamperes -- charge over night
See National SemiConductor page for LM chips
http://www.national.com/pf/LM/LM350.html

A more elaborate scheme can be found at URL:
http://www.angelfire.com/electronic/hayles/charge1.html
This includes some theory as to whats going on.

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com
"Eskay" <Nospamve3jua@rac.ca> wrote in message
news:3D924DCA.93CD82A3@rac.ca...
> I need a simple circuit to charge two AA Nimh batteries..
> Thanks very much..
> Eskay...VE3JUA..
>

2600. Re: Nimh battery charger circuit.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 22:00:46 UTC
From: Peter Parker <parkerp@alphalink.com.au>
Message-ID: <3d923245@news.alphalink.com.au>
Source record: 41164

"AC6V" <ac6v@amsat.org> wrote in message
news:rUpk9.72060$S32.4463857@news2.west.cox.net...
> Well I use a power supply -- fed to an LM Voltage regulator chip
configured
> as a constant current source
> adjust the resistor values for a chage current of 1/10 C e.g 1000
> milliampere cell -- charge at 100 milliamperes -- charge over night

Why not just a 5 watt wire wound resistor in series with the supply to
deliver the required current?

Peter

2601. Re: Noise Figure question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 22:15:17 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <Vzqk9.278006$z91.12031506@bin3.nnrp.aus1.giganews.com>
Source record: 41165

The antenna is sort of a noise generator. It has a noise temperature of about the object it is pointed at provided the beam width is small enough. If it is pointed at or near the ground then the noise is about the temp of the ground somewhere around 270 deg K if I remember correctly for a normal room (outside ?) temp. If it is pointed at a clear sky (no stars or radio sources) then it can be very low like maybe 20 or 30 deg K.

> My question, however, is: What happens if one of the stages is an
> antenna? An attenuator is a 'passive' loss. By that, I mean that its
> noise is thermal noise, not caused by any active components.
>
> I see nothing in equation 2 above that prevents Gd from being either
> greater or less than 1.0, so my conjecture is that, yes, an antenna
> can be treated the same as an attenuator in analyzing a multistage
> system.
>
> Any thoughts?
>
> Jim
> N8EE

2602. Re: 2-meter packet homebrew?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 22:22:52 UTC
From: LA3VEA <la3vea@hotmail.com>
Message-ID: <0Hqk9.22549$0p1.393694@news2.ulv.nextra.no>
Source record: 41166

Try www.baycom.org or search for other sites with BayCom info.
Good luck.
73 de Oddbjorn

"Rob French" <fulcrum99@earthlink.net> wrote in message
news:pan.2002.09.17.23.29.57.788012.30835@earthlink.net...
> Hello,
>
> I'm looking to return to amateur homebrew through a "little" project. I'd
> like to combine my computer hobby with amateur radio using packet. A
> while ago, I used a 2M HT w/ an AEA PK-88 for 2M packet. Now, I've seen
> a lot of low-cost, highly integrated RX/TX IC's... some of which even
> have packet mod/demod on them. Does anyone know of any (relatively)
> simple 2M packet radio designs based on any of these chips?
>
> Thanks.
> -Rob

2603. Re: Noise Figure question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 22:59:42 UTC
From: Bill M <exray@no>
Message-ID: <up4fuh8vdhs08c@corp.supernews.com>
Source record: 41167

Ralph Mowery wrote:
>
> The antenna is sort of a noise generator. It has a noise temperature of
> about the object it is pointed at provided the beam width is small enough.
> If it is pointed at or near the ground then the noise is about the temp of
> the ground somewhere around 270 deg K if I remember correctly for a normal
> room (outside ?) temp. If it is pointed at a clear sky (no stars or
> radio sources) then it can be very low like maybe 20 or 30 deg K.
>
> > My question, however, is: What happens if one of the stages is an
> > antenna? An attenuator is a 'passive' loss. By that, I mean that its
> > noise is thermal noise, not caused by any active components.
> >
> > I see nothing in equation 2 above that prevents Gd from being either
> > greater or less than 1.0, so my conjecture is that, yes, an antenna
> > can be treated the same as an attenuator in analyzing a multistage
> > system.
> >
> > Any thoughts?
> >
> > Jim
> > N8EE

Try this page....
http://www.setileague.org/articles/g-t.htm

-BM

2604. Re: Noise Figure question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 23:11:20 UTC
From: nx7u@arrl.net
Message-ID: <3d9240c3.21909281@news.west.cox.net>
Source record: 41168

Mostly...
Antenna noise temperature is the equivalent temperature of all the noise it sees...still kTB.
For example, NBS (back when it was still called that) and the ITU both have published radio noise curves for HF, for example, that are stated in terms of antenna noise factor fa (which is just Tant/To+1, by definition). fa is so large at lower HF frequencies that HF systems are generally "externally noise limited", and low-noise preamplification makes no improvement.
Getting into VHF, atmospheric noise gets smaller but galactic noise gets larger. Galactic noise at 2m is still in excess of 1,000K if I recall correctly. But it gets small enough that with typical receivers and transmission line losses, preamplification makes a positive difference.
Note that antenna beamwidth only makes a difference if the noise source is much larger in angular extent than the beamwidth...generally only really happens with large radioastronomical antennas pointed at the sun or moon.
As you get over 1GHz, the situation Ralph describes below is pretty accurate.
Since antennas have thermal losses of their own, however, actually the antenna noise factor has to get broken up into two terms:
Tant(efficiency)+To(1-efficiency)
So at microwave frequencies, an antenna pointed at a 20K sky needs to be very efficient to keep the actual antenna noise factor low.

On Wed, 25 Sep 2002 22:15:17 GMT, "Ralph Mowery" <rmowery@ctc.net> wrote:

>The antenna is sort of a noise generator. It has a noise temperature of
>about the object it is pointed at provided the beam width is small enough.
>If it is pointed at or near the ground then the noise is about the temp of
>the ground somewhere around 270 deg K if I remember correctly for a normal
>room (outside ?) temp. If it is pointed at a clear sky (no stars or
>radio sources) then it can be very low like maybe 20 or 30 deg K.
>
>> My question, however, is: What happens if one of the stages is an
>> antenna? An attenuator is a 'passive' loss. By that, I mean that its
>> noise is thermal noise, not caused by any active components.
>>
>> I see nothing in equation 2 above that prevents Gd from being either
>> greater or less than 1.0, so my conjecture is that, yes, an antenna
>> can be treated the same as an attenuator in analyzing a multistage
>> system.
>>

>> Any thoughts?
>>
>> Jim
>> N8EE
>
>

2605. Nimh battery charger circuit.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-25 23:59:06 UTC
From: Eskay <Nospamve3jua@rac.ca>
Message-ID: <3D924DCA.93CD82A3@rac.ca>
Source record: 41162

I need a simple circuit to charge two AA Nimh batteries..
Thanks very much..
Eskay...VE3JUA..

2606. Re: Simple (I hope) transmitter help.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 00:19:14 UTC
From: w4pqwhs@aol.com
Message-ID: <20020925201914.00230.00005476@mb-ce.aol.com>
Source record: 41169

>possible... I have neighbours who insist
>on playing their stereo at distortion levels. Anyway, I've been told
>the freq CD players work from is 4.2MHz. Can someone suggest/point me

Allen, I am not familiar with any 4.2 mhz signal used in CD player..Most likely a transmitter that would interfere with their CD player would probably be illlegal ,and could get you sent to "radio jail"..if the noise or sound level is so high as to be a neusinance to you, you may have a civil case that you could persue.. don`t believe I would get into the interference business, could bother other neighbors, air lines,law enforcement, military ,who knows..good luck HS in Fla.

2607. Re: Freeze spray tip (was: Re: Fixing vintage amp withstatic/crack...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 00:39:27 UTC
From: k7itm@aol.com
Message-ID: <3200347.0209251639.3c67cd4@posting.google.com>
Source record: 41170

There's a little web ap here that will calculate the vapor pressure for you at any given temperature (over a limited range): http://www.eatel.net/~amptech/elecdisc/rifledemos.htm This says at 68F = 20C, it's some 833psi. Is that extreme? Perhaps not, but it's enough you should have a proper container for it!

You can find a phase diagram for CO2 here: http://www.chem.uncc.edu/faculty/murphy/1252/Chapter11B/sld004.htm That should give you a bit more insight. Below -56.4C, you won't have liquid, and above 31.1C, the difference between liquid and gas is blurred. And you don't have liquid at pressures less than 5.11 atmospheres.

In fact, I was a teaching assistant in a chem lab long ago, and we had some dry ice in for some reason. One of the students put some in a glass sample vial, and I happened by about the time it warmed enough to become a liquid. It was one of the few times I felt really good, especially after the fact, about having a little forethought about what might happen...I told him to wrap it in a towel _immediately_ and lock it in his storage locker. A few minutes later, we were treated to a fairly loud BANG! from the locker, and he took out the towel and glass shards. So...please do NOT try this at home!

Cheers,
Tom

ogrowup@webtv.net (P.L. O'Connor) wrote in message news:<6163-3D8CDE7D-84@storefull-2236.public.lawson.webtv.net>...
> PArdon me for intruding, but...
> I seem to remember that carbon dioxide (CO2) exists only as a gas or a
> solid ('dry ice'); it can exist as a liquid only under extreme
> pressure..what sort of pressure are you talking here?
>
> "Eagles may soar but weasels aren't sucked into jets."

2608. Re: my experiment with ultra-sonic transducers as an i-f

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 01:52:14 UTC
From: janaeanddoug@netzero.net
Message-ID: <360a820d.0209251752.888a68f@posting.google.com>
Source record: 41171

la8ak.xnd@online.no (J M Noeding) wrote in message
news:<3d8e2a0b.252119098@news.online.no>...
> On 21 Sep 2002 20:30:24 -0700, janaeanddoug@netzero.net (Doug) wrote:
>
> >Recently took a d-c reciever and put a "transmit" transducer in place
> >of the speaker. Transducer was around 40 kc. Next to this I put the
> >"recieve" transducer. So I had an i.f. of 40 k.c. After this, the
> >signal went into a diode ring mixer, which used audio transformers and
> >4 1N914 diodes. I injected a signal from a 555 timer(bfo signal) into
> >the mixer and adjusted its frequency until I could hear signals. The
> >results were really impressive, very steep and selective, and even
> >passed one sideband! but images were really close cause of the low
> >i.f.. None of this is really new, cause its the basis of a mechanical
> >filter, but what had me baffled was the fact that with the bfo off,
> >The transducers stripped the carrier off all the signals and am
> >sounded normal!
>
> Interesting, but would be more so if you could give some figures about
> the selectivity
>
> 73
> Jan-Martin
> LA8AK
I dont have any fancy test equipment, but I did try a selectivity
test with my frequency counter, looks like it has selectivity of about
3.5 khz...not great, but then the further away I place the
transducers, the better. 73 Doug

2609. Re: my experiment with ultra-sonic transducers as an i-f

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 01:57:37 UTC
From: janaeanddoug@netzero.net
Message-ID: <360a820d.0209251757.834a5dd@posting.google.com>
Source record: 41172

>
>
> Hi Jan,
>
> Long time. No conversations.
>
> I agree with you, but I would also like to see the block diagram of this
> beast. An IF this low is bound to have image problems. BTW, I haven't
> seen Kcs in 30 years. :-)
>
> Steve Carlton WB4CZR

Terrible images, yes indeed! But this idea came upon me as I was trying to come up with different ways to filter the signal. Of course xtal filters are cheap and easy to make, but this was cool to actually use. 73 Doug p.s., dont know how to put the block diagram on here.

2610. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 02:18:08 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <up4rj8p9e0k035@corp.supernews.com>
Source record: 41173

> Two, (your case I believe) the r-f hardware is strong enough to
> operate at full gain regardless of incoming signal strength.

This would mean that you could turn the AGC off, run the RF gain at full tilt, use a good antenna, tune across 75 meters on a contest weekend and not have any distortion on the strongest signals on the band.

2611. Re: Nimh battery charger circuit.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 02:21:33 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <up4rpl7gimc180@corp.supernews.com>
Source record: 41174

> Why not just a 5 watt wire wound resistor in series with the supply
to
> deliver the required current?

Because as the battery voltage climbs during charging, the current
drops. A current regulator will maintain a constant current regardless
of battery voltage so it gets charged faster.

2612. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 02:53:44 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D9276B8.3060606@eznec.com>
Source record: 41175

Bob Lewis (AA4PB) wrote:
>>Two, (your case I believe) the r-f hardware is strong enough to
>>operate at full gain regardless of incoming signal strength.
>
>
> This would mean that you could turn the AGC off, run the RF gain at
> full tilt, use a good antenna, tune across 75 meters on a contest
> weekend and not have any distortion on the strongest signals on the
> band.

Or switch in an attenuator, and switch it back out on Monday morning.

Roy Lewallen, W7EL

2613. Re: 2-meter packet homebrew?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 10:43:29 UTC
From: c.a.m@nospammam.blueyonder.co.uk
Message-ID: <55p5pugeedastkg9qa05dv8jvgdrkdpk0c@4ax.com>
Source record: 41176

Don't forget it can now all be done on a sound card, the only bit you need to make is a tx/rx switch.

Clive

2614. Re: UHF+ SWR meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 10:52:51 UTC
From: c.a.m@nospammam.blueyonder.co.uk
Message-ID: <9gpuou814aon0tfpseagts88qnth44lglh@4ax.com>
Source record: 41177

Don;t you mean a 50 ohm to ground on the one end and not 100 ohm (on the pick up lines) ?

Clive

2615. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 11:04:52 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <up5qeslftbm9f6@corp.supernews.com>
Source record: 41178

> Or switch in an attenuator, and switch it back out on Monday
morning.

Yes, but that represents a form of manual gain control. The
electronics is not capable of handling the full range of possible
signals. My point is that I have not experienced a receiver that can
handle the full potential range of signals without some type of gain
control, be it manual RF gain, an attenuator, or AGC.

2616. Re: 2m homebrew antenna tuner schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 11:24:17 UTC
From: mike c <md_removeunderscores_cola@evenlink.com>
Message-ID: <MPG.17fcb870b59c2b8e98968c@news.evenlink.com>
Source record: 41179
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

In article <3D89D780.4243E908@ieee.org>, Cecil.A.Moore@ieee.org
says...
> JC wrote:
> >
> > > If you really need an antenna tuner, which I doubt, it should be
> > > mounted at the antenna and be remotely controlled, unless you want to
> > > climb the tower each time it needs to be readjusted. By this
> > > arrangement only the antenna is tuned and the feedline is not
> > > resonated, thus keeping the feedline losses down.
> >
> > I don't understand this. Why not putting the tuner between transmitter and
> > line ?
>
> If your 2m SWR is high enough to require an antenna tuner, it is so
> high that you will lose a lot of your transmitted signal unless you
> are using very expensive coax or unless you put the tuner at the antenna.
>
and the prob i had getting the swr down on 2m with a 5/8 vert was due
to poor ground plane.
--
Best Regards,
Mike Colasono

2617. Re: Nimh battery charger circuit.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 12:25:43 UTC
From: "Joe S." <joe@schlatter.org>
Message-ID: <amuudv0jr3@enews3.newsguy.com>
Source record: 41180

Why not visit a local retailer -- should be several in Canada -- and
purchase a Ray-O-Vac NiMH charger? For under US$20.00 you get a charger
that will charge AA, AAA, and 9-volt cells; adjusts the charge rate to fit
the condition of the battery; and has indicator lamps to tell you when it's
finished. Probably less than the cost to build one.

--

Regards,
Joe S.

"Eskay" <Nospamve3jua@rac.ca> wrote in message
news:3D924DCA.93CD82A3@rac.ca...
> I need a simple circuit to charge two AA Nimh batteries..
> Thanks very much..
> Eskay...VE3JUA..
>

2618. Re: Simple (I hope) transmitter help.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 13:07:59 UTC
From: Just Allan <justallan@COLDhotmail.com>
Message-ID: <63d3pu4d2ehk09he92luauc2rv26ati2tg@4ax.com>
Source record: 41181

On Wed, 25 Sep 2002 16:50:13 GMT, yeti@REMOVEcet.com
(yeti@REMOVEcet.com) wrote:

>In <rbo30vgdrna6c9c7tbliup76ssf8di3kik@4ax.com>, Just Allan
><justallan@COLDhotmail.com> wrote:
>
><snip>
>>Yep - as I said, there's far more to the story. They're not the full
>>dollar and if they ever knew I'd called the police - or even (gasp)
>>TALKED to them and asked them to turn down the music... Let's just
>>say their friends are the town thieves/drug pushers etc.
>
>Charming neighborhood. Ever thought about moving?

Heh - we just got here, actually!

>> Really I'd
>>rather the low power transmitter solution. That way, they simply
>>think there's something wrong with their stereo - and as long as they
>>listen to it at a reasonable (not inaudible) level, IT doesn't play
>>up. No violence, no trouble. Also, we're in an area of Australia
>>where the "RFI" wouldn't affect anyone else. (A regional area.)
>
>I posted what I did because I have already been in a similar
>situation. They are going to play whatever they want, whenever they
>want, and as loud as they want -- behavior consistant with lawless
>attitudes. If you cause RFI (whether they realize it or not) they are
>just going to get a new CD player that isn't affected by RFI. If you
>manage to jam that one, too, then you can bet they are going to get
>suspicious, and you will be risking the violence you claim to be
>avoiding.
>
>But hey, if you want to do things the hard way, that's your choice.
>Just find yourself a coarse metal or wood file, a screwdriver, and
>some jumper cables. Hook the file and screwdriver up to a car battery
>with the cables, and draw the screwdriver over the file. Makes a
>really nasty hash that can be heard for a couple hundred feet.

Heh... I have lots of junked gear lying around, and thought I could
just pull the I.F. crystals - then try them in a simple transmitter.
When I was a kid, the CB I had interfered with everything two houses
either way. Remembering back then, was what got me thinking along
these lines...

Allan.

2619. Receiver without a powersupply (or batteries)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 13:21:40 UTC
From: jan.ole.sundli@chembio.ntnu.no
Message-ID: <d462201.0209260521.12c4be35@posting.google.com>
Source record: 41182

Hi!
I saw on Discovery once someone who made a radio out of an old
variable cap, a very long antenna loop, and a ferrite. Can anyone tell
me how to do this? I found some old variable air caps with about
200pF.
Thanks
Jan Ole

2620. Re: Receiver without a powersupply (or batteries)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 13:45:50 UTC
From: troglodite@aol.com
Message-ID: <20020926094550.06793.00010748@mb-mv.aol.com>
Source record: 41183

>Hi!
>I saw on Discovery once someone who made a radio out of an old
>variable cap, a very long antenna loop, and a ferrite. Can anyone tell
>me how to do this? I found some old variable air caps with about
>200pF.

Jan,

Not sure what the ferrite was used for. You describe the basic makings of a crystal set, and for more information on various types try www.midnightscience.com

There is also a book called "The Voice of the Crystal" which shows how to make crystal sets from household materials, no special parts required.

A basic crystal set has some kind of tuner, which is a coil/capacitor combination with either the coil or the capacitor variable, a detector, a set of headphones and an antenna and ground. Sometimes a fixed capacitor or a resistor is added across the headphones depending on the type. Many materials have been used for detectors, but the common device is a 1N34 germanium diode. Headphones need to be high impedance, 2000 ohms or greater. Crystal headphones need some kind of resistor across them as a load for the detector. (Usually about 47000 ohms.) More information on the Crystal Set Society web page mentioned above.

Have fun!

Doug Moore

2621. Need info on RACAL 90516 Antenna tuner, Specs etc.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 14:05:17 UTC
From: ni4l@msn.com
Message-ID: <d4a0748e.0209260605.721479f7@posting.google.com>
Source record: 41184

Need info on Need info on RACAL 90516 Antenna tuner, Specs etc.

Does anyone have any paperwork on this tuner?

Thanks Chris

2622. Re: 10KW GATES ROLLER INDUCTOR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 14:06:05 UTC
From: ni4l@msn.com
Message-ID: <d4a0748e.0209260606.5df76adf@posting.google.com>
Source record: 41185

SOLD

ni4l@msn.com (NI4L) wrote in message
news:<d4a0748e.0209240553.72c3db5c@posting.google.com>...
> If you have been looking for the Ultimate Roller Coaster Inductor,
> HERE IT IS !!!
>
> Dimensions:
> * Coil element diameter - 3/8"
> * Coil winding diameter - 5 11/16" OD.
> * Coil frame length -6 13/16"
> * Overall length (shaft end to end) - 14 3/4"
> * Overall height - 7 1/2".
> * Shaft diameter - 3/8"
> * Mounting length -13 1/2"
> * Mounting width - 7"
>
> 37 COILS 103UH
> COILS SILVER PLATED
> SMOOTH ROLLER ACTION
>
> This is a very well Built Heavy Duty roller inductor.
> The name says it all Gates/Harris.
> This came from a 10kw transmitter.
> It is in excellent shape, no signs of any arcing, coils not pitted or
> damaged in any way. Just right for your next project. 225.00
>
> Buyer to pay postage/insurance figure around 17lbs shipped from 28681

2623. FA: WE 416B Planar Triodes (2 ea)..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 14:40:44 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <M%Ek9.104429$TX5.4270054@news1.east.cox.net>
Source record: 41186
Cross-posted to:
alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment

Please see:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1384212513

Thanks for looking..

2624. Re: Receiver without a powersupply (or batteries)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 16:21:39 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <nuGk9.239103$216.8643125@bin4.nnrp.aus1.giganews.com>
Source record: 41187

Look here for some info.

http://www.electronics-tutorials.com/receivers/crystal-radio-set.htm

Also do a Google search for 'fox hole radio'.

"Jan Ole Sundli" <jan.ole.sundli@chembio.ntnu.no> wrote in message
news:d462201.0209260521.12c4be35@posting.google.com...
> Hi!
> I saw on Discovery once someone who made a radio out of an old
> variable cap, a very long antenna loop, and a ferrite. Can anyone tell
> me how to do this? I found some old variable air caps with about
> 200pF.
> Thanks
> Jan Ole
>

2625. Re: Receiver without a powersupply (or batteries)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 16:41:41 UTC
From: ON5MJ <on5mjREMOVE@skynet.be>
Message-ID: <3d9338c9$0$208$ba620e4c@news.skynet.be>
Source record: 41188

Nice, it reminds me my first radio.

In this time I used a coil of about 100 turns in parallel with a variable capacitor (500 pF). It was OK for AM. Ferrite may increase sensitivity and selectivity. It's wise not to connect the antenna at the top but at about 1/3 of the coil. The rest is classic: germanium diode for detection (not silicon because of cutoff), 2000 ohms headphones, a small grounding cap (1000 pF) across the headphones. The ground connection (conterpoise) is mandatory because this radio is not that sensitive. You can always get close and not so close AM stations with this and plenty of fun for the kids.

--
on5mjREMOVE@skynet.be - please remove "REMOVE" from e-mail address

2626. Re: Noise Figure question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 16:50:50 UTC
From: aa1ll@email.com
Message-ID: <e85be400.0209260850.37beabba@posting.google.com>
Source record: 41189

nx7u@arrl.net (Scott Townley) wrote in message
news:<3d9240c3.21909281@news.west.cox.net>...
> Mostly...
> Antenna noise temperature is the equivalent temperature of all the
> noise it sees...still kTB.

Sort of...
There is also "man-made noise" which can be impulsive at HF frquencies and at VHF takes on a Gaussian distribution and can be summed power-wise with galactic and system (receiver, kToBF) noise. At 144MHz in the suburbs it has an equivalent level above kToB of 20dB, dropping to 0dB at 1GHz; at rural locations it is about 20dB lower. Note, you still have to add galactic noise above about 120MHz where galactic equals rural man made noise. This is from a 1963 CCIR report which is used to predict system performance. It is published in the ITT Handbook (Howard Sams & Co).

The interesting conclusion is that there is no reason to increase your receiver antenna gain if all it is doing is giving you MORE NOISE! In fact, for terrestrial communications below ~200MHz, a receiving antenna gain of more than 0dBi is wasted if you have a moderately low noise receiver (NF<2dB). (Transmitter EIRP is of course a different story.)

73, Paul, AA1LL
Mason, NH
http://www.qsl.net/aa1ll

2627. Re: my experiment with ultra-sonic transducers as an i-f

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 19:36:31 UTC
From: la8ak.xnd@online.no
Message-ID: <3d90bca4.420745314@news.online.no>
Source record: 41190

On Mon, 23 Sep 2002 20:32:08 GMT, motsteve@attbi.com (carltons) wrote:

>In article <3d8e2a0b.252119098@news.online.no>, LA8AK,xnd@Online.NO wrote:
>
>> On 21 Sep 2002 20:30:24 -0700, janaeanddoug@netzero.net (Doug) wrote:
>>
>> >Recently took a d-c reciever and put a "transmit" transducer in place
>> >of the speaker. Transducer was around 40 kc. Next to this I put the
>> >"recieve" transducer. So I had an i.f. of 40 k.c. After this, the
>> >signal went into a diode ring mixer, which used audio transformers and
>> >4 1N914 diodes. I injected a signal from a 555 timer(bfo signal) into
>> >the mixer and adjusted its frequency until I could hear signals. The
>> >results were really impressive, very steep and selective, and even
>> >passed one sideband! but images were really close cause of the low
>> >i.f.. None of this is really new, cause its the basis of a mechanical
>> >filter, but what had me baffled was the fact that with the bfo off,
>> >The transducers stripped the carrier off all the signals and am
>> >sounded normal!
>>
>> Interesting, but would be more so if you could give some figures about
>> the selectivity
>>

>I agree with you, but I would also like to see the block diagram of this
>beast. An IF this low is bound to have image problems. BTW, I haven't
>seen Kcs in 30 years. :-)
>
>Steve Carlton WB4CZR

Hi

LA7MI Stein suggests a small room between the transmitter and receiver
to form a sort of resonator, but he won't post here (to avoid SPAM),
it should be possible to achieve low bandwidth for cw

73
Jan-Martin LA8AK
--
remove ,xnd to reply

2628. Re: Noise Figure question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 19:56:53 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <Ksw403BFa2k9EA+8@ifwtech.co.uk>
Source record: 41192

Paul Gili wrote:
>
>The interesting conclusion is that there is no reason to increase your
>receiver antenna gain if all it is doing is giving you MORE NOISE! In
>fact, for terrestrial communications below ~200MHz, a receiving antenna
>gain of more than 0dBi is wasted if you have a moderately low noise
>receiver (NF<2dB).

So how come people buy all these beams?

If the noise distribution is uniform in all directions, the increased noise power density received by a beam in the forward direction is exactly compensated by the reduced power density received from other directions. Therefore the noise power received by the beam antenna is the same as that received by an isotropic source, which is another way of saying that the antenna noise temperature remains the same.

But the incoming power from the wanted signal is multiplied by the forward gain, because the beam collects more power from a wavefront arriving from that direction.

>(Transmitter EIRP is of course a different story.)
>
Transmitter EIRP is almost the *same* story, only it's rather easier to visualize.

The beam concentrates more of the radiated power in the forward direction, giving gain over an isotropic source. But the total radiated power doesn't change, so in the unwanted directions a beam must have *loss* relative to an isotropic source.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2629. FYI: Kits including AM Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 21:03:45 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <RCKk9.76746$S32.4761112@news2.west.cox.net>
Source record: 41191

Dozens nay Hundreds of kits including radios at URL:
http://ac6v.com/kits.htm

And then there is Elecraft --- http://www.elecraft.com/

Build a solid state AM Radio for $12.95 at URL:
http://www.electronics123.com/amazon/default.htm

Another at URL:
http://www.elenco.com/elenco.pdf

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com

2630. Re: Design for 2M 1/2 wave for bicycle ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-26 23:52:40 UTC
From: kd5nrh@yahoo.com
Message-ID: <20020926195240.356$wX@newsreader.com>
Source record: 41193

lagagnon@fakesprint.ca (Larry Gagnon) wrote:
> I would like to build a 2M 1/2wave antenna for use on a bicycle. Can
> anyone point me to an appropriate design or article to build such?

If you want to get creative, how about using one of those fiberglass
bicycle flag poles and setting up a vertical inside it?

Or you could try something from an old CB fiberglass antenna.

--
Joe Bramblett, KD5NRH

2631. CB conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 03:58:25 UTC
From: Alan Reece <alan.liz@verizon.net>
Message-ID: <BHQk9.5686$qg5.937@nwrddc02.gnilink.net>
Source record: 41194

Many years ago I saw projects to convert a CB radio into a ham radio.

Can anyone direct me to where I can find this information now?

Thanks,
Alan Reece
KQ6LJ

2632. Re: CB conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 04:54:35 UTC
From: George Crewe <gmcrewe@mnsi.net>
Message-ID: <3D93E48B.2030909@mnsi.net>
Source record: 41195

Alan Reece wrote:

>Many years ago I saw projects to convert a CB radio into a ham radio.
>
>Can anyone direct me to where I can find this information now?
>
> Thanks,
> Alan Reece
> KQ6LJ
>
>Dear Alan,
>

Try some of the cb mod pages. The best one to modify, is one that has
either an 01 or an 858 pll chip. I have a trc458 radio shack rig with 3
thumbwheels in place of the original channel selector switch. This gives
me almost all of the 10 meter band and I have worked the planet with 12
watts in ssb and psk31.

Best of luck and 73 for now.

George M. Crewe
VE3 TPD

>
>

2633. Re: Fox Hole Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 06:20:34 UTC
From: harleybuyer@aol.com
Message-ID: <20020927022034.28458.00006570@mb-cm.aol.com>
Source record: 41196

Hi, Can you tell me how to buld this radio?

Dave
Harleybuyer@aol.com

2634. Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 08:32:14 UTC
From: n2cqr@clix.pt
Message-ID: <3d941403.82107935@news.clix.pt>
Source record: 41097

Mike Marcus, N3JMM, has an interesting article on LINUX and "software radio" In the October 2002 QST.

Mark discusses the ideas (from 1959) of John Costas. "John feared that the widespread use of SSB would lead to a rapid decline in HF equipment building by hams and a consequential adverse impact on the ARS...Costas was trying to advocate suppressed-carrier double sideband because it was simpler to build and had overall throughput comparable to SSB according to his analysis."

Having recently built two DSB transcievers and one SSB transmitter, I thought this was a very interesting comment. The DSB rigs are far easier to get going.

What do you guys think -- could simple DSB rigs have saved more hams from appliance addiction?

73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 25.7 W
http://planeta.clix.pt/n2cqr

2635. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 10:30:52 UTC
From: ronayling@hotmail.com
Message-ID: <3d943098.13654821@news.freeserve.co.uk>
Source record: 41098

All history I'm afraid, leading to today where here in the UK Home Brew is almost extinct even simple mods to PMR equipment is seen as being for the very few that have the time knowledge and test equipment, you only have to look at the help files to realise many componants suitable for Home Brew are no longer made,
Of course there will always be a few diehards usually grey heads that will carry on but amateur radio in the home brew sense will for all intents and purposes be gone by the end of this decade, with the advent of broadband internet and all that will come with it communication in the amateur sense will be over, as the younger generation will see no magic in it, similar to us when we turn a light switch on and get light, we are at this moment experiancing the end of an era, like steam trains.......

On Fri, 27 Sep 2002 08:32:14 GMT, n2cqr@clix.pt (Bill Meara) wrote:

>Mike Marcus, N3JMM, has an interesting article on LINUX and "software
>radio" In the October 2002 QST.
>
>Mark discusses the ideas (from 1959) of John Costas. "John feared that
>the widespread use of SSB would lead to a rapid decline in HF
>equipment building by hams and a consequential adverse impact on the
>ARS...Costas was trying to advocate suppressed-carrier double sideband
>because it was simpler to build and had overall throughput comparable
>to SSB according to his analysis."
>
>Having recently built two DSB transcievers and one SSB transmitter, I
>thought this was a very interesting comment. The DSB rigs are far
>easier to get going.
>
>What do you guys think -- could simple DSB rigs have saved more hams
>from appliance addiction?
>
>
>73 de Bill CU2JL N2CQR
>Sao Miguel Island, The Azores, Portugal
>37.7 N 25.7 W
>http://planeta.clix.pt/n2cqr

2636. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 12:33:11 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <beYk9.255787$216.9717073@bin4.nnrp.aus1.giganews.com>
Source record: 41099

Let me tie this together with the article in QEX regarding receivers and adjacent channel interference. I think that the article in QEX will cause a lot of people to rething using their transceivers for DX. When a modified Drake R4C comes out on top (because of its very quiet PTO) , you know that 20 years of up-converting is not the way to go.

A lot of "homebrewing" fans have gone into robotics, microcontrollers, audio and "over-clocking" their PC's. I couldn't get my 3 sons into ham radio, but they are all gadgeteers. Just look at the direction of magazines -- Nuts N Volts, Circuit Cellar, AudioXpress etc., etc.

"Bill Meara" <n2cqr@clix.pt> wrote in message
news:3d941403.82107935@news.clix.pt...
> Mike Marcus, N3JMM, has an interesting article on LINUX and "software
> radio" In the October 2002 QST.
>
> Mark discusses the ideas (from 1959) of John Costas. "John feared that
> the widespread use of SSB would lead to a rapid decline in HF
> equipment building by hams and a consequential adverse impact on the
> ARS...Costas was trying to advocate suppressed-carrier double sideband
> because it was simpler to build and had overall throughput comparable
> to SSB according to his analysis."
>
> Having recently built two DSB transcievers and one SSB transmitter, I
> thought this was a very interesting comment. The DSB rigs are far
> easier to get going.
>
> What do you guys think -- could simple DSB rigs have saved more hams
> from appliance addiction?
>
>
> 73 de Bill CU2JL N2CQR
> Sao Miguel Island, The Azores, Portugal
> 37.7 N 25.7 W
> http://planeta.clix.pt/n2cqr

2637. Re: Fox Hole Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 13:18:24 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <an1lqv$p3q$1@venus.btinternet.com>
Source record: 41101

"HarleyBuyer" <harleybuyer@aol.com> wrote in message
news:20020927022034.28458.00006570@mb-cm.aol.com...
> Hi, Can you tell me how to buld this radio?

Start with an ordinary crystal set using a germanium diode detector. Get
that working, then try a razor blade, galena or whatever.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2638. Homebrew in QST--Chicken or Egg?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 15:32:40 UTC
From: Roger Leone <arleoneNoSpam@inreach.com>
Message-ID: <9S_k9.1537$hv5.456934431@news.inreach.com>
Source record: 41102

QST ceased being a technical publication several decades ago. If you pick up some issues from the 1950's and 1960's you will be amazed at the construction articles that gave homebrewers many good designs to follow. Yes, QEX is a separate publication for the technically inclined, but it just segregates homebrewers from the mainstream ham population. The Radio Amateur's Handbook also has greatly reduced content aimed at homebrewers.

SSB transmitters and receivers are a little harder to build than those old AM rigs, but better components are available today that simplify the process (DBM's, filters, etc). But you don't go directly to building a SSB transceiver without some easier projects to learn from and whet your appetite. Homebrewers can build power supplies, antenna tuners and other parts of their stations, even if they don't try to build an all band, all mode transceiver.

My question is this: Does QST's lack of technical content merely reflect the preference of its readers, or does QST's lack of technical content the contribute to the lack of interest in its readers? (Cause or effect, chicken or egg?)

I am guessing that it is a little bit of both.

73,

Roger K6XQ (ARRL member and QEX subscriber)

2639. Re: motorola business band to ham help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 16:05:36 UTC
From: Skipp <nospam@yahoo.com>
Message-ID: <an1vkg$39a$1@woodrow.ucdavis.edu>
Source record: 41103

: i have acquired some old motorola pageboy pagers that operate on 153.110. i
: would like to use them as a weather alert reciever or as a 2M repeater
: monitor.

Not practical... they are not designed for audio and mod'ing them is a pain. Not to mention the large change in frequency. You can buy a weather alert receiver from Radio Shaft cheap, it's more practical to use it for repeater rx operation adding a squelch circuit. With the cost of scanners near an all time low... you should be looking in that direction.

: the second question i have is on a motorola radio that radioshack used to
: make. catalog 19-1216 uhf business band radio. is it possible to change it
: to a 70cm repeater or simplex freq. i checked batlabs.com and couldnt find
: anything

Yes, don't have a picture of it, but it's probably something like a Motorola Spirit or similar series of radio. Find a motorola person and they should be able to provide you with the equivalent Motorola radio type. Radio Shack should also be able to sell you a service manual for it, they've been really go to me in that regards.

It probably wouldn't be practical to move the radio into the ham bands. Many of them are crystal controlled and require retuning plus. As cheap as ham radios are getting these days, don't waste your time ordering crystals for a conversion.

: any help would be appreciated
: steve

cheers
skipp
http://sonic.ucdavis.edu has a cool amateur radio page

2640. Re: Foolproof grid circuit for 4CX350 at 50MHz pse?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 16:11:22 UTC
From: Skipp says contact him through the web page <nospam@yahoo.com>
Message-ID: <an1vva$39a$2@woodrow.ucdavis.edu>
Source record: 41104

You want to run it AB1 or grounded grid..?
Where is the drive going... the grid or the cathode...?

I've got a circuit on the http://sonic.ucdavis.edu Amateur Radio page,
there are Email icons to contact me if you have questions.

cheers
skipp

http://sonic.ucdavis.edu

2641. Re: CB conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 16:11:24 UTC
From: Eskay <Nospamve3jua@rac.ca>
Message-ID: <3D94832C.2A421B20@rac.ca>
Source record: 41100

73 Magazine ran a lot of articles on converting CB radios way back when.
Go to cbcintl.com,they have info and parts to convert CBs.
Eskay..

Alan Reece wrote:

> Many years ago I saw projects to convert a CB radio into a ham radio.
>
> Can anyone direct me to where I can find this information now?
>
> Thanks,
> Alan Reece
> KQ6LJ

2642. Re: CB conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 16:24:09 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <an20nd$e3i$1@slb2.atl.mindspring.net>
Source record: 41105

I have a Uniden Grant model that I simply changed the crystal. And got it
to cover a good part of the ten meter band. Its been a few years and
without taking it apart and looking I don't recall the frequency of the
xtal. But will check if someone really needs it.

Dan/W4NTI

"George Crewe" <gmcrewe@mnsi.net> wrote in message
news:3D93E48B.2030909@mnsi.net...
>
>
> Alan Reece wrote:
>
> >Many years ago I saw projects to convert a CB radio into a ham radio.
> >
> >Can anyone direct me to where I can find this information now?
> >
> > Thanks,
> > Alan Reece
> > KQ6LJ
> >
> >Dear Alan,
> >
>
> Try some of the cb mod pages. The best one to modify, is one that has
> either an 01 or an 858 pll chip. I have a trc458 radio shack rig with 3
> thumbwheels in place of the original channel selector switch. This gives
> me almost all of the 10 meter band and I have worked the planet with 12
> watts in ssb and psk31.
>
> Best of luck and 73 for now.
>
> George M. Crewe
> VE3 TPD
>
> >
> >
>

2643. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 16:25:54 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <an20qn$q6e$1@slb7.atl.mindspring.net>
Source record: 41106

Nah....incentive licensing led to Dick Bash...then to the CB
flood.....nothing could have changed it.

Dan/W4NTI

"Bill Meara" <n2cqr@clix.pt> wrote in message
news:3d941403.82107935@news.clix.pt...
> Mike Marcus, N3JMM, has an interesting article on LINUX and "software
> radio" In the October 2002 QST.
>
> Mark discusses the ideas (from 1959) of John Costas. "John feared that
> the widespread use of SSB would lead to a rapid decline in HF
> equipment building by hams and a consequential adverse impact on the
> ARS...Costas was trying to advocate suppressed-carrier double sideband
> because it was simpler to build and had overall throughput comparable
> to SSB according to his analysis."
>
> Having recently built two DSB transcievers and one SSB transmitter, I
> thought this was a very interesting comment. The DSB rigs are far
> easier to get going.
>
> What do you guys think -- could simple DSB rigs have saved more hams
> from appliance addiction?
>
>
> 73 de Bill CU2JL N2CQR
> Sao Miguel Island, The Azores, Portugal
> 37.7 N 25.7 W
> http://planeta.clix.pt/n2cqr

2644. Re: Homebrew in QST--Chicken or Egg?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 17:20:49 UTC
From: n7ws@nowhere.com
Message-ID: <3d94936a.7140615@news.triconet.org>
Source record: 41107

On Fri, 27 Sep 2002 08:32:40 -0700, "Roger Leone"
<arleoneNoSpam@inreach.com> wrote:

|QST ceased being a technical publication several decades ago. If you pick
|up some issues from the 1950's and 1960's you will be amazed at the
|construction articles that gave homebrewers many good designs to follow.
|Yes, QEX is a separate publication for the technically inclined, but it just
|segregates homebrewers from the mainstream ham population. The Radio
|Amateur's Handbook also has greatly reduced content aimed at homebrewers.
|
|SSB transmitters and receivers are a little harder to build than those old
|AM rigs, but better components are available today that simplify the process
|(DBM's, filters, etc). But you don't go directly to building a SSB
|transceiver without some easier projects to learn from and whet your
|appetite. Homebrewers can build power supplies, antenna tuners and other
|parts of their stations, even if they don't try to build an all band, all
|mode transceiver.
|
|My question is this: Does QST's lack of technical content merely reflect
|the preference of its readers, or does QST's lack of technical content the
|contribute to the lack of interest in its readers? (Cause or effect,
|chicken or egg?)

I am a longtime ARRL member (you're supposed to say this instead of
"QST subscriber") and on again-off again QEX subscriber. I also buy a
new Handbook and Antenna Book once in a while and I have all of the
Antenna Compendiums, (and was published in the last one).

In my opinion, the ARRL has turned into a publishing house. The
objective is to sell as many publications as possible. If that means
divvying up the available material into a number of separate
"specialty" publications then that's what they do. Is it in the best
interest of ham radio to do so? I don't think so.

On a personal note, I would have much rather my paper was published in
QST where it would have done more good than have it published in the
Compendium, where the readership is much smaller.

Just examine the advertiser's index in the latest issue for example.
Not counting the covers, there are 160 pages in this "Official Journal
of the ARRL." Seventeen of them have advertisements for---you guessed
it, the ARRL.

To be fair, many of these are nothing more that fillers; however, four
are full-page ads. Take out all of this shilling for the house and
there would have been room for a technical article or two.

As for QEX, as I said earlier, I have subscribed a few times (not currently) but it's too expensive. If there are four good pieces in it but I'm not interested in two of them, then 50% of the content is wasted on me. If these same pieces were in QST, then the two I'm not interested in would be a small percentage of the total. Clearly, the "Official Journal of the ARRL" should be including the work of all of its members and not relegating it to a splinter publication.

I have the first issue of QEX, which offered subscriptions of 12 issues for $6.00. The last issue I have at hand, July/August 2001, offers subscriptions of six issues for $24. Sure the new variant is slick, colorful and has more pages. (Three of those pages, including the back cover contain the inevitable full-page ads for ARRL.)

I saw my first QST in the high school library in the 1950's and was fascinated. I didn't understand much of it but it challenged and motivated me to learn to understand it. Ultimately, my hobby led to my life's work in engineering

Would a young person today be similarly challenged by "The Doctor is IN", which in the current issue says to avoid experimenting with an inexpensive microphone and go buy an overpriced Heil microphone instead?

I doubt it. But I'm sure that the ARRL's market research guys have fine-tuned their offerings to exactly what the majority of the public desires.

Wes N7WS

2645. Re: CB conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 17:47:45 UTC
From: rs2bk@aol.com
Message-ID: <20020927134745.27360.00004708@mb-bk.aol.com>
Source record: 41108

One article I just ran accross was in
the February 1967 QST.

Jim Roseman w9ud
Moline, IL

2646. Re: motorola business band to ham help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 19:01:32 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2709021502300001@c-66-176-144-254.se.client2.attbi.com>
Source record: 41109

In article <an1vkg$39a$1@woodrow.ucdavis.edu>, Skipp <nospam@yahoo.com> wrote:

> : i have acquired some old motorola pageboy pagers that operate on 153.110. i
> : would like to use them as a weather alert reciever or as a 2M repeater
> : monitor.
>
> Not practical... they are not designed for audio and mod'ing them is a
> pain. Not to mention the large change in frequency. You can buy a weather
> alert receiver from Radio Shaft cheap, it's more practical to use it for
> repeater rx operation adding a squelch circuit. With the cost of scanners
> near an all time low... you should be looking in that direction.
>
> : the second question i have is on a motorola radio that radioshack used to
> : make. catalog 19-1216 uhf business band radio. is it possible to change it
> : to a 70cm repeater or simplex freq. i checked batlabs.com and couldnt find
> : anything
>

I agree with you somewhat Skipp, but the old pageboy can and was used for
monitoring repeaters. Nowadays this is probably something that you
wouldn't want to do as it is one royal pain unless you can get the xtals
and a Pageboy I which had a nice size speaker. All should be advised that
it only works on a single freq and needs modifications up the wazoo for
carrier squelch and voice. Skipp's advise on the weather monitor makes
more sense.

Steve WB4CZR (ex Motorola engineer)

2647. Re: Foolproof grid circuit for 4CX350 at 50MHz pse?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 19:03:27 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2709021504260001@c-66-176-144-254.se.client2.attbi.com>
Source record: 41110

In article <an1vva$39a$2@woodrow.ucdavis.edu>, Skipp says contact him
through the web page <nospam@yahoo.com> wrote:

> You want to run it AB1 or grounded grid..?
> Where is the drive going... the grid or the cathode...?
>
> I've got a circuit on the http://sonic.ucdavis.edu Amateur Radio page,
> there are Email icons to contact me if you have questions.
>
> cheers
> skipp
>
> http://sonic.ucdavis.edu

Skipp,

That's a good question. BTW, which is the link to your circuit?

Steve WB4CZR

2648. Re: Homebrew in QST--Chicken or Egg?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 20:37:12 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D94C201.840@pop.removethistomailme.net>
Source record: 41111

Wes Stewart wrote:
>
> I saw my first QST in the high school library in the 1950's and was
> fascinated. I didn't understand much of it but it challenged and
> motivated me to learn to understand it. Ultimately, my hobby led to
> my life's work in engineering
>
> Would a young person today be similarly challenged by "The Doctor is
> IN", which in the current issue says to avoid experimenting with an
> inexpensive microphone and go buy an overpriced Heil microphone
> instead?
>
> I doubt it. But I'm sure that the ARRL's market research guys have
> fine-tuned their offerings to exactly what the majority of the public
> desires.
>

Well said, Wes.

The other issue with respect to QEX is: should its content really be printed and distributed on paper in the first place? I can put technical articles on the Web and reach anyone, anywhere, anytime (or at least as long as qsl.net stays in business), for free. QEX reaches a very limited audience by comparison.... but obviously they contribute editorial value that isn't available on the Web.

What are peoples' thoughts on the value of placing technical content in specialized, non-peer-reviewed magazines like QEX, versus less-disciplined venues like WWW sites? If you were in high school now, you wouldn't be digging through musty stacks of QSTs and QEXes in your library looking for something interesting to read -- you'd be surfing the net instead.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2649. MANUAL SALE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 20:39:57 UTC
From: joeee1621@aol.com
Message-ID: <20020927163957.08815.00000300@mb-ba.aol.com>
Source record: 41112

OVER 830 TITLES TO CHOOSE FROM..WE PROBABLY HAVE THE ONE YOU NEED ..ALL MANUALS
$16 SHIPPED TO THE LOWER 48 STATES UNLESS OTHERWISE NOTED.. PLEASE TAKE A LOOK
AT OUR LIST- http://hometown.aol.com/joeee1621/myhomepage/business.html -AND
LET US KNOW WHAT YOU WOULD LIKE-WE GLADLY SHIP WORLDWIDE-..NEW MANUALS
DAILY..ORDER TODAY..SHIP TOMORROW.

2650. Re: Foolproof grid circuit for 4CX350 at 50MHz pse?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 21:04:50 UTC
From: hexter@blazenet.net
Message-ID: <up9hvicqu4u2de@corp.supernews.com>
Source record: 41113

In article <amd6jg$st9$1@news.lth.se>, nospam@mah.se says...
>
>Hi group -
>
>I ï¿½ve seen many designs for the input of RF into the 4CX250 on 6m, but
not
>so many for the 4CX350.
>Currently, I am using a L-C-L input link that I find very sharp and
also
>inefficient. It just doesnï¿½t work well - set it and forget it, you
know....
>
>I have a 25W rig with adjustable output, so Iï¿½d settle for ,say, 5W
input
>power.
>The PA works at 1800V B+, 340V G2/screen, -70/25V G1/Bias.
>
>Who amongst you has the ultimate design - easy to build, easy to
adjust,
>stable and suitable?
>Will it be a C-L, a LCL or a parallell LC network that comes out the
winner?
>Can I *please* have your coil data in millimeters, *please* ? :-)
>
>Finally, space is an issue here - the grid compartment is small,
really....
>
>Tnx fer your pointers, time and help. 73 /Rick, SM7SCJ
>
with that much driving power availible, just drive it untuned.
i am doing so right now. i have a balun that is center tapped.
low side to ground, center tap to rig, and high side to grid.
i have 4 resistors in series/parallel set up to provide 200 ohms
from the grid to ground as a load for the rig. full output
equal about 10 watts input

2651. Re: Receiver without a powersupply (or batteries)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 21:54:22 UTC
From: "Sverre Holm (LA3ZA)" <0junk4me@qsl.net>
Message-ID: <is4l9.26774$sR2.469843@news4.ulv.nextra.no>
Source record: 41114

I am guessing from your name that you live somwhere in Norway, and the crystal detector won't work very well, at least not during daytime, unless you live within a few 100 km from some of the medium/long wave broadcasting stations. In Norway they are all along the West Coast and in the North (Stavanger, Kristiansund, ...).

Sverre LA3ZA
www.qsl.net/la3za

"Jan Ole Sundli" <jan.ole.sundli@chembio.ntnu.no> wrote in message news:d462201.0209260521.12c4be35@posting.google.com...
> Hi!
> I saw on Discovery once someone who made a radio out of an old
> variable cap, a very long antenna loop, and a ferrite. Can anyone tell
> me how to do this? I found some old variable air caps with about
> 200pF.
> Thanks
> Jan Ole

2652. Re: The Space/Time Paradox...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 22:31:40 UTC
From: newsdesk@aeonsciltd.net
Message-ID: <869eda69.0209271431.24596b56@posting.google.com>
Source record: 41115

"Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message
news:<3D8DE5C1.3951903D@clifto.com>...
> Eugene wrote:
> > "Clifton T. Sharp Jr." <clifto@clifto.com> wrote in message
news:<3D8C8999.2C5F5D5D@clifto.com>...
> > > Eugene wrote:
> > > > If electro-magnetic waves exist, then planes of parallel space
> > > > traveling near the speed of light, and if mass is relative to heat,
> > > > space/time is quazi-linear. The speed of any object is given as G...
> > >
> > > The teachers produce *this*, and then demand more money?
> >
> > GREAT CAESERS GAOST
>
> HOLY JUPMNIG KATPHESH
>
> Try "Hooked On Phonics", okay?
>
> > Take for example, a pebble it tries and tries to soak up water,
> > but to no avail. Casting the pebble into the water causing it to
> > sink, is the pebble invisable?
>
> Any potential is automatically a true negative resistor, since it is a
> free harmonic set of bidirectional flows of EM energy (due to its dipolarity
> and the broken symmetry of same; it takes the energy right out of the vacuum
> via the broken symmetry of the source charge or dipolarity). Hence you can
> collect as much energy from it as you wish, from its "flowing rivers of
> energy", if you arrange for enough charges (buckets) to collect it (to
> collect the water). Nothing says you have to use just one kind of charge
> (the electron). You can use -- as Bedini does -- both the ions between the
> plates and the electrons in the external circuit. And you can use them
> both, and potentialize them both simultaneously with the same potential.
> HOW MUCH EXCESS ENERGY YOU CATCH IN BOTH DIRECTIONS DEPENDS SOLELY ON THE
> MAGNITUDE OF THE PHI AND THE MAGNITUDE OF THE Q's.
>
> http://www.icehouse.net/john1/

GREAT CAESARS GAOST

Interesting that you should bring that up... I've been running it
around in my mind, and I seem to have stumbled upon a possible
explaination for harmonic variations in a closed circuit - not
something but something else - sort of reasoning! THANKS

http://www.aeonsciltd.net

2653. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 22:52:58 UTC
From: N2EY@AOL.COM
Message-ID: <c2356669.0209271452.558a2225@posting.google.com>
Source record: 41116

n2cqr@clix.pt (Bill Meara) wrote in message news:<3d941403.82107935@news.clix.pt>...
> Mike Marcus, N3JMM, has an interesting article on LINUX and "software
> radio" In the October 2002 QST.
>
> Mark discusses the ideas (from 1959) of John Costas. "John feared that
> the widespread use of SSB would lead to a rapid decline in HF
> equipment building by hams and a consequential adverse impact on the
> ARS...Costas was trying to advocate suppressed-carrier double sideband
> because it was simpler to build and had overall throughput comparable
> to SSB according to his analysis."
>
> Having recently built two DSB transcievers and one SSB transmitter, I
> thought this was a very interesting comment. The DSB rigs are far
> easier to get going.
>
> What do you guys think -- could simple DSB rigs have saved more hams
> from appliance addiction?

I don't think DSB would have made much difference, Bill. Here's why:

One of the big attractions of SSB (or SSSC, as it was originally known) over AM was spectrum conservation. Switching to SSB virtually doubled the effective width of the 'phone parts of the HF ham bands. (The US HF 'phone bands were fewer and narrower back then). DSB offered no spectrum savings over conventional AM, just the elimination of carrier heterodynes and big-iron modulators. And the Ancient Ones who pioneered SSB produced many examples of simple SSB rigs, like the W1JEO exciter, "Cheap And Easy SSB", and the IMP 3 tube exciter.

One of the main reasons many hams homebrewed in the post-WW2 era was economics. Prices of manufactured equipment were much higher than today, when you consider inflation. The savings of homebrew/surplus/kit rigs could make a big difference. Manufactured gear of that time was expensive in large part because of the manual labor needed to assemble and align it. New parts were relatively expensive for the same reasons. Homebrewing eliminated the labor cost, and the use of recycled and surplus parts allowed the homebrewing ham to save significant money. A set of simple hand tools and a few pieces of test gear were adequate for most ham projects.

The techology used by most hams in those days tended towards the "lots of boxes" shack: receiver, converter, exciter, VFO, final, speech amplifier, antenna tuning unit, control unit, several power supplies,

etc. Homebrew stations usually consisted of an evolution of small projects, built as time, skills and finances permitted. Often old gear was torn down and the parts reused, or existing gear modified and added onto until it bore little resemblance to its original form.

The end result of all this was that being a ham in those days required a certain amount of technical know-how and mechanical skill unless you were one of the few who were well-heeled enough to buy everything. And even those with lots of dough had to integrate their store-bought boxes into a working station. The prices of those days look cheap today, until you remember how low wages were back then for most people. Back when $5000/yr was considered a really good middle-class income, spending $500 on a ham station was BIG money.

The trend away from homebrewing was apparent even before WW2, and postwar surplus furthered that trend even before SSB became popular with hams.

As electronic manufacturing methods advanced, costs declined. Hand wiring gave way to PC boards. Miniaturization meant greater precision and planning were required. Quantity discounts on new parts and the static nature of surplus
meant that the homebrewers' cost advantages dwindled. This was first seen in the kit market - Heath could sell rigs like the DX-20/40/100 series for less than the parts would cost if bought new in small quantities. (btw, early Heath
stuff is full of surplus components).

On top of this was the move from separate, uncoordinated transmitter/receiver setups to the true heterodyne transceiver and the matched-pair transmitter-receiver lines. Multiband HF SSB ham transceivers were much less expensive than
comparable AM gear. Transceivers were also smaller and lighter, bringing the hamshack out of the basement or attic. But a typical ham transceiver was too complex for home construction with simple tools unless the builder was very
skilled and very patient, and willing to risk lots of time and money on a single big project, rather than lots of little ones. Again, the kit rigs offered a lowcost solution - when Heath offered the HW-100 at $250, it was a rare ham who could homebrew an equivalent for less money.

Where homebrewing flourishes is in the areas where the mainstream manufacturers don't go very much, like QRP, AM (!), vacuum tubes, new modes and methods, truly high performance, etc.

But homebrewing is NOT dead, despite pronouncements otherwise. It's simply become a niche market, rather than something almost all hams did, out of necessity. See Electric Radio for July, 1995.;-)

73 de Jim, N2EY

2654. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 22:56:18 UTC
From: g3pho@nospam.qsl.net
Message-ID: <3d98dc2c.48702784@usenet.free-online.net>
Source record: 41117

On Fri, 27 Sep 2002 10:30:52 GMT, ronayling@hotmail.com (Ron) wrote:

>with
>the advent of broadband internet and all that will come with it
>communication in the amateur sense will be over, as the younger
>generation will see no magic in it, similar to us when we turn a light
>switch on and get light, we are at this moment experiancing the end
>of an era, like steam trains.......

Hi Ron..

Are you related to Victor Meldrew??

Don't be so pessimistic!

Homebrew is alive and well... viz. UK QRP club, UK microwavers, etc ..
though not to the extent it was when I first got my callsign.

It's up to us "veterans" to inject some magic into the hobby for
youngsters. Communication is only part of amateur radio. There's a
great deal of satisfaction to be gained from making gear for its own
sake.

Peter, G3PHO

2655. Re: Homebrew in QST--Chicken or Egg?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-27 22:58:48 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <xEK2eZDoKOl9EAyb@ifwtech.co.uk>
Source record: 41118

John Miles wrote:
>
>What are peoples' thoughts on the value of placing technical content in
>specialized, non-peer-reviewed magazines like QEX, versus
>less-disciplined venues like WWW sites?

"Non-peer-reviewed"? QEX does have a review panel, but it's also presently edited by someone who knows his stuff in his own right. That makes you think about what you write. As both an author and an editor, I greatly value someone else's editorial input, and technical article are almost always the better for it.

You don't get that feedback on the web... and web content is generally the poorer without it.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2656. Newbie's got a question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 00:01:19 UTC
From: rferoni <rferoni@hotmail.com>
Message-ID: <jj6l9.267141$216.10285759@bin4.nnrp.aus1.giganews.com>
Source record: 41119

Hello all,

I don't know if I'm in the right place or not, but this is what I'm lookin for. I need to know how to make a transmitter that transmits up to about a 1/4 mile(maybe a little further) and how to build a reciever to go with it. I have NO idea of how to go about this. I just have this "idea" and I need to build a transmitter and reciever to get started. Could anyone point me in the right direction? Websites, books and such? Would greatly appreciate it......Thanks.

Ron

rferoni@hotmail.com

2657. Re: Newbie's got a question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 00:18:45 UTC
From: Bill M <exray@no>
Message-ID: <up9tageb9rs3db@corp.supernews.com>
Source record: 41120

rferoni wrote:
>
> Hello all,
>
> I don't know if I'm in the right place or not, but this is what
> I'm lookin for. I need to know how to make a transmitter that transmits up
> to about a 1/4 mile(maybe a little further) and how to build a reciever to
> go with it. I have NO idea of how to go about this. I just have this
> "idea" and I need to build a transmitter and reciever to get started. Could
> anyone point me in the right direction? Websites, books and such? Would
> greatly appreciate it......Thanks.
>
> Ron
>
> rferoni@hotmail.com

Would this be for communications purposes or just a link of some sort?
My first instinct says get a pair of FRS walkie talkies and you could
easily rig up something at very little cost.
-BM

2658. Re: Homebrew in QST--Chicken or Egg?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 00:26:46 UTC
From: n7ws@nowhere.com
Message-ID: <3d94f268.1519662@news.triconet.org>
Source record: 41121

On Fri, 27 Sep 2002 23:58:48 +0100, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

|John Miles wrote:
|>
|>What are peoples' thoughts on the value of placing technical content in
|>specialized, non-peer-reviewed magazines like QEX, versus
|>less-disciplined venues like WWW sites?
|
|"Non-peer-reviewed"? QEX does have a review panel, but it's also
|presently edited by someone who knows his stuff in his own right.

Yes indeed. But there is peer review and then there is PEER REVIEW.

My former employer paid a stipend for published papers, although only
those published in peer-reviewed journals (think IEEE). They also
required the author to get company approval before submitting
something for publication.

I once asked whether they would pay for something I was submitting to
a ham publication and they about laughed. I got it published
anyway---without their permission. They wouldn't pay; I wouldn't
play.

|That
|makes you think about what you write. As both an author and an editor, I
|greatly value someone else's editorial input, and technical article are
|almost always the better for it.

Absolutely.
|
|You don't get that feedback on the web... and web content is generally
|the poorer without it.

Not necessarily. Your web site is a shining example of an argument
against your position <g>. Others include, but are not limited to:
W4RNL, W7EL, W9CF...

These folks publish great stuff and I wouldn't be surprised if they
ran it by their peers before putting it up.

And I believe forums such as this wind up being a form of peer review.

73,

Wes

2659. Re: Homebrew in QST--Chicken or Egg?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 02:01:17 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3D950CEB.3CD@pop.removethistomailme.net>
Source record: 41122

Ian White, G3SEK wrote:
>
> "Non-peer-reviewed"? QEX does have a review panel, but it's also
> presently edited by someone who knows his stuff in his own right. That
> makes you think about what you write. As both an author and an editor, I
> greatly value someone else's editorial input, and technical article are
> almost always the better for it.

The conventional meaning of peer review implies that articles are vetted
by independent reviewers before they ever see the light of day. That's
a little different from what a magazine's on-staff editorial board does
(for better or worse).

> You don't get that feedback on the web...

Actually, I haven't found that to be true at all. I get a LOT of
feedback, much of it actually useful.

> and web content is generally
> the poorer without it.

In the general case, yes, I agree.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2660. Re: CB conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 02:17:23 UTC
From: KB7M <kb7m@arrl.net>
Message-ID: <Xi8l9.391$v_6.156263@news.uswest.net>
Source record: 41123

"George Crewe" <gmcrewe@mnsi.net> wrote in message
news:3D93E48B.2030909@mnsi.net...
>
>
> Alan Reece wrote:
>
> >Many years ago I saw projects to convert a CB radio into a ham radio.
> >
> >Can anyone direct me to where I can find this information now?
> >
> > Thanks,
> > Alan Reece
> > KQ6LJ
> >
> >Dear Alan,
> >
>
> Try some of the cb mod pages. The best one to modify, is one that has
> either an 01 or an 858 pll chip. I have a trc458 radio shack rig with 3
> thumbwheels in place of the original channel selector switch. This gives
> me almost all of the 10 meter band and I have worked the planet with 12
> watts in ssb and psk31.
>
> Best of luck and 73 for now.
>
> George M. Crewe
> VE3 TPD
>

I just had a burst of nostagia! I did one of those that exact way shortly
after I got my ham ticket. A friend raved over it so much that I gave it to
him, and he later gave it to another friend who gave it to someone else and
so on. I lost track of it after that, but it sure gave a string of new hams
a lot of fun!

The conversion was basically straightforward. The PLL chip takes as input
4-bit BCD numbers, one for each digit of the frequency. I tore out the the
channel assembly that was designed to present only the correct 40 BCD
patterns for the 40 CB channels. I replaced this with BCD thumbwheel
switches, one for each digit. Then I changed the reference crystal to move
the covered band up 1 Mhz from the 27 Mhz range to 28 Mhz. Then it was a
simple matter of tweaking the thing up to perform well a Mhz higher than
originally intended. I got a mod for tying the "clarifier" to the
transmitter as well as the receiver out of a CB mods book. The end result
was a radio with full coverage from about 28Mhz to about 29Mhz.

$10 for the radio at a yard sale, thumbwheels and a crystal from the junk box, produced a very usable QRP radio for 10 meters.

2661. Re: Analog Devices suppliers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 02:27:33 UTC
From: sdwilmet@aol.com
Message-ID: <20020927222733.14136.00005201@mb-bj.aol.com>
Source record: 41124

Rob...

Newark Electronics will sell single pieces, even take your redit card... Some of the device have been a bit pricey in single unit quanities however.

www.newark.com

Enjoy!

Regards, Steve

2662. Re: vhf dummy load plans

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 02:42:12 UTC
From: sdwilmet@aol.com
Message-ID: <20020927224212.14136.00005210@mb-bj.aol.com>
Source record: 41125

Ralph:

ARRL Amateur Radio Handbook (various years but not in the past 5 or so) -and- (if my mind isn't playing tricks on me) one of their VHF books - contained an article on VHF/UHF High Power Dummy Load construction. It used two one-gallon paint cans (stacked) and 50 ohm Ohmite Power Resistor (think 225w rated) and some fairly easy-to-make sheet metal cones... I built two of them years ago and they worked very well consiering their "cheap" price... They were good (I think for a Kilowatt out to maybe 450 Mhz... (I used
mine for 144 and 220 Mhz)...

Hope this helps...

Regards, Steve - W6SDW

2663. Re: CB conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 03:29:11 UTC
From: k9sqg@aol.com
Message-ID: <20020927232911.03289.00006105@mb-ck.aol.com>
Source record: 41126

There were quite a few modification articles in 73 magazine from the early 70s, I believe QST had one article written by Bob Heil. The easiest coversion is a CB rig with the 02A PLL chip and three crystals. To get it on 10 meters, you change one crystal, realign it, and you're on the air.

73s,

Evan

2664. Pinouts for TV tuner modules for homebrew project.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 03:44:11 UTC
From: N8PHU <N8PHU@comcast.net>
Message-ID: <fA9l9.335079$z91.14779003@bin3.nnrp.aus1.giganews.com>
Source record: 41127

Greetings all,

My question has to do with TV tuner modules thatI would like to turn into a couple of homebrew projects, but I can't seem to find a site to get the pinout of the modules. I also am looking at modifying my FRG-9600 scanner by upgrading the TV tuner module that is currently used in it. Does some one out there have a site to look up the pinouts?

Thanks,

Chris N8PHU

2665. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 07:49:47 UTC
From: ronayling@hotmail.com
Message-ID: <3d955ce9.1230450@news.freeserve.co.uk>
Source record: 41128

Sorry Peter but you are wrong, have you no eyes to see? I have
been going to Amateur Rallies for years and they are declining
fast, and even these rallies are 75% computer, and we call them
grey head rallies, just look around next time you go to one and see
for yourself, componants are getting hard to find, magazines like
HRT have gone, most clubs have a declining membership, I've
seen it all happen, when I started in comms 30 years ago it was
all repairs with a soldering iron, when I retired I was just a mobile
terminal, all I had was a laptop pooter!
End of the decade as I said, you wait and see......

>
>Don't be so pessimistic!
>
>Homebrew is alive and well... viz. UK QRP club, UK microwavers, etc ..
>though not to the extent it was when I first got my callsign.
>
>It's up to us "veterans" to inject some magic into the hobby for
>youngsters. Communication is only part of amateur radio. There's a
>great deal of satisfaction to be gained from making gear for its own
>sake.
>
>Peter, G3PHO
>
>

2666. Re: Homebrew in QST--Chicken or Egg?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 07:58:25 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <cNYt8VFhEWI9EA3P@ifwtech.co.uk>
Source record: 41129

John Miles wrote:
>Ian White, G3SEK wrote:
>>
>> "Non-peer-reviewed"? QEX does have a review panel, but it's also
>> presently edited by someone who knows his stuff in his own right. That
>> makes you think about what you write. As both an author and an editor, I
>> greatly value someone else's editorial input, and technical article are
>> almost always the better for it.
>
>The conventional meaning of peer review implies that articles are vetted
>by independent reviewers before they ever see the light of day. That's
>a little different from what a magazine's on-staff editorial board does
>(for better or worse).
>
And Wes said:
>there's peer review and PEER REVIEW.

In academic publishing, industrial-strength PEER REVIEW is the rule, but it can be very much a "for better or worse" process. At its best, it provides useful feedback. Anonymity provides protection to the reviewer, in an often small community where people have extensive power over one another's appointments and research grants. All well and good... but at its worst, it provides a free-fire zone for vicious academic conflicts, and anonymity is a sham.

Academic editors grieve over this, but there's nothing they can do to change it.

Unfortunately there are numerous examples where peer reviewing in amateur radio publications has fallen far short of the ideal... which, after all, is to get the best possible article out there and published for the benefit of everyone. In particular, anonymity creates a huge risk of misunderstandings between authors and reviewers, and most editors are in a poor position to mediate in matters of high-technology nitpicking.

All too often the result is that the article never gets published at all. Radio amateurs don't have to publish to survive, like academics do, and I've seen many would-be authors permanently turned off by insensitive and incompetent reviewing processes. Everybody loses.

I haven't been bitten myself by this process, but have witnessed enough fiascos to mistrust it deeply. I won't take part in any amateur radio reviewing process that explicitly forbids me to discuss questions directly with the author.

For my own articles, my policy is now to take charge of the reviewing process myself, so that I can finally go to an editor and say "This article has already been reviewed by <insert list of well-known names>. Any points of disagreement have either been resolved or are discussed in the article." This is another of those things that e-mail makes very easy, and editors are very appreciative.

>> You don't get that feedback on the web...
>
>Actually, I haven't found that to be true at all. I get a LOT of
>feedback, much of it actually useful.
>
I do too, but it's not the same as the feedback you get when you ask someone directly for an in-depth critical review.

>> and web content is generally
>> the poorer without it.
>
>In the general case, yes, I agree.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2667. 603 Tower for sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 12:25:20 UTC
From: Me <j.dauphinais@worldnet.att.net>
Message-ID: <Qchl9.72138$jG2.3881575@bgtnsc05-news.ops.worldnet.att.net>
Source record: 41130
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I have a steel tower totaling 25'. this is in 3 sections 1 10 foot st8 and 1 5foot st8 and 1 10 foot top section. I don't not have a rotator. $50.00. pickup only from Nashua,NewHampshire. 73's Jeff AA1GR

2668. Re: ARRL = AARP = AAA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 12:36:50 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <Cnhl9.276839$216.10890063@bin4.nnrp.aus1.giganews.com>
Source record: 41131

Roger, you make a very good point. The ARRL has become like AAA and AARP -- organizations which exist to keep the organization intact, with considerable lobbying impact.

"Roger Leone" <arleoneNoSpam@inreach.com> wrote in message news:9S_k9.1537$hv5.456934431@news.inreach.com...
> QST ceased being a technical publication several decades ago. If you pick
> up some issues from the 1950's and 1960's you will be amazed at the
> construction articles that gave homebrewers many good designs to follow.
> Yes, QEX is a separate publication for the technically inclined, but it
just
> segregates homebrewers from the mainstream ham population. The Radio
> Amateur's Handbook also has greatly reduced content aimed at homebrewers.
>
> SSB transmitters and receivers are a little harder to build than those old
> AM rigs, but better components are available today that simplify the
process
> (DBM's, filters, etc). But you don't go directly to building a SSB
> transceiver without some easier projects to learn from and whet your
> appetite. Homebrewers can build power supplies, antenna tuners and other
> parts of their stations, even if they don't try to build an all band, all
> mode transceiver.
>
> My question is this: Does QST's lack of technical content merely reflect
> the preference of its readers, or does QST's lack of technical content the
> contribute to the lack of interest in its readers? (Cause or effect,
> chicken or egg?)
>
> I am guessing that it is a little bit of both.
>
> 73,
>
> Roger K6XQ (ARRL member and QEX subscriber)
>
>

2669. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 14:27:05 UTC
From: troglodite@aol.com
Message-ID: <20020928102705.04996.00007485@mb-fq.aol.com>
Source record: 41132

>
>It's up to us "veterans" to inject some magic into the hobby for
>youngsters. Communication is only part of amateur radio. There's a
>great deal of satisfaction to be gained from making gear for its own
>sake.

Peter,

And that is the crux of the matter. Yes, back in the 50's it made economic sense to roll your own, especially if you didn't have any money to begin with. But, though that may have been the reason you started homebrewing, you quickly realized there was real satisfaction in the creation and operation of your own gear. My 50's stations were all homebrew except for the receivers.

Today, there's a lot of competition for peoples time and interest. Basic survival takes a lot more effort than it did in the 50's. I enjoy restoring and operating old vacuum tube gear because it takes me back to a time when things were simpler, and I could see all the parts without a magnifying glass. But, I doubt I'll finish all the projects I have pending before I expire.

Homebrew isn't dead, but it is a shadow of what it once was. As for the magazines, they seem to concentrate on what brings the most revenue, a trend that permeates today's society.

Doug Moore KB9TMY (Formerly K6HWY)

2670. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 15:09:20 UTC
From: n2ey@aol.com
Message-ID: <20020928110920.28700.00001092@mb-fz.aol.com>
Source record: 41133

In article <beYk9.255787$216.9717073@bin4.nnrp.aus1.giganews.com>, "john walton" <jdwalton@comcast.net> writes:

>Let me tie this together with the article in QEX regarding receivers and >adjacent channel interference. I think that the article in QEX will cause a >lot of people to rething using their transceivers for DX. When a modified >Drake R4C comes out on top (because of its very quiet PTO) , you know that >20 years of up-converting is not the way to go.

This was known way back in 1957 (see "What's Wrong With Our Present Receivers?" QST, January 1957).

For many years the ham rig designers have traded true "radio performance" for features such as general coverage and memories. Do you really NEED to know your QRG down to the Hertz? Yaecomwood thinks so. But don't try to turn the AGC off.

The R4-C's 30+ year old design is not electropolitically correct today. No digital stuff in it. And it uses vacuum tubes.

73 de Jim, N2EY

2671. Re: Rookie needs your help.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 15:58:21 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <xkkl9.117043$TX5.4954321@news1.east.cox.net>
Source record: 41134

Try the Rec.Antiques.Phono&Radio forum. Why tubes does it use?
It probably needs around 22.5 volts on the detector, and I'd guess
45 volts on the first audio, and the second audio plate voltage would
be around 100 volts max, depending on the tube type and whether
a C bias battery is used.

The first and second jacks can be used for either 2K headphones,
or vintage horn or cathedral type speaker--these are also high impedance.
To save batteries, you'd use the jack that delivered usable audio for
the station you were listening to.

Pete

"Ron" <rfred45@charter.net> wrote in message
news:uopnur50lra805@corp.supernews.com...
> I found an old 20's homebrew radio in grandpa's attic and would like some
> hook up information. I've read a number of books and have tried to apply
the
> information to this unit. Before it's juiced up I'd like to be sure I
don't
> fry anything.
>
> A wiring diagram and a couple of questions can be found at:
> http://www.bmara.com/radio.htm
>
> reply via this newsgroup or e-mail..... rfred45@charter.net
>
> If you could help me out it will surly be appreciated..Thanks
>
> Ron
>
>
>

2672. A beginner say : Building a 20m transceiver...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 16:23:53 UTC
From: Amir Kharbian <blue_amir@gmx.net>
Message-ID: <an4l2k$b1o3d$1@ID-157035.news.dfncis.de>
Source record: 41135

I try to build a 20m ssb transceiver,
I found many schematics in :
1.ARRL site
2.ARRL handbook 1997
but it contain mini-circuit(SBL-1) as mixer.
How can replace it,please guide me.

TNX
Amir Kharabian

2673. Help a newbie build a Neophyte?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 16:32:45 UTC
From: Chris Hobbs <heyyou@clanhobbs.org>
Message-ID: <Xns9297607187CF9heyyouclanhobbsorg@130.133.1.4>
Source record: 41136

I'm testing the waters of building from scratch by putting together a Neophyte Receiver (QST, 2/98 reprinted in _QRP Classics_, also available online at http://www.arrl.org/tis/info/pdf/28814.pdf). Figure this is a good way to motivate me to upgrade my ticket, if I can build my own gear.

I've tracked down sources for all of the components except one, which the article describes as follows:

Two-section, polyethylene-dielectric variable; sections 59.2 and 141.6 pF (Mouser 24TR222 or equivalent).

Mouser no longer carries this part number, and I was unable to locate anything similar in their catalog. I did however find the following, and wonder if someone more experienced than I could tell me if it's "equivalent": http://www.elexp.com/cmp_280p.htm

Thanks a bunch for any help!

73's KE6RWH

--
_ _ _ Replace "heyyou" with "chris" to reply
| | | | | | | | | http://www.clanhobbs.org
___| | __ _ _ __ | |__| | ___ | |__ | |__ ___ ___ _ __ __ _
/ __| |/ _` | '_ \| __ |/ _ \| '_ \| '_ \/ __| / _ \| '__/ _` |
| (__| | (_| | | | | | | | | (_) | |_) | |_) __ \| (_) | | | (_| |
___|_|__,_|_| |_|_| |_|___/|_.__/|_.__/|___(_)___/|_| __, |
__/ |
|___/

2674. Re: Noise Figure question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 20:30:33 UTC
From: newsdesk@aeonsciltd.net
Message-ID: <869eda69.0209281230.71b315ea@posting.google.com>
Source record: 41137

"Ralph Mowery" <rmowery@ctc.net> wrote in message
news:<Vzqk9.278006$z91.12031506@bin3.nnrp.aus1.giganews.com>...
> The antenna is sort of a noise generator. It has a noise temperature of
> about the object it is pointed at provided the beam width is small enough.
> If it is pointed at or near the ground then the noise is about the temp of
> the ground somewhere around 270 deg K if I remember correctly for a normal
> room (outside ?) temp. If it is pointed at a clear sky (no stars or
> radio sources) then it can be very low like maybe 20 or 30 deg K.
>
> > My question, however, is: What happens if one of the stages is an
> > antenna? An attenuator is a 'passive' loss. By that, I mean that its
> > noise is thermal noise, not caused by any active components.
> >
> > I see nothing in equation 2 above that prevents Gd from being either
> > greater or less than 1.0, so my conjecture is that, yes, an antenna
> > can be treated the same as an attenuator in analyzing a multistage
> > system.
> >
> > Any thoughts?
> >
> > Jim
> > N8EE

Eugene

If I may interject something here: There may have occured an
"error", which is to say "they should have fixed the decimal
equivelents" rather than converting.

http://www.aeonsciltd.net

2675. Re: Help a newbie build a Neophyte?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 21:43:02 UTC
From: "G. Beat" <gregory.beat.nospam@attbi.com>
Message-ID: <Gnpl9.42415$wH.5058@sccrnsc01>
Source record: 41139

Air variable capacitors are getting more expensive.

Look at the available parts at Dan's Small Parts

http://www.fix.net/~jparker/dans.html

Th second one of these (that is listed) may be a good substitute. E-mail
your situation - he may have a few single items of the exact part.

w9gb

Hammarlund Dual 6PF - 150PF per section with a 1/4" shaft,
Part number on this capacitor 9411-73-60079, size is 3 1/2" long
x 1" wide (this does not include shaft length), Shaft length 1 1/2"
long. Has Ceramic base, tabbed holes for mounting. These are
new old stock, no longer manufactured. Price $20.00EA.

Small Dual Section Air Variable Capacitor.
Double bearing type has a 1/4" shaft that extends 1/2"
from the front of the air variable. Can be panel mounted
or has tapped holes in the base for mounting that way.
Front section is 8-125PF and rear section is 8-90PF.
Size is 1 5/16" Wide at the front and 7/8" Deep.
A very nice small air variable.
Dan's price $12.50ea.

"Chris Hobbs" <heyyou@clanhobbs.org> wrote in message
news:Xns9297607187CF9heyyouclanhobbsorg@130.133.1.4...
> I'm testing the waters of building from scratch by putting together a
> Neophyte Receiver (QST, 2/98 reprinted in _QRP Classics_, also available
> online at http://www.arrl.org/tis/info/pdf/28814.pdf). Figure this is a
> good way to motivate me to upgrade my ticket, if I can build my own gear.
>
> I've tracked down sources for all of the components except one, which the
> article describes as follows:
>
> Two-section, polyethylene-dielectric variable; sections 59.2 and 141.6 pF
> (Mouser 24TR222 or equivalent).
>
> Mouser no longer carries this part number, and I was unable to locate
> anything similar in their catalog. I did however find the following, and
> wonder if someone more experienced than I could tell me if it's
> "equivalent": http://www.elexp.com/cmp_280p.htm
>
> Thanks a bunch for any help!
>

> 73's KE6RWH
>
> --
> _ _ _ Replace "heyyou" with "chris" to reply
> | | | | | | | | | http://www.clanhobbs.org
> ___| | __ _ _ __ | |__| | ___ | |__ | |__ ___ ___ _ __ __ _
> / __| |/ _` | '_ \| __ |/ _ \| '_ \| '_ \/ __| / _ \| '__/ _` |
> | (__| | (_| | | | | | | | | (_) | |_) | |_) __ \| (_) | | | (_| |
> ___|_|__,_|_| |_|_| |_|___/|_.__/|_.__/|___(_)___/|_| __, |
> __/ |
> |___/

2676. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 21:45:09 UTC
From: n2cqr@clix.pt
Message-ID: <3d961bdf.215212200@news.clix.pt>
Source record: 41138

On 27 Sep 2002 15:52:58 -0700, N2EY@AOL.COM (N2EY) wrote:

>I don't think DSB would have made much difference, Bill. Here's why:
>
>One of the big attractions of SSB (or SSSC, as it was originally
>known) over AM was spectrum conservation.
And the Ancient Ones who pioneered SSB produced many
>examples of simple SSB rigs, like the W1JEO exciter, "Cheap And Easy
>SSB", and the IMP 3 tube exciter.

Jim: Agreed. A simple SSB rig is not that much more difficult. I
liked the IMP. And the transistorized IMP. I recently came across a
great series of QST articles by Doug DeMaw on building simple SSB
transmitters. Circa 1985. Great stuff.
>
>The techology used by most hams in those days tended towards the "lots
>of boxes" shack: receiver, converter, exciter, VFO, final, speech
>amplifier, antenna tuning unit, control unit, several power supplies,
>etc. Homebrew stations usually consisted of an evolution of small
>projects, built as time, skills and finances permitted. Often old gear
>was torn down and the parts reused, or existing gear modified and
>added onto until it bore little resemblance to its original form.

Sounds familiar. I'm developing a box collection. And I have some RF
amplifier boards that have served in several rigs.
>
>The end result of all this was that being a ham in those days required
>a certain amount of technical know-how and mechanical skill unless you
>were one of the few who were well-heeled enough to buy everything.

Sounds like poverty had its advantages!
>
>But homebrewing is NOT dead, despite pronouncements otherwise. It's
>simply become a niche market, rather than something almost all hams
>did, out of necessity. See Electric Radio for July, 1995.;-)

Viva HB! I'm amused by the forecasts of the end of homebrewing.
Unless they kick down the doors and pry the soldering irons from our
hands, there will be at least a few of us still at it.

I think the "parts shortage" is exaggerated. As for the oft cited
time crunch of modern life, I think this is sometimes used as an
excuse by guys who for some reason feel uncomfortable about all the
appliances in theirs shack. (One ham I know ALWAYS says "I wish I had
the time," when homebrewing comes up. He's an avid golfer.) I'm sure
this IS a problem for many people, but there seems to be plenty of

time for CONTESTS! And aren't we always being reminded of the high percentage of retirees in our ranks. Parts shortage? Time crunch? Lets face it, most hams just don't like to homebrew. To each his own. More parts for us!

73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 25.7 W
http://planeta.clix.pt/n2cqr

2677. Re: Help a newbie build a Neophyte?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 21:45:39 UTC
From: "G. Beat" <gregory.beat.nospam@attbi.com>
Message-ID: <7qpl9.42437$wH.4244@sccrnsc01>
Source record: 41140

The link you gave at bottom of your post -- appears to be the exact item
(polyethylene dielectric - and not air)

w9gb

"Chris Hobbs" <heyyou@clanhobbs.org> wrote in message
news:Xns9297607187CF9heyyouclanhobbsorg@130.133.1.4...
> I'm testing the waters of building from scratch by putting together a
> Neophyte Receiver (QST, 2/98 reprinted in _QRP Classics_, also available
> online at http://www.arrl.org/tis/info/pdf/28814.pdf). Figure this is a
> good way to motivate me to upgrade my ticket, if I can build my own gear.
>
> I've tracked down sources for all of the components except one, which the
> article describes as follows:
>
> Two-section, polyethylene-dielectric variable; sections 59.2 and 141.6 pF
> (Mouser 24TR222 or equivalent).
>
> Mouser no longer carries this part number, and I was unable to locate
> anything similar in their catalog. I did however find the following, and
> wonder if someone more experienced than I could tell me if it's
> "equivalent": http://www.elexp.com/cmp_280p.htm
>
> Thanks a bunch for any help!
>
> 73's KE6RWH
>
> --
> _ _ _ Replace "heyyou" with "chris" to reply
> | | | | | | | | | http://www.clanhobbs.org
> ___| | __ _ _ __ | |__| | ___ | |__ | |__ ___ ___ _ __ __ _
> / __| |/ _` | '_ \| __ |/ _ \| '_ \| '_ \/ __| / _ \| '__/ _` |
> | (__| | (_| | | | | | | | | (_) | |_) | |_) __ \| (_) | | | (_| |
> ___|_|__,_|_| |_|_| |_|___/|_.__/|_.__/|___(_)___/|_| __, |
> __/ |
> |___/

2678. Re: A beginner say : Building a 20m transceiver...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 21:46:45 UTC
From: "G. Beat" <gregory.beat.nospam@attbi.com>
Message-ID: <9rpl9.29997$bX.5250@sccrnsc02>
Source record: 41141

Mini-Circuits still sells this mixer in single quantity to the amateur radio homebuilder

w9gb

"Amir Kharbian" <blue_amir@gmx.net> wrote in message news:an4l2k$b1o3d$1@ID-157035.news.dfncis.de...
> I try to build a 20m ssb transceiver,
> I found many schematics in :
> 1.ARRL site
> 2.ARRL handbook 1997
> but it contain mini-circuit(SBL-1) as mixer.
> How can replace it,please guide me.
>
>
> TNX
> Amir Kharabian
>
>

2679. Re: Newbie's got a question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 22:12:50 UTC
From: rferoni <rferoni@hotmail.com>
Message-ID: <CPpl9.346775$5r1.15816979@bin5.nnrp.aus1.giganews.com>
Source record: 41142

It's NOT for communications puposes. I just need something that works basically like a garage door opener, and that will work at about a 1/4 mile range. The idea I have is something I want to try to get patented. I need something that when a switch or button is tripped will send out a signal to a reciever that will more or less turn on a light.......The frs walkie talkies might work I guess. I also understand that transmitting without a license is illegal?? (someone emailed me that info) I don't actually have to transmit. I just need to make a working model so I can get everything down on paper for the patent.

Thanks for the info....

Ron

2680. Local Oscillator Waveforms

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 23:17:14 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3D96396A.20055B0F@alma.demon.co.uk>
Source record: 41143

I am re-visiting a superhet radio which I built over 25 years ago as a kid! Now that I have a reasonable selection of test equipment, I thought that it was time to dust it off and get it working properly.

The local oscillator uses a single NPN transistor in the configuration where the coil has 3 windings, with the smaller windings in the emitter and collector circuits. I looked at the waveform on my scope and was pretty appalled.

I built on the bench (using a plug in board) another oscillator from the same Babani Press book (BP226 - How to Build Advanced Short Wave Receivers) based on a 2N3819 JFET. The waveforms were also pretty bad, with plenty of harmonics and not a very nice sinewave. As expected the signal amplitude varied with frequency (as did the attrociousness of the waveform!).

I then build a 3rd variation (from a magazine) again FET based, but again the waveform was very poor.

I am aware that a edsktop lash up using plug in boards isn't the best way to try out HF oscillators, but can anybody recommend a reasonably simple circuit that can be used as the LO for a superhet?

I have a suspicion that same kind of feedback based on the signal level might be a good way to improve the waveform, kind of like a Wien bridge oscillator which uses a lamp (in some cases).

--Gary

2681. Re: Newbie's got a question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 23:20:14 UTC
From: Bill M <exray@no>
Message-ID: <upce8ji599qebd@corp.supernews.com>
Source record: 41144

rferoni wrote:
>
> It's NOT for communications puposes. I just need something that works
> basically like a garage door opener, and that will work at about a 1/4 mile
> range. The idea I have is something I want to try to get patented. I need
> something that when a switch or button is tripped will send out a signal to
> a reciever that will more or less turn on a light.......The frs walkie
> talkies might work I guess. I also understand that transmitting without a
> license is illegal?? (someone emailed me that info) I don't actually have
> to transmit. I just need to make a working model so I can get everything
> down on paper for the patent.
>
> Thanks for the info....
>
> Ron

I think it will work. No license is required for FRS.
-Bill

2682. Re: Santa Barbara/Goleta -- Electronic Junque stores

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 23:52:25 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnapcg5o.n73.QSB@animas.frontier.net>
Source record: 41145

On 23 Sep 2002 22:17:22 GMT, Allodoxaphobia scribbled:
> On Fri, 20 Sep 2002 23:58:08 -0700, Norm Mann scribbled:
>>
>> "Norm Mann" <folder0735@hotmail.com> wrote in message
>> news:3d8bf12f$0$189@news.impulse.net...
>>>
>>> "Allodoxaphobia" <QSB@QRM-QRN.net> wrote in message
>>> news:slrnaokta3.kb.QSB@animas.frontier.net...
>>> > The wife and I are going out to S.B. to visit her mom for a
>>> > coupl'o days. I can usually get off on some 'personal time'
>>> > on these visits. I've found 3 or 4 used books stores that I
>>> > like to visit.
>>> > But, I'd like to trawl through some used/surplus/mystery
>>> > electronic stores -- if there be any. In all my previous
>>> > trips I've never found any.
>>> > Are there any?
>>>
>>> Most of the stores you're looking for dried up and blew away a long time
>>> ago. However, last I knew, Marvac Electronics in the Walnut Center (east
>>> of Patterson/Hollister Ave. intersection) was still in business.
>>> The only other one I know of is in Santa Maria.
>>
>> Whoops! Marvac is in Magnolia Shopping Center. (Only name was wrong, not
>> place. - shows what happens when you drive on autopilot.)
>
> OK, I'll check'em out. My taxi duties will have me running
> up and down Hollister quite a few times while I'm there.
> Thank you.

Just got back home from Santa Barbara. I visited Marvac Electronics
(http://www.marvac.com) and was quite impressed. These kinds of
electronic 'boutiques' just don't exist much anymore.
They've got a Good Selection of components, tools, cables, connectors,
hardware, project boxes, etc., usw.
I bought a Unitbit (to replace a broken one), 2 cans of freeze spray,
and some new tips for my Weller gun. I wish I had a place like
this within 75 miles of _my_ QTH!
Patronize it, folks. It's be a shame to see it dry up and blow away...

73
Jonesy
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

2683. Re: MANUAL SALE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 23:53:12 UTC
From: Allodoxaphobia <QSB@QRM-QRN.net>
Message-ID: <slrnapcg77.n73.QSB@animas.frontier.net>
Source record: 41146

On 27 Sep 2002 20:39:57 GMT, Joeee1621 scribbled:
> OVER 830 TITLES TO CHOOSE FROM..WE PROBABLY HAVE THE ONE YOU NEED ..ALL MANUALS
> $16 SHIPPED TO THE LOWER 48 STATES UNLESS OTHERWISE NOTED.. PLEASE TAKE A LOOK
> AT OUR LIST- http://hometown.aol.com/joeee1621/myhomepage/business.html -AND
> LET US KNOW WHAT YOU WOULD LIKE-WE GLADLY SHIP WORLDWIDE-..NEW MANUALS
> DAILY..ORDER TODAY..SHIP TOMORROW.

plonk

2684. Re: Local Oscillator Waveforms

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-28 23:55:19 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <an5fh6$q8h$1@paris.btinternet.com>
Source record: 41047

"Gary Morton" <gary@alma.demon.co.uk> wrote in message
news:3D96396A.20055B0F@alma.demon.co.uk...
> I am re-visiting a superhet radio which I built over 25 years ago as a
> kid! Now that I have a reasonable selection of test equipment, I thought
> that it was time to dust it off and get it working properly.
>
> The local oscillator uses a single NPN transistor in the configuration
> where the coil has 3 windings, with the smaller windings in the emitter
> and collector circuits. I looked at the waveform on my scope and was
> pretty appalled.
>
> I built on the bench (using a plug in board) another oscillator from the
> same Babani Press book (BP226 - How to Build Advanced Short Wave
> Receivers) based on a 2N3819 JFET. The waveforms were also pretty bad,
> with plenty of harmonics and not a very nice sinewave. As expected the
> signal amplitude varied with frequency (as did the attrociousness of the
> waveform!).
>
> I then build a 3rd variation (from a magazine) again FET based, but
> again the waveform was very poor.
>
> I am aware that a edsktop lash up using plug in boards isn't the best
> way to try out HF oscillators, but can anybody recommend a reasonably
> simple circuit that can be used as the LO for a superhet?
>
> I have a suspicion that same kind of feedback based on the signal level
> might be a good way to improve the waveform, kind of like a Wien bridge
> oscillator which uses a lamp (in some cases).

It can be quite tricky to get a decent sine wave sometimes. Colpitts
oscillators tend to be better than Hartleys, but you can get a Hartley
oscillator to behave. You are probably using Hartley configurations. Try a
diode (cathode to ground) on the gate, to limit the signal (not the ideal
solution, but it works). Also, a bypassed source resistor will help. It is
possible to rectify the output, amplify it and use it as feedback to
stabilise the oscillator amplitude. Marconi signal generators used this
approach. Also, you should buffer the oscillator output.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2685. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 01:26:35 UTC
From: n2ey@aol.com
Message-ID: <20020928212635.04751.00001232@mb-mw.aol.com>
Source record: 41048

In article <3d961bdf.215212200@news.clix.pt>, n2cqr@clix.pt (Bill Meara) writes:

>On 27 Sep 2002 15:52:58 -0700, N2EY@AOL.COM (N2EY) wrote:
>
>>I don't think DSB would have made much difference, Bill. Here's why:
>>
>>One of the big attractions of SSB (or SSSC, as it was originally
>>known) over AM was spectrum conservation.
> And the Ancient Ones who pioneered SSB produced many
>>examples of simple SSB rigs, like the W1JEO exciter, "Cheap And Easy
>>SSB", and the IMP 3 tube exciter.
>
>Jim: Agreed. A simple SSB rig is not that much more difficult. I
>liked the IMP. And the transistorized IMP. I recently came across a
>great series of QST articles by Doug DeMaw on building simple SSB
>transmitters. Circa 1985. Great stuff.

There were even designs of 75 meter SSB transceivers built around FT-241 crystals. No more complex to build than an HBR receiver. One of these days I may actually build one just for the heck of it.
>>
>>The techology used by most hams in those days tended towards the "lots
>>of boxes" shack: receiver, converter, exciter, VFO, final, speech
>>amplifier, antenna tuning unit, control unit, several power supplies,
>>etc. Homebrew stations usually consisted of an evolution of small
>>projects, built as time, skills and finances permitted. Often old gear
>>was torn down and the parts reused, or existing gear modified and
>>added onto until it bore little resemblance to its original form.
>
>Sounds familiar. I'm developing a box collection. And I have some RF
>amplifier boards that have served in several rigs.

You get the picture. Madame Mu would be right at home. (Anyone besides me remember Madame Mu, Grommethead Schultz, and Jeeves?)
>>
>>The end result of all this was that being a ham in those days required
>>a certain amount of technical know-how and mechanical skill unless you
>>were one of the few who were well-heeled enough to buy everything.
>
>Sounds like poverty had its advantages!

Necessity is the mother of invention, but poverty is the father.
>>
>>But homebrewing is NOT dead, despite pronouncements otherwise. It's

>>simply become a niche market, rather than something almost all hams
>>did, out of necessity. See Electric Radio for July, 1995.;-)
>
>Viva HB! I'm amused by the forecasts of the end of homebrewing.
>Unless they kick down the doors and pry the soldering irons from our
>hands, there will be at least a few of us still at it.

Point is, it used to be so much more common than today.
>
>I think the "parts shortage" is exaggerated.

I'm old enough to recall a time when you could order almost any part a ham could want from Newark or Allied - if the local radio parts emporium didn't have it. Outfits like G&G and Fair Radio sold surplus at lowlowlow prices, and postage was cheap. Most big cities had their Radio Row - Philly had Arch Street, and NYC had Cortlandt Street. All gone.

The parts shortage started in the early '70s, as many outfits went out of business, dropped ham-type parts from their stock, and/or required high minimum orders.

Today the situation is much improved, in large part due to the 'net. Instead of paper catalogs, we have websites like Mouser and Digi-Key.

True fact: Digi-Key got its name and its start back about 1968 by selling RTL digital logic ICs to hams for keyers. Look for their tiny ads in the back of the QSTs of the late '60s and early '70s.

>As for the oft cited
>time crunch of modern life, I think this is sometimes used as an
>excuse by guys who for some reason feel uncomfortable about all the
>appliances in theirs shack.

It's real, but in ways that are not too obvious. See below.

>One ham I know ALWAYS says "I wish I had
>the time," when homebrewing comes up. He's an avid golfer.)

Consider this: If he goes to play golf, he's guaranteed at least a few hours of uninterrupted fun, either by himslef or with like-minded buddies. He may have difficulty getting an equivalent amount of uninterrupted time in the home workshop. Between the honeydew list and the telephone, golf may be all that keeps him sane.

>I'm sure
>this IS a problem for many people, but there seems to be plenty of
>time for CONTESTS!

I build my own rigs and contest with them. See QST for June, 1994, page 55.

>And aren't we always being reminded of the high
>percentage of retirees in our ranks. Parts shortage? Time crunch?
>Lets face it, most hams just don't like to homebrew. To each his own.
>More parts for us!

>
Here are some other factors:

- lack of space for a proper workshop and parts storage
- less than perfect eyesight and fine-motor skills
- lack of resolve/desire/drive to start out with simple projects and work up to advanced stuff.
- lack of examples (you'd be amazed how many hams, upon visiting my shack, remarked that they had NEVER seen a 100% homebrew ham station.)

73 de Jim, N2EY

2686. Re: Newbie's got a question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 02:19:00 UTC
From: Rick Haub <rhaub@midwestmicro-tek.com>
Message-ID: <3D966314.BFB99837@midwestmicro-tek.com>
Source record: 41049

You might try these

http://www.linxtechnologies.com/

You don't need a license unless you use an amplifier and then you only need
apply for a business license, similar to a CB license. At least that is the gist
I go from the company when I needed some of their transmitters. Any one here
know the exact legalities of these tx/rx's?

Rick KC0GIX

rferoni wrote:

> Hello all,
>
> I don't know if I'm in the right place or not, but this is what
> I'm lookin for. I need to know how to make a transmitter that transmits up
> to about a 1/4 mile(maybe a little further) and how to build a reciever to
> go with it. I have NO idea of how to go about this. I just have this
> "idea" and I need to build a transmitter and reciever to get started. Could
> anyone point me in the right direction? Websites, books and such? Would
> greatly appreciate it......Thanks.
>
> Ron
>
> rferoni@hotmail.com

2687. Re: MANUAL SALE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 03:35:44 UTC
From: rgawtry@timewave.com
Message-ID: <upct8i5g3ceq3c@corp.supernews.com>
Source record: 41050

In article <slrnapcg77.n73.QSB@animas.frontier.net>, Allodoxaphobia <QSB@QRM-QRN.net>
wrote:
>On 27 Sep 2002 20:39:57 GMT, Joeee1621 scribbled:
>> OVER 830 TITLES TO CHOOSE FROM..WE PROBABLY HAVE THE ONE YOU NEED ..ALL
> MANUALS
>> $16 SHIPPED TO THE LOWER 48 STATES UNLESS OTHERWISE NOTED.. PLEASE TAKE A
> LOOK
>> AT OUR LIST- http://hometown.aol.com/joeee1621/myhomepage/business.html -AND
>> LET US KNOW WHAT YOU WOULD LIKE-WE GLADLY SHIP WORLDWIDE-..NEW MANUALS
>> DAILY..ORDER TODAY..SHIP TOMORROW.
>
>*plonk*

Well spoken!

Add copyright infringement.

Randy Gawtry
Timewave

2688. Re: Homebrew in QST--Chicken or Egg?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 03:39:28 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D9675BC.C86A951D@townsqr.com>
Source record: 41051

Wes Stewart wrote:

>
> I am a longtime ARRL member (you're supposed to say this instead of
> "QST subscriber") and on again-off again QEX subscriber. I also buy a
> new Handbook and Antenna Book once in a while and I have all of the
> Antenna Compendiums, (and was published in the last one).
>

I have been a member more than not over the years but decided against lifetime membership back when it was actually a bargain because I decided it was very much a possibility that some boneheaded move made by the BOD would cause me to drop out -that happened when they sued the FCC over the 220 mc band that was a real boneheaded stunt IMO. I signed on again in a few years but came very close to dropping again last April when the time came around. I finally decided to go for another limited term since I do believe we really do need a strong representative in DC and elsewhere. But the right to dump them is reserved.

>objective is to sell as many publications as possible. If that means
>divvying up the available material into a number of separate
>"specialty" publications then that's what they do.

When I said something very similar to your comment on .policy a few years ago a staffer really dressed me down for even suggesting such a thing!

> Is it in the best
> interest of ham radio to do so? I don't think so.

It's a plan to maximize the take. Not that a good cash cache isn't needed, but it dilutes hell out of QST and makes it much more difficult for beginners to get and stay current. I have never subscribed to QEX on principle alone - from the start it was clear that the main intent was to sell everyone another subscription - and I know I've missed a lot because of it. I also no longer buy new handbooks. Back when they were priced as though they intended for one to be in every ham's library, I bought a new one every year. Now I get them when they're a few years old - someone is always selling last years issue, or earlier, still new, at hamfests for a fraction of retail. I know some other OTs with similar feelings.

>
>
> On a personal note, I would have much rather my paper was published in
> QST where it would have done more good than have it published in the
> Compendium, where the readership is much smaller.
>

I'd rather that, too, so that I might get to read it sooner!

>
> Just examine the advertiser's index in the latest issue for example.
> Not counting the covers, there are 160 pages in this "Official Journal
> of the ARRL." Seventeen of them have advertisements for---you guessed
> it, the ARRL.
>
> To be fair, many of these are nothing more that fillers; however, four
> are full-page ads. Take out all of this shilling for the house and
> there would have been room for a technical article or two.
>
> As for QEX, as I said earlier, I have subscribed a few times (not
> currently) but it's too expensive. If there are four good pieces in
> it but I'm not interested in two of them, then 50% of the content is
> wasted on me. If these same pieces were in QST, then the two I'm not
> interested in would be a small percentage of the total. Clearly, the
> "Official Journal of the ARRL" should be including the work of all of
> its members and not relegating it to a splinter publication.

I couldn't agree more!

>
>
> I have the first issue of QEX, which offered subscriptions of 12
> issues for $6.00. The last issue I have at hand, July/August 2001,
> offers subscriptions of six issues for $24. Sure the new variant is
> slick, colorful and has more pages. (Three of those pages, including
> the back cover contain the inevitable full-page ads for ARRL.)
>
> I saw my first QST in the high school library in the 1950's and was
> fascinated. I didn't understand much of it but it challenged and
> motivated me to learn to understand it. Ultimately, my hobby led to
> my life's work in engineering
>
> Would a young person today be similarly challenged by "The Doctor is
> IN", which in the current issue says to avoid experimenting with an
> inexpensive microphone and go buy an overpriced Heil microphone
> instead?
>
> I doubt it. But I'm sure that the ARRL's market research guys have
> fine-tuned their offerings to exactly what the majority of the public
> desires.
>

The intent seems to be to integrate all the "hobby" radio services into some umbrella sort of organization. That was the subject of a QST editorial some time back. Bring in all the sheep into the fold, and get their $$$.

It's a different world and it ain't ever going back.

Dick W0EX

>
> Wes N7WS

2689. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 04:09:51 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D967CDC.AF48D3E8@townsqr.com>
Source record: 41052

N2EY wrote:

> One of the big attractions of SSB (or SSSC, as it was originally
> known) over AM was spectrum conservation.

Yes, but the main attraction for most of us was

GET RID OF ALL THOSE #$@~!%^$# HETERODYNES!

If you were around listening to 75 meter SSB in the late 50's-early 60's you know what I'm speaking of. DSB would have done that, too, with much simpler gear.

Dick

2690. Re: A beginner say : Building a 20m transceiver...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 05:56:59 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D96962B.9040309@eznec.com>
Source record: 41053

You can make an equivalent mixer with two small ferrite core transformers and four diodes. For HF, ordinary silicon signal diodes do as well as hot carrier diodes in nearly all cases, although a little more LO power is required. Two places I know of where there's a schematic are _Solid State Design for the Radio Amateur_, and "An Optimized QRP Transceiver" in August 1980 _QST_. I'm sure you can find a schematic many other places. Look for "double (or doubly) balanced mixers" or "diode ring mixers".

Roy Lewallen, W7EL

Amir Kharbian wrote:
> I try to build a 20m ssb transceiver,
> I found many schematics in :
> 1.ARRL site
> 2.ARRL handbook 1997
> but it contain mini-circuit(SBL-1) as mixer.
> How can replace it,please guide me.
>
>
> TNX
> Amir Kharabian
>
>

2691. Re: Newbie's got a question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 06:00:07 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D9696E7.5090305@eznec.com>
Source record: 41054

Anyone seriously or even casually interested in commercial applications
of unlicensed transmitters in the U.S. should get and read a copy of
part 15 of the FCC rules. It's just a few dollars from the Government
Printing Office, and the real answers are all there.

Roy Lewallen, W7EL

Rick Haub wrote:
> You might try these
>
> http://www.linxtechnologies.com/
>
> You don't need a license unless you use an amplifier and then you only need
> apply for a business license, similar to a CB license. At least that is the gist
> I go from the company when I needed some of their transmitters. Any one here
> know the exact legalities of these tx/rx's?
>
> Rick KC0GIX
>
> rferoni wrote:
>
>
>>Hello all,
>>
>> I don't know if I'm in the right place or not, but this is what
>>I'm lookin for. I need to know how to make a transmitter that transmits up
>>to about a 1/4 mile(maybe a little further) and how to build a reciever to
>>go with it. I have NO idea of how to go about this. I just have this
>>"idea" and I need to build a transmitter and reciever to get started. Could
>>anyone point me in the right direction? Websites, books and such? Would
>>greatly appreciate it......Thanks.
>>
>>Ron
>>
>> rferoni@hotmail.com
>
>

2692. Re: Local Oscillator Waveforms

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 06:10:19 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D96994B.10201@eznec.com>
Source record: 41055

An oscillator is an amplifier with feedback and a loop gain greater than one. This means that the oscillation will build up, and up, until something limits it. The more gain the loop has, the faster the oscillator will start, and the more leeway you have for component tolerance, temperature variation, etc., but the more severe the limiting is. This limiting usually shows up as flat topping of the waveform. So the raw output of most oscillators isn't very clean. (Getting control of the limiting process is one secret to making stable and relatively clean oscillators.) The obvious solution is to run the output through a filter. And it helps to have a resonant circuit of reasonable Q as part of the oscillator, and get the output from that tuned circuit, loading it as lightly as possible.

But the fact is that the ideal LO signal for diode and most other types of mixers isn't a sine wave anyway -- it's a square wave. LO harmonics don't necessarily translate to poor mixer performance. But you do want the waveform to be symmetrical, so the resulting switching takes place at regular intervals. Generally, the easiest way to do this is to tap off the oscillator at a relatively clean point, run the signal through a lowpass filter, and amplify as necessary. The Wein bridge approach is another solution, but not one that's usually used.

Roy Lewallen, W7EL

Gary Morton wrote:
> I am re-visiting a superhet radio which I built over 25 years ago as a
> kid! Now that I have a reasonable selection of test equipment, I thought
> that it was time to dust it off and get it working properly.
>
> The local oscillator uses a single NPN transistor in the configuration
> where the coil has 3 windings, with the smaller windings in the emitter
> and collector circuits. I looked at the waveform on my scope and was
> pretty appalled.
>
> I built on the bench (using a plug in board) another oscillator from the
> same Babani Press book (BP226 - How to Build Advanced Short Wave
> Receivers) based on a 2N3819 JFET. The waveforms were also pretty bad,
> with plenty of harmonics and not a very nice sinewave. As expected the
> signal amplitude varied with frequency (as did the attrociousness of the
> waveform!).
>
> I then build a 3rd variation (from a magazine) again FET based, but
> again the waveform was very poor.
>
> I am aware that a edsktop lash up using plug in boards isn't the best

> way to try out HF oscillators, but can anybody recommend a reasonably
> simple circuit that can be used as the LO for a superhet?
>
> I have a suspicion that same kind of feedback based on the signal level
> might be a good way to improve the waveform, kind of like a Wien bridge
> oscillator which uses a lamp (in some cases).
>
> --Gary

2693. Good Cheap HF Amplifier Project?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 07:52:54 UTC
From: Jim Balls <m0cke@btinternet.com>
Message-ID: <0kyl9.1500$Fv2.115863@wards>
Source record: 41056

Hi all,

I'm interested in building a Amplifier capable of the legal limit here in
the UK of 400w, I would like it to do this comfortably but at minimul cost.
Are there any good Amp Projects on the web?
Any idea where to get HV Transformers from here in the UK?
Any good suppliers of HV Variable Capacitors and accessories?
Any good suppliers of used Valves?

Thanks for any help.

Kind Regards,

Jim M0CKE
m0cke@btinternet.com

2694. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 08:01:27 UTC
From: ronayling@hotmail.com
Message-ID: <3d96af6c.807477@news.freeserve.co.uk>
Source record: 41057

.
.
Thats right it will, of course it won't die completely, just like we
have guys that repair steam engines etc
But it will become a very rare hobby, the componant issue will be
a major concern, much of homebrew will become a search for
componants as everything will just be an irrepairable module, you
can see how its going, have a look at the latest computer boards
and mobile phones, size will be another problem, you just won't be
able to hande the componants unless you have the skills of a
watchmaker.
As for time well unless you are retired you just won't have it, thats
a sad fact of life these days, leisure time is TV DVD or something
physical to keep in shape like Golf etc
And lets face it it's difficult you have to have the knowledge to do
it, which means learning something, and very few young people
today want to do that, they want instant results.
of course old homebrew diehards will carry on but when they are
gone that will be it.....

>>simply become a niche market, rather than something almost all hams
>>did, out of necessity. See Electric Radio for July, 1995.;-)
>
>Viva HB! I'm amused by the forecasts of the end of homebrewing.
>Unless they kick down the doors and pry the soldering irons from our
>hands, there will be at least a few of us still at it.
>
>I think the "parts shortage" is exaggerated. As for the oft cited
>time crunch of modern life, I think this is sometimes used as an
>excuse by guys who for some reason feel uncomfortable about all the
>appliances in theirs shack. (One ham I know ALWAYS says "I wish I had
>the time," when homebrewing comes up. He's an avid golfer.) I'm sure
>this IS a problem for many people, but there seems to be plenty of
>time for CONTESTS! And aren't we always being reminded of the high
>percentage of retirees in our ranks. Parts shortage? Time crunch?
>Lets face it, most hams just don't like to homebrew. To each his own.
>More parts for us!
>
>.

2695. Re: Good Cheap HF Amplifier Project?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 08:23:34 UTC
From: "atec77(nospam)" <"atec77(nospam)"@hotmail.com>
Message-ID: <3D96B886.5D474921@hotmail.com>
Source record: 41058

you might like to consider solid state with a pair of BLW 96 .

Jim Balls wrote:
>
> Hi all,
>
> I'm interested in building a Amplifier capable of the legal limit here in
> the UK of 400w, I would like it to do this comfortably but at minimul cost.
> Are there any good Amp Projects on the web?
> Any idea where to get HV Transformers from here in the UK?
> Any good suppliers of HV Variable Capacitors and accessories?
> Any good suppliers of used Valves?
>
> Thanks for any help.
>
> Kind Regards,
>
> Jim M0CKE
> m0cke@btinternet.com

2696. FA: Tek 7403N Scope..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 11:48:31 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <jMBl9.122835$TX5.5136680@news1.east.cox.net>
Source record: 41059
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1771068787

Thanks for looking..

2697. FA: Tek 5A15N Plugins....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 11:50:21 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <1OBI9.122864$TX5.5137498@news1.east.cox.net>
Source record: 41060
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1771069350

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1771077447

As always, thanks for looking..

2698. Re: Nimh battery charger circuit.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 11:51:47 UTC
From: KB1ATF <kb1atf@qsl.net>
Message-ID: <nPBl9.296577$216.12102542@bin4.nnrp.aus1.giganews.com>
Source record: 41061

Joe S. wrote:

> Why not visit a local retailer -- should be several in Canada -- and
> purchase a Ray-O-Vac NiMH charger? For under US$20.00 you get a charger
> that will charge AA, AAA, and 9-volt cells; adjusts the charge rate to fit
> the condition of the battery; and has indicator lamps to tell you when
> it's
> finished. Probably less than the cost to build one.

>>
Why do people insist on posting where/how/what to buy the commercial equivalent of what you can build to a news group labeled *.homebrew? If we wanted to know what to buy off the shelf we'd pick up the latest ham rag, not post to a news group specializing in building things. We need less appliance opperators giving advice in this news group, maybe some people might take some enjoyment out of building something that can be bought for less. Wait a minute, we just might learn something in the process...Oh the humanity.

Here's a nice charger project:
http://www.gnt.ee/users/ergo/charger/index.html

Have fun, and happy home-brewing!

-jsw

2699. FA: WE 416B Planar Triodes.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 11:53:07 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <DQBI9.122910$TX5.5137674@news1.east.cox.net>
Source record: 41062
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1384212513

Thanks for looking..

2700. Re: A beginner say : Building a 20m transceiver...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 14:03:25 UTC
From: janaeanddoug@netzero.net
Message-ID: <360a820d.0209290603.79425c4b@posting.google.com>
Source record: 41063

"Amir Kharbian" <blue_amir@gmx.net> wrote in message
news:<an4l2k$b1o3d$1@ID-157035.news.dfncis.de>...
> I try to build a 20m ssb transceiver,
> I found many schematics in :
> 1.ARRL site
> 2.ARRL handbook 1997
> but it contain mini-circuit(SBL-1) as mixer.
> How can replace it,please guide me.
>
>
> TNX
> Amir Kharabian

I use 3 strands of fine wire and twist them together with a bolt
hanging from the bottom. Twist up a length that will go thru the core
7 or 8 times..I have used ferrite beads salvaged from old tv's for the
cores, and 1n914 diodes. They can be made very small if you mount them
smc-style. Also there are several articles about this in ARRL'S QRP
Classics.

2701. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 14:09:16 UTC
From: n2ey@aol.com
Message-ID: <20020929100916.28700.00001106@mb-fz.aol.com>
Source record: 41064

In article <3D967CDC.AF48D3E8@townsqr.com>, Dick Carroll <dixie@townsqr.com>
writes:

>N2EY wrote:
>
>> One of the big attractions of SSB (or SSSC, as it was originally
>> known) over AM was spectrum conservation.
>
> Yes, but the main attraction for most of us was
>
>GET RID OF ALL THOSE #$@~!%^$# HETERODYNES!

Right you are, Dick. I forgot all about the heterodyne problems. Most good rx's
of those days had notch filters, but they could only deal with one heterodyne.
>
>If you were around listening to 75 meter SSB in the late 50's-early 60's you
>know what
>I'm speaking of. DSB would have done that, too, with much simpler gear.

Yup. And there were some DSB rigs built by manufacturers. The WRL SB-175, for
example.

73 de Jim, N2EY

2702. Re: Homebrew in QST--Chicken or Egg?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 15:22:56 UTC
From: n7ws@nowhere.com
Message-ID: <3d971aab.142919703@news.triconet.org>
Source record: 41065

On Sun, 29 Sep 2002 03:39:28 GMT, Dick Carroll <dixie@townsqr.com>
wrote:

[snip]

| I'd rather that, too, so that I might get to read it sooner!

http://users.triconet.org/wesandlinda/ladder.htm

2703. FT: Collins 75S-3B/C AM filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 16:30:41 UTC
From: k6sde <sp@m.me.not>
Message-ID: <3D972ABC.D0187AED@m.me.not>
Source record: 41067

I'd like to trade a plug-in Collins AM filter for the 75S-3B
or 75S-3C for either of the following for the 75A4:

* AM filter, 6 kc
* CW filter 500 cycle

Look at filter information for some pictures and my e-mail
contact information.

If you prefer:
http://home.attbi.com/~h1m/collinsfilter.html

Thanks for looking!

2704. Re: project boxes from circuit board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 16:40:28 UTC
From: Gary & Angela Belcaster <gbelcas@charter.net>
Message-ID: <gbelcas-2A7590.11402829092002@corp.supernews.com>
Source record: 41069

In article <0l7epuo18gf3h7g79dhoo9rrcpos15mv53@4ax.com>,
Max Foo <maxfoo@punkass.com> wrote:

Too late Max. Couldn't find an Al box with the dimensions I needed.
PCB scrap handy. The rest is history. Box sturdy, RF proofed and
doesn't look half bad either.

Gary

> don't waste good pcb for that for heaven's sake, use some brass shim
> instead. sheesh!
>
>
> On Tue, 24 Sep 2002 11:46:18 -0500, Gary & Angela Belcaster
> <gbelcas@charter.net> wrote:
>
> >Quick question to the group. I am building a directional coupler and
> >would like to fashion the box which houses it from some double sided
> >circuit board I've got. Are there any 'gotchas' lurking for me with
> >this approach (?? stray capacitance between the sides . . .) etc.
> >Thanks much in advance.
> >
> >gary
>

2705. Re: Nimh battery charger circuit.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 17:20:13 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <FvGI9.5917$F21.4303@fe02>
Source record: 41070

> Why do people insist on posting where/how/what to buy the commercial
> equivalent of what you can build to a news group labeled *.homebrew? If we
> wanted to know what to buy off the shelf we'd pick up the latest ham rag,
> not post to a news group specializing in building things. We need less
> appliance opperators giving advice in this news group, maybe some people
> might take some enjoyment out of building something that can be bought for
> less. Wait a minute, we just might learn something in the process...Oh the
> humanity.
>
> Here's a nice charger project:
> http://www.gnt.ee/users/ergo/charger/index.html

For the software inclined, Atmel's Tiny-26 processor makes a very nice
battery charger.
Switchmode, with current, voltage, and temperature sensing. You need to
provide the power electronics, a few Rs and Cs, but it's on-chip high speed
PWM is brilliant.

2706. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 17:52:25 UTC
From: n2cqr@clix.pt
Message-ID: <3d973b67.15251073@news.clix.pt>
Source record: 41066

Another big advantage of the DB rigs (and what got us started in this thread): simplicity. I agree that a simple SSB TX is not much more complicated than a DSB TX. Sort of like the difference between a DC receiver and a simple superhet.

But when we start talking about TRANSCEIVERS, DSB simplicity becomes a real advantage. I think it is significantly easier to build a DSB transceiver than it is to build an SSB transceiver.

DSB transceivers might represent an oppotunity for new hams to build their own phone rigs. And these rigs would be MUCH cheaper than commercial gear. I think a phone rig would be more attractive to the younger generation than a CW rig.

There are some interesting DSB rigs out there: From Cuba come stories of the fabled "Islander" transceiver, a hybrid tube/transistor DSB rig built from old Russian TV sets by intrepid youngsters. From British Columbia there's the "WeeWilly" by Dick Pattinson, VE7GC. From Sweeden we hear of Johan Bodin, SM6LKM's "Optimist" 80 meter DSB rig From Japan, Kazuhiro Sunamura, JF1OZL's huge web site contains a number of very nice DSB rigs. And from down under, Peter Parker, VK3YE's web site sings the praises of DSB. The G-QRP club's quarterly SPRATcarried reports of Eric Sears' legendary ZL2BMI DSB rig.

73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 25.7 W
http://planeta.clix.pt/n2cqr

2707. Re: A beginner say : Building a 20m transceiver...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 18:23:14 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0209291023.2ca16771@posting.google.com>
Source record: 41071

"Amir Kharbian" <blue_amir@gmx.net> wrote in message
news:<an4l2k$b1o3d$1@ID-157035.news.dfncis.de>...

> I try to build a 20m ssb transceiver,

> I found many schematics in :

> 1.ARRL site

> 2.ARRL handbook 1997

> but it contain mini-circuit(SBL-1) as mixer.

> How can replace it,please guide me.

It's a standard part, and a good one. Use it.

What's the problem?

Laura Halliday VE7LDH ï¿½ ï¿½ "Que les nuages soient notre
Grid: CN89lg ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½pied a terre..."
ICBM: 49 16.57 N 123 0.24 W ï¿½ ï¿½ ï¿½ ï¿½- Hospital/Shafte

2708. Re: Nimh battery charger circuit.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-29 19:32:06 UTC
From: Eskay <Nospamve3jua@rac.ca>
Message-ID: <3D975535.B192AAE0@rac.ca>
Source record: 41068

That would be too easy but not the way I originally planned to get what I am looking for. Eskay,,,VE3JUA.....

"Joe S." wrote:

> Why not visit a local retailer -- should be several in Canada -- and
> purchase a Ray-O-Vac NiMH charger? For under US$20.00 you get a charger
> that will charge AA, AAA, and 9-volt cells; adjusts the charge rate to fit
> the condition of the battery; and has indicator lamps to tell you when it's
> finished. Probably less than the cost to build one.
>
> --
>
> ------
> Regards,
> Joe S.
>
> "Eskay" <Nospamve3jua@rac.ca> wrote in message
> news:3D924DCA.93CD82A3@rac.ca...
> > I need a simple circuit to charge two AA Nimh batteries..
> > Thanks very much..
> > Eskay...VE3JUA..
> >

2709. FS: CD Antennas and More

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 01:00:26 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <KmNl9.74985$jG2.4075272@bgtnsc05-news.ops.worldnet.att.net>
Source record: 41072

Plans on how to make your own base and mobile antennas, from quarter waves
to beams, quads, and MORE.

Understanding coax, swr's, line loss, co-phasing, grounding and MORE.

CD also includes tuning and modifications on just about every cb as well as
most 10 meter radios and MORE

Mic wiring to all popular cbs, D104, Sedelata, Turner, standard and of
course MORE.

PLL convertions, adding talk-back, swing kits, roger beeps and MORE
Packed with pictures, how toos, parts and MORE.
How bout takin a radio and electronics course?

email for more info, over 130 megs of info in easy to understand format.

Organized for EASY reference.

.* *)) -:*:-
*.** .****))
George Kinzer
((**.** ..**

--
If first you don't succeed, do the same thing again...see what happens

2710. FS: Two-Way Radio Service Manuals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 01:18:10 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <wENl9.72530$Bj.6428975@read2.cgocable.net>
Source record: 41073

Have acquired a quantity of Commercial & some Amateur, Two Way Radio Service Manuals...Take a look and see if you have a need for any. Am trying to add to my HTML page as time permits.
73...Norm VE3CZI

http://home.cogeco.ca/~rodemi/Service%20Manuals/Service%20Manuals.html

2711. Re: Pinouts for TV tuner modules for homebrew project.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 02:05:59 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3D97B187.47336F@clifto.com>
Source record: 41074

N8PHU wrote:
> My question has to do with TV tuner modules thatI would like to turn
> into a couple of homebrew projects, but I can't seem to find a site to get
> the pinout of the modules. I also am looking at modifying my FRG-9600
> scanner by upgrading the TV tuner module that is currently used in it. Does
> some one out there have a site to look up the pinouts?

Ask this in sci.electronics.repair. I don't know of a source in general
for pinouts, but if you can identify the maker, or the TV it came from,
you might be able to track it down.

--
It is better to light just one little candle than to curse the darkness.
If everyone lit just one little candle, the EPA would outlaw candles.

2712. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 03:07:32 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3D97BFBE.425FE956@townsqr.com>
Source record: 41075

Bill Meara wrote:

> Another big advantage of the DB rigs (and what got us started in this
> thread): simplicity. I agree that a simple SSB TX is not much more
> complicated than a DSB TX. Sort of like the difference between a DC
> receiver and a simple superhet.
>
> But when we start talking about TRANSCEIVERS, DSB simplicity becomes a
> real advantage. I think it is significantly easier to build a DSB
> transceiver than it is to build an SSB transceiver.
>
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> their own phone rigs. And these rigs would be MUCH cheaper than
> commercial gear. I think a phone rig would be more attractive to the
> younger generation than a CW rig.
>
> There are some interesting DSB rigs out there: From Cuba come
> stories of the fabled "Islander" transceiver, a hybrid
> tube/transistor DSB rig built from old Russian TV sets
> by intrepid youngsters. From British Columbia there's the "WeeWilly"
> by Dick Pattinson, VE7GC. From Sweeden we hear of Johan Bodin,
> SM6LKM's "Optimist" 80 meter DSB rig From Japan,
> Kazuhiro Sunamura, JF1OZL's huge web site contains a number of very
> nice DSB rigs. And from down under, Peter Parker, VK3YE's web site
> sings the praises of DSB. The G-QRP club's quarterly
> SPRATcarried reports of Eric Sears' legendary ZL2BMI DSB rig.

Actually what we need is a DSB rig with an autotracking DSP selectable sideband filter just ahead of the driver..... :-)

Dick

2713. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 04:21:22 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0209292021.41056f45@posting.google.com>
Source record: 41076

n2cqr@clix.pt (Bill Meara) wrote in message news:<3d973b67.15251073@news.clix.pt>...
> Another big advantage of the DB rigs (and what got us started in this
> thread): simplicity. I agree that a simple SSB TX is not much more
> complicated than a DSB TX. Sort of like the difference between a DC
> receiver and a simple superhet.
>
> But when we start talking about TRANSCEIVERS, DSB simplicity becomes a
> real advantage. I think it is significantly easier to build a DSB
> transceiver than it is to build an SSB transceiver.
>
> DSB transceivers might represent an oppotunity for new hams to build
> their own phone rigs. And these rigs would be MUCH cheaper than
> commercial gear. I think a phone rig would be more attractive to the
> younger generation than a CW rig.
>[stuff deleted]

But I think this is cheating. You seem to be talking about a receiver
that can't receive DSBsc.

One reason that DSBsc took off for a while in ham circles was because
SSB was already moving in, and so receivers started getting narrow enough
to pass only 1 sideband. So a DSBsc transmitter worked because it
was turned into an SSB signal in the receiver.

If you didn't have that selectivity, DSB was problematic. You'd have
the problem of getting the reinserted carrier exactly in the middle
between the two sidebands. With SSB (or DSB converted to SSB in
the receiver), if you were mistuned you'd simply get a wrong pitch.
If you try that with a DSBsc signal, when you translate the sidebands
down to audio, they won't land on the same frequency. And that will
be far more disturbing than a slightly mistuned SSB signal.

DSB, unless you do that receiver-end conversion to SSB, requires
a fancier detector, one that will lock the bfo to that exact spot
between the sidebands. And if you get fancy enough with the detector,
you will receive the advantages of sending the redundant sideband.

Since you are talking simple, I suspect you are thinking of a
direct conversion receiver. This will be troublesome at the very
least when receiving DSBsc. Such a transceiver would count on
the other guy transmitting real SSB. But to propose this as a popular
approach implies that the other guy may be sending DSBsc as well.

Yes, you could go to a phasing direct conversion receiver, but that
boosts complexity. Or go to a superhet with an SSB-bandwidth filter,
again a move to more complexity. And in both cases, once you start

going there, much of an SSB transmitter is in place. So what's the advantage of a DSB transmitter at that point?

What is advantageous about DSBsc transmitters is that you don't have to worry about a conversion from a fixed frequency where the sideband filter resides. But that signal-frequency operation loses in a transceiver if you've got a superhet, because you can't use the same local oscillator for transmit and receive, unless you add more complexity to the circuit.

In the days when DSBsc transmitters were relatively common, a lot of hams were still using separate transmitters and receivers. The average transmitter used a VFO on the signal frequency (or a subharmonic of it), and one could convert an AAM transmitter to DSB with a bit of work, or use a CW transmitter to drive a high level balanced modulator. This added to the usefulness of the scheme.

Now, when most people use transceivers, they would expect real transceive, and the the simplicity factor is less of an advantage.

One important thing to note is that when generating an SSB signal, you have a controlled situation, unlike in a receiver. You can use a relatively wide crystal filter, because you have the luxury of using audio filters to limit bandwidth. Since you can control what goes into the balanced modulator, the filter doesn't have to be too exacting. It's the same thing with phasing, too; that phasing network can be simpler because it is handling a limited audio spectrum. Filter the audio carefully, even just use a microphone with limited bandwidth, and all you have to be sure of is that the IF filter (or phasing network) knocks out the opposite sideband. Try it on receive, and a strong adjacent signal will get past the lousy filter.

Michael VE2BVW

2714. Re: Good Cheap HF Amplifier Project?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 05:09:37 UTC
From: "K.chattenton" <k.chattenton@btopenwold.com>
Message-ID: <an8mah$4pe$1@knossos.btinternet.com>
Source record: 41077

Hi Jim, all,
"Jim Balls" <m0cke@btinternet.com> wrote in message
news:0kyl9.1500$Fv2.115863@wards...
> Hi all,
>
> I'm interested in building a Amplifier capable of the legal limit here in
> the UK of 400w, I would like it to do this comfortably but at minimul
cost.
> Are there any good Amp Projects on the web?
> Any idea where to get HV Transformers from here in the UK?
> Any good suppliers of HV Variable Capacitors and accessories?
> Any good suppliers of used Valves?
>
> Thanks for any help.
>
> Kind Regards,

Check out, 'Linear amps UK', they not only supply new amps for all occasions
but sell all amp parts also.......cheers, Ken, G4KIR.
>
> Jim M0CKE
> m0cke@btinternet.com
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.391 / Virus Database: 222 - Release Date: 19/09/2002

2715. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 08:31:53 UTC
From: n2cqr@clix.pt
Message-ID: <3d98092a.67933639@news.clix.pt>
Source record: 41078

On 29 Sep 2002 21:21:22 -0700, blackm00@cam.org (Michael Black) wrote:

>n2cqr@clix.pt (Bill Meara) wrote in message news:<3d973b67.15251073@news.clix.pt>...
>> Another big advantage of the DB rigs (and what got us started in this
>> thread): simplicity. I agree that a simple SSB TX is not much more
>> complicated than a DSB TX. Sort of like the difference between a DC
>> receiver and a simple superhet.
>>
>But I think this is cheating. You seem to be talking about a receiver
>that can't receive DSBsc.

Michael: Yes, I am talking about using a simple DC receiver, and you
are right about the problems that DC receivers have in handling DSBsc
sigs. But here is where all those appliances come in handy! Our
intrepid young radio builders will have no problem finding
Yaesucomwood ops to talk to. They just won't be able to talk (without
distortion) to other intrepid DSBsc homebrewers.

Unfortunately this wouldn't be much of a problem. I ran a DSB rig on
17 meters for about a year. One day a guy asked me what I would do if
I came across another similar rig. I told him that this was not
something to worry about. I never did run into another DSBsc rig. I
don't think I've ever worked one in all my years of hamming.

Another benefit of DSBsc rigs: the fun you have in explaining things
to guys who try to tell you you are on the "wrong" sideband.

73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 25.7 W
http://planeta.clix.pt/n2cqr

2716. Re: Good Cheap HF Amplifier Project?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 12:23:05 UTC
From: UnTale <i@i.com>
Message-ID: <JmXl9.30954$e31.675206@twister2.libero.it>
Source record: 41081

> I'm interested in building a Amplifier capable of the legal limit here in
> the UK of 400w, I would like it to do this comfortably but at minimul
cost.
> Are there any good Amp Projects on the web?

Hi
just some ideas:
A) modify an old CB amplifire for HF bands
B) use russian tube
C) use the HV transformer of home "microwave furnace" (is it the right
word?)

of course you can do A+B+C;
ciao
--

73 de iz7ath, Talino

Homebrew, RF projects and digital tecniques on
http://www.qsl.net/iz7ath
IZ7ATH Talino +39 338 5029196

2717. Re: Foolproof grid circuit for 4CX350 at 50MHz pse?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 12:53:21 UTC
From: Richard J <nospam@nospam.mah.se>
Message-ID: <an9c7p$2ms$1@news.lth.se>
Source record: 41079

Tnx fer advice guys.
I ended up with a very simple serial cct that proved OK, close to perfect match. TNX!
input jack>cap>centre tap of coil
one end of coil goes to 50pF variable >GND
other end of coil goes to grid.

Simple /straightforwrd.

73 /Rick

"gudmundur" <hexter@blazenet.net> wrote in message news:up9hvicqu4u2de@corp.supernews.com...
> In article <amd6jg$st9$1@news.lth.se>, nospam@mah.se says...
> >
> >Hi group -
> >
> >I ve seen many designs for the input of RF into the 4CX250 on 6m, but
> not
> >so many for the 4CX350.
> >Currently, I am using a L-C-L input link that I find very sharp and
> also
> >inefficient. It just doesn t work well - set it and forget it, you
> know....
> >
> >I have a 25W rig with adjustable output, so I d settle for ,say, 5W
> input
> >power.
> >The PA works at 1800V B+, 340V G2/screen, -70/25V G1/Bias.
> >
> >Who amongst you has the ultimate design - easy to build, easy to
> adjust,
> >stable and suitable?
> >Will it be a C-L, a LCL or a parallell LC network that comes out the
> winner?
> >Can I *please* have your coil data in millimeters, *please* ? :-)
> >
> >Finally, space is an issue here - the grid compartment is small,
> really....
> >
> >Tnx fer your pointers, time and help. 73 /Rick, SM7SCJ
> >
> with that much driving power availible, just drive it untuned.
> i am doing so right now. i have a balun that is center tapped.

> low side to ground, center tap to rig, and high side to grid.
> i have 4 resistors in series/parallel set up to provide 200 ohms
> from the grid to ground as a load for the rig. full output
> equal about 10 watts input
>

2718. Re: max G2 current on 4cx350F, pse?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 12:55:27 UTC
From: Richard J <nospam@nospam.mah.se>
Message-ID: <an9cbo$2n1$1@news.lth.se>
Source record: 41080

Forget this post - it's been sorted out.
Tnx anyway for looking

Cheers /Rick

"Richard J" <nospam@mah.se> wrote in message
news:an4cqt$7be$1@news.lth.se...
> Hi guys -
>
> while trying to get a 6m amp (conversion from 2m>6m) to work properly, me
> and a friend ran into this discussion abt whether it is allowed to let a
> 4CX350 run at positive grid current, and if so, how much...we also wonder
> how much drive power shud be considered optimum and maximum.
>
> Amp data (can't change any of the voltages, sri, pre-built power supply):
>
> Anode= 1800V
> G2 = 330V
> G1 Bias -70/25V
>
> drive power is fed to G1 via tuned cct (1:1,1).
> Thing is we can't get this amp to produce the kind of pwr we'd like. 2,5W
in
> deliver (at present) 140W with anode running at 210mA - thats less than
37%
> efficiency. Idle current is 50mA. In my view, this shud/cud be better. OK,
> all components are not optimal yet - we have losses - but still, the
> question remains...
>
> Friend says that 350:s do not like positive screen currents - he claims
> there is a risk for internal flashover
> if the tube runs more than maybe +2mA screen current, and that we shud try
> to stay as near zero mA as possible even at full output. Now, this holds
the
> Pout down.....'coz when I tweak the load cap for near-zero (or most
> negative) screen current, I lose a lot of Pout.
>
> Now, in my view, I think the data sheet for the 4CX350 mentions G2
> dissipation of 8W.....which is a LOT of mA with my 330V....so I THINK that
> if I let the tube run at a few mA positive G2 current, I'd have more
screen
> current>more anode current>more Pout at given anode current=better
> efficiency.
>

> OK, I know, these 8W also involve the negative mA at lower drive levels,
but
> I have never seen this amp run more negative than -3,8mA....
>
> Pse enlighten me - wud a few mA (if so, how many?) of positive G2 current
> improve things, or is my friend right - it will snuff the tube in a big
> BANG?
>
> Thanks for your advice and time
> 73
> /Rick
>
>
>
>

2719. Re: project boxes from circuit board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 13:01:33 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <an9hve$cgmqu$1@ID-61331.news.dfncis.de>
Source record: 41082

>
> Too late Max. Couldn't find an Al box with the dimensions I needed.
> PCB scrap handy. The rest is history. Box sturdy, RF proofed and
> doesn't look half bad either.
>
> Gary
>
> > don't waste good pcb for that for heaven's sake, use some brass shim
> > instead. sheesh!
> >

PCB is great for making boxes, I use it a lot see
http://www.hanssummers.com/radio/cwtx/index.htm and
http://www.hanssummers.com/radio/polyphase/index.htm. Brass shim isn't as
sturdy, I don't think it's as easy to solder, and it's probably more
expensive too...

--

Hans Summers
http://www.HansSummers.Com

2720. Re: About AF derived AGC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 13:14:32 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <an9ino$ceed6$1@ID-61331.news.dfncis.de>
Source record: 41083

Thanks for the discussion, I have learnt a lot more about AGC.

I said "relatively constant" because I thought in practise "constant" isn't likely to be possible. I now see why one wouldn't always want truely constant output e.g. you don't want huge noise level when there is no signal.

In my design I have no RF amplifier, just the FST3253 switching mixer. This operates on a +5V supply and the incoming signal is biased to midpoint so I think a 4V p-p signal would be switched without problems. Following the mixer is 33dB of amplification before the phase shift network, these are NE5534 op-amps on a 12V single-rail supply, so perhaps 10V p-p signal coming out of those before clipping - which means 227mV p-p. So I should be able to tolerate something like a 200mV input without overloading, right? What is considered a maximum level that a receiver should be able to handle?

Ok, so what I will build is an AGC system having a variable "delay" threshold below which it does not operate. Adjustable attack and hang times. And adjustable depth of AGC to control how "relatively" constant the audio output is (slope of the out dB vs in dB curve). I am planning on using the CA3086 transconductance opamp similar to my use of LM13700 here http://www.hanssummers.com/electronics/equipment/muscle/index.htm which was very effective.

Thanks for all the answers

73 de Hans G0UPL

Hans Summers
http://www.HansSummers.Com

[...]
> |I am interested in why you say I shouldn't want to maintain a flat audio
> |output. If I'm sitting there and there's QSB on the band surely it's nice
> |for me if the receiver compensates for it as far as possible by keeping
the
> |audio relatively constant?
>
> Well, you're hedging a bit by saying, "relatively constant", where
> before you said, "My main reason for AGC is just to maintain constant
> audio output.."<g>
>
> There are at least two possibilities.
>
> One, your r-f/i-f subsystem cannot handle the full dynamic range of

> all possible incoming signal levels so you need some gain control on
> the front end. This could be in the form of an AGC-controlled PIN
> diode attenuator, etc.
>
> Two, (your case I believe) the r-f hardware is strong enough to
> operate at full gain regardless of incoming signal strength. I'm
> dubious that this is possible but that is just my opinion.
>
> In case one, there should be some threshold, below which no AGC is
> developed. This maintains the noise figure of the first r-f device,
> whatever it is. (I realize that at say 160 meters the SNR is set by
> external noise, but I'm speaking in the general sense.) This is what
> we mean by "delayed AGC"; the application of control is delayed until
> the signal level reaches some threshold. Clearly, if this is the case
> then you cannot maintain a completely constant output without major
> audio AGC and the resulting problems of loop stability and the effects
> that I describe next.
>
> In case two, your ACG system becomes nothing more than an audio
> compressor. If your goal is constant output, then with no signal, you
> get max noise out. When a signal comes along it just punches a hole
> in the noise. For a good example of this listen to the guys (Italians
> leap to mind) that transmit using a lot of compression and set the
> audio gain wide open and sit across the room. You get to hear the
> blower on the 10 KW amplifier, the wife in the next room and the dogs
> barking in the street. When they finally say something the
> compression kicks in and the noise subsides.
>
> If we use your hedging position, of "relatively constant", then we
> seem to be in agreement. There can be some area in the dynamic range
> where the system gain is constant, thus stronger signals sound
> stronger than weak ones.
>
> Regards,
>
> Wes
>

2721. Re: Local Oscillator Waveforms

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 14:10:13 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <59mgpuk5kfdni0p3tfvehbrg6g0bo5vqse@4ax.com>
Source record: 41084

On Sat, 28 Sep 2002 23:55:19 +0000 (UTC), "Leon Heller"
<leon_heller@hotmail.com> wrote:

>Try a
>diode (cathode to ground) on the gate, to limit the signal (not the ideal
>solution, but it works). Also, a bypassed source resistor will help.

The diode to ground configuration is noted in the 2002 edition of the
Radio Amateur's Handbook (see page 14.15, top left column) as a source
of phase noise.

I'm curious as to why there is so much concern over the wave form of
the oscillator. It seems to me that the real concerns for a circuit
like this ought to be stability, phase noise, and durability.

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

2722. 6LQ6 Settings for valve tester

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 15:00:54 UTC
From: Don Vosper <don@vosperd.freeserve.co.uk>
Message-ID: <an9ote$iu8$1@newsg1.svr.pol.co.uk>
Source record: 41085

Hello
Does anyone have the Taylor 45C Valve tester switch settings for the 6LQ6 (6JE6) please?
Don M5AKY
Bristol UK

2723. FS ELECTROLYTIC CAPACITORS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 16:01:17 UTC
From: ni4l@msn.com
Message-ID: <d4a0748e.0209300801.678502fd@posting.google.com>
Source record: 41086
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

1500mfd @ 450vdc Size 5 3/16" x 3"
10.00 each + shipping I will make you a deal if you want several of them.
I have 17 of these total.
I can take Pay-Pal, checks (wait till clear), and M/O

Chris NI4L

2724. Re: Good Cheap HF Amplifier Project?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 17:29:07 UTC
From: UnTale <i@i.com>
Message-ID: <DR%l9.31915$Eu.716592@twister1.libero.it>
Source record: 41087

> C) use the HV transformer of home "microwave furnace" (is it the right
> word?)

Oven, oven; yes, I mean microwave oven ;-)))

--

73 de iz7ath, Talino

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http://www.qsl.net/iz7ath
IZ7ATH Talino +39 338 5029196

2725. Re: Noise Figure question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 18:44:17 UTC
From: aa1ll@email.com
Message-ID: <e85be400.0209301044.3718fcf8@posting.google.com>
Source record: 41088

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:<Ksw403BFa2k9EA+8@ifwtech.co.uk>...

>
> So how come people buy all these beams?
>

You are absolutely correct Ian, and I apologize for misleading anyone.
I was thinking about an omnidirectional receiving antenna with no
directivity. The directional beam antenna will increase signal power
with little effect on noise.

73, Cheers,
Paul, AA1LL
Mason, NH
http://www.qsl.net/aa1ll

2726. advise required

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 18:49:07 UTC
From: york-y-man <barryNO@SPAMashfield.karoo.co.uk>
Message-ID: <uph79o4kbq63f3@corp.supernews.com>
Source record: 41089

ok wnat to try out home brew as beer is way to expensive. i dont weant to shell out on loads of fancy formenting equipment. is there an easy way to produce a few bottels just to try? also any decent recipies. is simple kitchen equipment adicuate if i want to brew on a small scale. (10 bottels max) also how long will it take till i start yielding my results

2727. Re: advise required

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 19:38:46 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3D98A846.2B6B6F41@mfi.net>
Source record: 41090

york-y-man wrote:
>
> ok wnat to try out home brew as beer is way to expensive. i dont weant to
> shell out on loads of fancy formenting equipment. is there an easy way to
> produce a few bottels just to try? also any decent recipies. is simple
> kitchen equipment adicuate if i want to brew on a small scale. (10 bottels
> max) also how long will it take till i start yielding my results

Wrong kind of home brew.
--

Michael A. Terrell
Central Florida

2728. Re: advise required

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 20:11:15 UTC
From: boeing.5.kyrrin@spamgourmet.com
Message-ID: <3d98af82.2343741031@news.boeing.com>
Source record: 41092

On Mon, 30 Sep 2002 19:49:07 +0100, "york-y-man"
<barryNO@SPAMashfield.karoo.co.uk> wrote:

>ok wnat to try out home brew as beer is way to expensive. i dont weant to
>shell out on loads of fancy formenting equipment. is there an easy way to
>produce a few bottels just to try? also any decent recipies. is simple
>kitchen equipment adicuate if i want to brew on a small scale. (10 bottels
>max) also how long will it take till i start yielding my results

Perhaps you'd get better results by asking in the correct
newsgroup.

Read the name of this group again: rec.RADIO.AMATEUR.homebrew.
In that context, 'homebrew' refers to the design and construction of
self-designed electronic equipment specific to the hobby of amateur
radio.

2729. Re: advise required

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 20:23:04 UTC
From: Idontwantspam@net
Message-ID: <3d98b0dc.45672012@news.bellatlantic.net>
Source record: 41091

On Mon, 30 Sep 2002 19:49:07 +0100, "york-y-man"
<barryNO@SPAMashfield.karoo.co.uk> wrote:

>ok wnat to try out home brew as beer is way to expensive. i dont weant to
>shell out on loads of fancy formenting equipment. is there an easy way to
>produce a few bottels just to try? also any decent recipies. is simple
>kitchen equipment adicuate if i want to brew on a small scale. (10 bottels
>max) also how long will it take till i start yielding my results
>
rec.crafts.brewing
rec.food.drink.beer
alt.brewing

are more specific newsgroups for your question.

Wine and beer hobby stores often have an introductory kit that makes
roughly one gallon, as well as books on how-to. Not all that
complicated with modern stuff and kitted ingredients, as long as you
can follow directions well.

Many do home brewing more for taste than for saving money, but
typically you can end up with premium beer taste for generic beer
prices.

Depends on type but a week or two minimum from starting. Can't rush
fermentation.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

2730. Re: advise required

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 22:08:21 UTC
From: Idontwantspam@net
Message-ID: <3d98cadb.52327242@news.bellatlantic.net>
Source record: 41094

On Mon, 30 Sep 2002 17:17:23 -0700, Eskay <Nospamve3jua@rac.ca> wrote:

>Is it possible that this fellow is having a bit of fun with you guys????
> Eskay,,,,VE3JUA
>
Always possible, but it is also possible he did not read the newsgroup
name carefully and only saw "brew" or "homebrew".

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

2731. Re: advise required

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 22:33:14 UTC
From: "atec77(nospam)" <"atec77(nospam)"@hotmail.com>
Message-ID: <3D98D12A.395DE3C@hotmail.com>
Source record: 41095

you need
alt.alcohol.home-distillation

york-y-man wrote:
>
> ok wnat to try out home brew as beer is way to expensive. i dont weant to
> shell out on loads of fancy formenting equipment. is there an easy way to
> produce a few bottels just to try? also any decent recipies. is simple
> kitchen equipment adicuate if i want to brew on a small scale. (10 bottels
> max) also how long will it take till i start yielding my results

2732. Re: Local Oscillator Waveforms

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-09-30 23:20:17 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3D98DD23.73F65D28@alma.demon.co.uk>
Source record: 41096

Roy Lewallen wrote:
>
> An oscillator is an amplifier with feedback and a loop gain greater than
> one. This means that the oscillation will build up, and up, until
> something limits it. The more gain the loop has, the faster the
> oscillator will start, and the more leeway you have for component
> tolerance, temperature variation, etc., but the more severe the limiting
> is. This limiting usually shows up as flat topping of the waveform. So
> the raw output of most oscillators isn't very clean. (Getting control of
> the limiting process is one secret to making stable and relatively clean
> oscillators.) The obvious solution is to run the output through a
> filter. And it helps to have a resonant circuit of reasonable Q as part
> of the oscillator, and get the output from that tuned circuit, loading
> it as lightly as possible.
>
> But the fact is that the ideal LO signal for diode and most other types
> of mixers isn't a sine wave anyway -- it's a square wave. LO harmonics
> don't necessarily translate to poor mixer performance. But you do want
> the waveform to be symmetrical, so the resulting switching takes place
> at regular intervals. Generally, the easiest way to do this is to tap
> off the oscillator at a relatively clean point, run the signal through a
> lowpass filter, and amplify as necessary. The Wein bridge approach is
> another solution, but not one that's usually used.
>
> Roy Lewallen, W7EL

Since the local oscillator feeds a mixer which generates a whole set of frequencies as well as the wanted fin-LO, I would have though having 2nd, 3rd or whatever harmonics would probably be a bad thing as they would all mix in wierd and complicated ways with all the other mixing products?

This radio uses a simple dual gate MOSFET as a mixer.

I assumed that a sine wave from the LO would be the best possible input to this mixer. Are you saying that a square wave would be better?

I was also wondering what difference the signal level injected from the LO made?

BTW the current oscillator is a basic Reinartz LC oscillator. The waveform is really really bad with some high frequency "ringing", possibly the resonance of one of the two smaller windings?

regards...

--Gary

2733. Re: advise required

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-01 00:17:23 UTC
From: Eskay <Nospamve3jua@rac.ca>
Message-ID: <3D98E993.2C9CDF43@rac.ca>
Source record: 41093

Is it possible that this fellow is having a bit of fun with you guys????
Eskay,,,,VE3JUA

york-y-man wrote:

> ok wnat to try out home brew as beer is way to expensive. i dont weant to
> shell out on loads of fancy formenting equipment. is there an easy way to
> produce a few bottels just to try? also any decent recipies. is simple
> kitchen equipment adicuate if i want to brew on a small scale. (10 bottels
> max) also how long will it take till i start yielding my results

2734. Re: Local Oscillator Waveforms

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-01 00:28:17 UTC
From: Richard Hosking <zaprichardh@iinet.net.au>
Message-ID: <3d98ea13$0$16794@echo-01.iinet.net.au>
Source record: 40997

You will almost certainly have filtering in the front end of the receiver.
You should probably have a filter (bandpass or low pass) after the LO if the
mixer is linear . If you look at the waveform at the output of this it will
look like a good sinewave. If there is ringing in the waveform it could be a
harmonic or maybe a parasitic oscillation at a higher frequency. If you had
a spectrum analyser it would easy to see :)

Richard

"Gary Morton" <gary@alma.demon.co.uk> wrote in message
news:3D98DD23.73F65D28@alma.demon.co.uk...
> Roy Lewallen wrote:
> >
> > An oscillator is an amplifier with feedback and a loop gain greater than
> > one. This means that the oscillation will build up, and up, until
> > something limits it. The more gain the loop has, the faster the
> > oscillator will start, and the more leeway you have for component
> > tolerance, temperature variation, etc., but the more severe the limiting
> > is. This limiting usually shows up as flat topping of the waveform. So
> > the raw output of most oscillators isn't very clean. (Getting control of
> > the limiting process is one secret to making stable and relatively clean
> > oscillators.) The obvious solution is to run the output through a
> > filter. And it helps to have a resonant circuit of reasonable Q as part
> > of the oscillator, and get the output from that tuned circuit, loading
> > it as lightly as possible.
> >
> > But the fact is that the ideal LO signal for diode and most other types
> > of mixers isn't a sine wave anyway -- it's a square wave. LO harmonics
> > don't necessarily translate to poor mixer performance. But you do want
> > the waveform to be symmetrical, so the resulting switching takes place
> > at regular intervals. Generally, the easiest way to do this is to tap
> > off the oscillator at a relatively clean point, run the signal through a
> > lowpass filter, and amplify as necessary. The Wein bridge approach is
> > another solution, but not one that's usually used.
> >
> > Roy Lewallen, W7EL
>
> Since the local oscillator feeds a mixer which generates a whole set of
> frequencies as well as the wanted fin-LO, I would have though having
> 2nd, 3rd or whatever harmonics would probably be a bad thing as they
> would all mix in wierd and complicated ways with all the other mixing
> products?
>
> This radio uses a simple dual gate MOSFET as a mixer.
>

> I assumed that a sine wave from the LO would be the best possible input
> to this mixer. Are you saying that a square wave would be better?
>
> I was also wondering what difference the signal level injected from the
> LO made?
>
> BTW the current oscillator is a basic Reinartz LC oscillator. The
> waveform is really really bad with some high frequency "ringing",
> possibly the resonance of one of the two smaller windings?
>
> regards...
>
> --Gary

2735. Re: Local Oscillator Waveforms

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-01 04:50:02 UTC
From: Paul Keinanen <Paul.Keinanen@sci.fi>
Message-ID: <867ipu0j865i27jaesl1v54hbtj1dca01i@4ax.com>
Source record: 40998

On Mon, 30 Sep 2002 23:20:17 GMT, Gary Morton <gary@alma.demon.co.uk>
wrote:

>Since the local oscillator feeds a mixer which generates a whole set of
>frequencies as well as the wanted fin-LO, I would have though having
>2nd, 3rd or whatever harmonics would probably be a bad thing as they
>would all mix in wierd and complicated ways with all the other mixing
>products?

That is of course true for most switching type mixers. With a
symmetrical square wave there are quite strong mixing products with
the 3rd, 5th etc. LO harmonics.

However, in an up-conversion receiver, the LO is quite high in
frequency and thus easier to filter out. With an IF of 45 MHz and
0-30 MHz tuning range, the LO range is 45 - 75 MHz, the 3rd harmonic
at 135 - 225 MHz and the first harmful spurious responses come from 90
- 180 MHz, thus quite easy to filter out with a 30 MHz LPF at the
front end.

>This radio uses a simple dual gate MOSFET as a mixer.

And if the LO also has an asymmetric waveform, there are going to be
strong 2nd harmonic response. The situation even gets worse, when down
conversion is used and the LO is below the RF. Assuming 4 MHz IF and
receiving the 14 MHz band, the LO is at 10 MHz, the 2nd harmonic at 20
MHz and the first spurious response at 16 MHz. Thus, the front end
filter should pass the 14 MHz signal, but strongly attenuate the 16
MHz signal.

Anyway, using tunable front end filter or at least fixed band pass
filters for the amateur bands only, is a good thing to reduce mixing
products with the LO harmonics, but also to reduce RF 3rd order
intermodulation products ofincomming signals and to reduce reciprocal
mixing with the LO phase noise.

Paul OH3LWR

2736. Re: Local Oscillator Waveforms

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-01 09:01:22 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0210010101.3aaf05cb@posting.google.com>
Source record: 40999

"Richard Hosking" <zaprichardh@iinet.net.au(remove the zap)> wrote in message news:<3d98ea13$0$16794@echo-01.iinet.net.au>...
> You will almost certainly have filtering in the front end of the receiver.
> You should probably have a filter (bandpass or low pass) after the LO if the
> mixer is linear ...

A linear mixer ?? If two signals are passed by an absolutely linear circuit, they appear unchanged on the output and no combinations of them are obtained. Mixing two signals is by its nature always a non-linear process. A mixer MUST be non-linear, having either a curved or "part-by-part nearly linear" folded characteristic. If the latter is the case, the operational point must swing across at least one of the folding points.
A single tuned circuit with moderate Q should be enough on the oscillator output.

PSE excuse my lack of proper English terms.

73 de Ivan OK1SIP

2737. Re: advise required

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-01 10:47:09 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <anbv0r$205$1@nic.grnet.gr>
Source record: 41000

it would be nice if we could make a 80M cw/ssb rig which also could keep our beer cold when dxing.....

--
http://deosiereas.virtualave.net
"york-y-man" <barryNO@SPAMashfield.karoo.co.uk> wrote in message news:uph79o4kbq63f3@corp.supernews.com...
> ok wnat to try out home brew as beer is way to expensive. i dont weant to
> shell out on loads of fancy formenting equipment. is there an easy way to
> produce a few bottels just to try? also any decent recipies. is simple
> kitchen equipment adicuate if i want to brew on a small scale. (10 bottels
> max) also how long will it take till i start yielding my results
>
>

2738. Re: project boxes from circuit board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-01 13:08:57 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0210010508.64bc9fe1@posting.google.com>
Source record: 41001

> > > don't waste good pcb for that for heaven's sake, use some brass shim
> > > instead. sheesh!

Depends on costing - I got squre metre pieces (nice fibreglass double sided) at the local trash and treasure for virtually nothing, so I use it for boxes. Brass shim costs a fortune by comparison!

2739. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-01 13:39:15 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0210010539.475e1777@posting.google.com>
Source record: 41002

> Mark discusses the ideas (from 1959) of John Costas. "John feared that
> the widespread use of SSB would lead to a rapid decline in HF
> equipment building by hams and a consequential adverse impact on the
> ARS...Costas was trying to advocate suppressed-carrier double sideband
> because it was simpler to build and had overall throughput comparable
> to SSB according to his analysis."
>
> Having recently built two DSB transcievers and one SSB transmitter, I
> thought this was a very interesting comment. The DSB rigs are far
> easier to get going.
>
> What do you guys think -- could simple DSB rigs have saved more hams
> from appliance addiction?
>
>
> 73 de Bill CU2JL N2CQR
> Sao Miguel Island, The Azores, Portugal
> 37.7 N 25.7 W
> http://planeta.clix.pt/n2cqr

Probably not - as has been pointed out the same technology that brings us the $150 colour television now brings us the relatively cheap ham gear - and like TV and VCR (and indeed all consumer equipment) its so loaded with "features" that homebrew cant compete. The "features" may be irrelevant but, hey, its in software so its cheap to introduce.

The 50's and 60's are gone, no more nice WW2 surplus to provide us with beautiful mechanical drives and cheap parts (although, we never think of the price our world had to pay to get these things) so its time to move on to modern techniques and methods.

SMD is a pain, but so was learning Morse or the theory needed to pass the ham exams, even a cursory(sp) web search will bring up dozens of tutorials on how to use it at home - sure, you might need to buy a pair of magnifying specs (mine cost me $3 for x3 magnification), a decent high intensity desk lamp ($10 in Kmart) and 2 cheap soldering irons to remove components from boards. And if you want to remove the big smd chips, WELLER (among others) make a neat little gas catalytic burner thats ideal for this task. Sure, it takes practice and perseverance to get competant, but then so did 20wpm CW.

Many people in this thread have replied with examples of superb home brewing using modern components, doing things that were unheard of 30 years ago. A digital readout for your receiver - 1 PIC micro, a LCD display, and a power line - what could be easier? - at one fell swoop,

all the old VFO problems are largely solved - so if the VFO drifts, you can see it on the display and bring it back! - can you imagine a 50's VFO that somehow mechanically tracked the VFO scale to oscillator drift - I think not.

What we need is to use lateral thinking - there is a hell of a lot of surplus modern junk that can provide some nice bits for home brewing, eg trashed cellular phones have all sorts of nice front end/mixer/synthesiser chips in them, computer power supplies can be readily reworked to give 12v at 20 amps plus, and in a box that sits at the back of the bench and weighs only a pound - how much does a 20amp linear supply weigh? - the cost is about the same because, lets face it, as Amateurs we are cheap and wouldnt dream of actually BUYING the power transformer and filter caps!

Surplus uwave TV signal downconverters can be readily modified to hear AO40 on 2.4GHZ - like, how good is that - for the time to salvage one from a neighbours roof and a bit of hacking, you have something that even in your wildest dreams you couldnt home brew in 1950!

Its easy to get nostalgic about the good old days (I remember them too, you froze in winter because only the rich had decent heating, if you were lucky you had a clapped out old car, the food was lousy because it was all we could afford, we had lovely diseases like polio, smallpox, ricketts ,malnutrition, social events like the cold war (and hot ones as well) and most of your time was taken up with survival, not leasure pursuits)

I think it says in the ARRL Handbook "The amateur is progressive" - it still holds true, we will adapt and prosper and do things the old timers could only dream about if we only stop saying "ITS TOO HARD, WE WILL GIVE UP!"

2740. Re: A beginner say : Building a 20m transceiver...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-01 13:41:54 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0210010541.e10c567@posting.google.com>
Source record: 41003

marsgal42@hotmail.com (Laura Halliday) wrote in message
news:<d42b5a72.0209291023.2ca16771@posting.google.com>...
> "Amir Kharbian" <blue_amir@gmx.net> wrote in message
news:<an4l2k$b1o3d$1@ID-157035.news.dfncis.de>...
>
> > I try to build a 20m ssb transceiver,
>
> > I found many schematics in :
>
> > 1.ARRL site
>
> > 2.ARRL handbook 1997
>
> > but it contain mini-circuit(SBL-1) as mixer.
>
> > How can replace it,please guide me.
>
>
> It's a standard part, and a good one. Use it.
>
> What's the problem?
>
> Laura Halliday VE7LDH ï¿½ ï¿½ "Que les nuages soient notre
> Grid: CN89lg ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½pied a terre..."
> ICBM: 49 16.57 N 123 0.24 W ï¿½ ï¿½ ï¿½ ï¿½- Hospital/Shafte

Maybe the problem is that in his local currency the SBL1 would cost a
significan part of a weeks wages - we cant all live in (or next to)
the USA with the assosciated standard of living and disposable income.

2741. Re: advise required

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-01 14:42:41 UTC
From: janaeanddoug@netzero.net
Message-ID: <360a820d.0210010642.652284f6@posting.google.com>
Source record: 41004

"Deos" <lineoffiretoday@yahoo.com> wrote in message news:<anbv0r$205$1@nic.grnet.gr>...
> it would be nice if we could make a 80M cw/ssb rig which also could keep our
> beer cold when dxing.....
>
>
> --
> http://deosiereas.virtualave.net
> "york-y-man" <barryNO@SPAMashfield.karoo.co.uk> wrote in message
> news:uph79o4kbq63f3@corp.supernews.com...
> > ok wnat to try out home brew as beer is way to expensive. i dont weant to
> > shell out on loads of fancy formenting equipment. is there an easy way to
> > produce a few bottels just to try? also any decent recipies. is simple
> > kitchen equipment adicuate if i want to brew on a small scale. (10
> bottels
> > max) also how long will it take till i start yielding my results
> >
> >

Couldnt copper tubing in some tank coils be used in a still?

2742. Homebrewers lies swapping Octoberfest in NY/NJ/PA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-01 14:57:40 UTC
From: k3bu@aol.com
Message-ID: <20021001105740.05495.00010982@mb-fc.aol.com>
Source record: 41005

Come and have radio-octoberfest fun!
Even if it rains!

You are all invited to (Radio) "Uktoberfest" at Mountainview Resort Verkhovyna (dance hall) in Glen Spey, NY (NY, NJ, PA tri-state area) hosted by the Tesla Radioclub and Ukrainian-American Cultural Foundation - UACF on Saturday, October 5, 2002, starting at 3:00 pm till ???

Come and have fun meeting other hams, DXers, contesters, while having good time and drinking Spaten Oktoberfest and Ukrainian Obolon beer. Enjoy Ukrainian food (special kobassy/wurst, kapusta/sauerkraut, pyrohy/pirogi, sweets) and German food (sauerbraten, spatzel, red cabbage, apple strudel), listen or dance to endless polka's by Czornozem live band and DJ Yurko-Durko. Wear your badge, hat or shirt with callsign proud and meet other radio aficionados around the "radio" table reserved for hams. Free admission to Hams, firemen, police officers, just show your badge.

142 acre Verkhovyna - MountainView Resort is the new home to Tesla Radioclub N2EE station.
Join the semiserious discussion of how many towers do we need to put up there. Come, check it out, join the club and get a free beer. Bring your family and friends.

Directions:
Take Hwy. 84 to Port Jervis, NY exit 1; follow Rt. 6 through Port Jervis to traffic light with Rt. 97/42 signs, go through and follow Rt. 97 west for 10.8 miles to Pond Eddy ("Nolan's" motel on right, bridge on left), turn right onto High Rd. (Rt. 41), go up the steep hill for 1.7 miles, Verkhovyna is on the left.
Plenty of parking.

More info, maps and satellite view of the resort are at www.Verkhovyna.com home page under directions.

See you all there and join us yodeling in Morse code :-)

Nazdorovya, Ein Prosit!

For more info contact
Yuri, K3BU, tel 973 808 1970 Email K3BU@aol.com
pres. Tesla Radioclub, host of Uktoberfest

2743. Re: advise required

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-01 15:16:57 UTC
From: troglodite@aol.com
Message-ID: <20021001111657.23076.00000654@mb-fp.aol.com>
Source record: 41006

>Couldnt copper tubing in some tank coils be used in a still?

He said BEER. You don't need a still for beer. :-) I used to cook hot dogs in the tank coil of my old 40 meter transmitter.

Unfortunately, there aren't any vacuum-tube devices that work as heat pumps, but there is a solid state device - the Peltier(sp) junction. The trick would be to incorporate these devices in a manner useful for something, besides cooling your beer. I actually had a beer spigot on an old power supply, but it was just for looks.

Doug Moore KB9TMY

2744. HV CAPACITOR BANK FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-01 15:28:45 UTC
From: ni4l@msn.com
Message-ID: <d4a0748e.0210010728.27d38f6@posting.google.com>
Source record: 41007
Cross-posted to:
rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap,rec.radio.amateur.boatanchors,misc.industry.electronics.marketplace

Really nice capacitor bank with board and eq resistors already
mounted.
It has the screw type filter capacitors. They are mounted on a
commercial made PC board with eq. resistors. It consist of 15 -
1500mfd @ 450vdc
computer grade capacitors in series. There is room for one more cap,
of
which I have a couple of spares 17 total caps. There are also some
extra resistors mounted on the board you could use to add the last
one.
That would give 93 mf at 7200wvdc. That is nothing to sneeze at! Most
of the HARD work is already done for you.
Great for your next high powered project. It will fit in a standard
19" rackmount chassis it is 6" tall 9 3/4" depth
Figure about 25lbs packed weight shipped from 28681 would like 100.00
+ shipping open to offers I could use 2 oil capacitors around 20mfd @
5000vdc each Ok if cap is higher.ni4l@charter.net

2745. FOR SALE PANEL METERS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-01 17:24:27 UTC
From: ni4l@msn.com
Message-ID: <d4a0748e.0210010924.222bbc8e@posting.google.com>
Source record: 41008
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap,misc.industry.electronics.marketplace

PANEL METERS ALL VINTAGE BLACK MILITARY STYLE UNLESS NOTED

DC AMPERES 0-600 3 SCALES 4 3/4" SQUARE $10.00

DC AMPERES 0-1 SHURITE 2 1/2" SQUARE $10.00

DC AMPERES 0-50 SHURIE 2 1/2" SQUARE $10.00

DC VOLTS 0-5 SHURITE 2 1/2" SQUARE $10.00

DC VOLTS 0-50 SHURITE 2 1/2" SQUARE $10.00

DC VOLTS 0-1 SHURITE 2 1/2" SQUARE $10.00

MAIN LOAD AMPS 0-50 2 SCALES WESTON 3" SQUARE $10.00

DC MICROAMPERES 0-500 2 3/4" ROUND $10.00

AMPS 0-300 3 1/4" ROUND $10.00

HICKOK MODEL 56R 0-2 F.S.=50UA 2 3/4" ROUND $10.00

DC AMPERES SIMPSON 0-50 3" SQUARE $10.00

INPUT AMPS DC 0-200 3 SCALES 3" SQUARE $10.00

DC VOLTS 0 CENTER 50 0-250 2 SCALES DEJUA R330 3 1/2" ROUND $10.00

DC AMPERES 0-600 3 1/2" ROUND $10.00

AC MILLIAMPERES 0-10 SIMPSON 3 1/4" SQUARE $10.00

DC MICROAMPERES 0-50 SIMPSON 2 1/2" SQUARE $10.00

AC AMPERES 0-1.5 SIMPSON 2 1/2" SQUARE $10.00

NOTE ALL IN GOOD SHAPE , All deflect and work fine.
All prices include shipping.

I have pictures of the meters.

2746. Re: Local Oscillator Waveforms

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-01 17:29:08 UTC
From: k7itm@aol.com
Message-ID: <3200347.0210010929.514d5163@posting.google.com>
Source record: 41009

As Roy suggested, if you couple your tank circuit lightly to the active element, you can get lower distortion output. But you can also (read: in addition) pick the output off a relatively low-distortion point in the oscillator circuit. If the tank is high Q, then it's going to have low harmonic content, even though the waveform at the oscillator transistor (or other active element) may be full of harmonics and very spikey. So...you can connect a low-distortion amplifier to the tank and get low distortion that way. Be sure the amplifier is low noise (so it doesn't add a lot of phase noise) and doesn't load the tank (so the Q remains high). You can find some examples of this sort of thing in the ARRL literature, I think.

In an ideal product detector/mixer, where the output is input A times input B (in the time domain), then the ideal LO waveform will be a sinewave, to minimize response to harmonics. Most mixers don't have such a simple relationship. And certainly you want some filtering on the input and output signals, so you select the mixing products you want and don't care that much about responses at LO harmonics. In the broadband spectral analysis equipment we build here, we generally try to excite the LO port of mixers with single frequencies (even though they will still have a strong response at odd harmonics of the LO), and may put diplexer-type filters between the LO amplifier and the mixer input...the diplexer to keep loading on the LO port at a constant value over a wide frequency range.

Cheers,
Tom

Gary Morton <gary@alma.demon.co.uk> wrote in message news:<3D96396A.20055B0F@alma.demon.co.uk>...
> I am re-visiting a superhet radio which I built over 25 years ago as a
> kid! Now that I have a reasonable selection of test equipment, I thought
> that it was time to dust it off and get it working properly.
>
> The local oscillator uses a single NPN transistor in the configuration
> where the coil has 3 windings, with the smaller windings in the emitter
> and collector circuits. I looked at the waveform on my scope and was
> pretty appalled.
>
> I built on the bench (using a plug in board) another oscillator from the
> same Babani Press book (BP226 - How to Build Advanced Short Wave
> Receivers) based on a 2N3819 JFET. The waveforms were also pretty bad,
> with plenty of harmonics and not a very nice sinewave. As expected the
> signal amplitude varied with frequency (as did the attrociousness of the
> waveform!).

>
> I then build a 3rd variation (from a magazine) again FET based, but
> again the waveform was very poor.
>
> I am aware that a edsktop lash up using plug in boards isn't the best
> way to try out HF oscillators, but can anybody recommend a reasonably
> simple circuit that can be used as the LO for a superhet?
>
> I have a suspicion that same kind of feedback based on the signal level
> might be a good way to improve the waveform, kind of like a Wien bridge
> oscillator which uses a lamp (in some cases).
>
> --Gary

2747. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-01 17:50:17 UTC
From: ronayling@hotmail.com
Message-ID: <3d99dd60.35911874@news.freeserve.co.uk>
Source record: 41010

Sounds wonderful, and you have sold it to me, but then I'm a Hb'er
myself
But if you think the average youngster is going to sit for hours with
a magnifier trying to sweat componants from an old phone, then you
are out of touch with the younger generation, they simply don't want
to know, they have grown up in a different world where they are
consumers, they buy, and if they can't buy it then they are simply
not interested, its a fact......
And without youngsters HB has no future.

>
>Probably not - as has been pointed out the same technology that brings
>us the $150 colour television now brings us the relatively cheap ham
>gear - and like TV and VCR (and indeed all consumer equipment) its so
>loaded with "features" that homebrew cant compete. The "features" may
>be irrelevant but, hey, its in software so its cheap to introduce.
>
>The 50's and 60's are gone, no more nice WW2 surplus to provide us
>with beautiful mechanical drives and cheap parts (although, we never
>think of the price our world had to pay to get these things) so its
>time to move on to modern techniques and methods.
>
>SMD is a pain, but so was learning Morse or the theory needed to pass
>the ham exams, even a cursory(sp) web search will bring up dozens of
>tutorials on how to use it at home - sure, you might need to buy a
>pair of magnifying specs (mine cost me $3 for x3 magnification), a
>decent high intensity desk lamp ($10 in Kmart) and 2 cheap soldering
>irons to remove components from boards. And if you want to remove the
>big smd chips, WELLER (among others) make a neat little gas catalytic
>burner thats ideal for this task. Sure, it takes practice and
>perseverance to get competant, but then so did 20wpm CW.
>
>Many people in this thread have replied with examples of superb home
>brewing using modern components, doing things that were unheard of 30
>years ago. A digital readout for your receiver - 1 PIC micro, a LCD
>display, and a power line - what could be easier? - at one fell swoop,
>all the old VFO problems are largely solved - so if the VFO drifts,
>you can see it on the display and bring it back! - can you imagine a
>50's VFO that somehow mechanically tracked the VFO scale to oscillator
>drift - I think not.
>
>What we need is to use lateral thinking - there is a hell of a lot of
>surplus modern junk that can provide some nice bits for home brewing,
>eg trashed cellular phones have all sorts of nice front

>end/mixer/synthesiser chips in them, computer power supplies can be
>readily reworked to give 12v at 20 amps plus, and in a box that sits
>at the back of the bench and weighs only a pound - how much does a
>20amp linear supply weigh? - the cost is about the same because, lets
>face it, as Amateurs we are cheap and wouldnt dream of actually BUYING
>the power transformer and filter caps!
>
>Surplus uwave TV signal downconverters can be readily modified to
>hear AO40 on 2.4GHZ - like, how good is that - for the time to salvage
>one from a neighbours roof and a bit of hacking, you have something
>that even in your wildest dreams you couldnt home brew in 1950!
>
>Its easy to get nostalgic about the good old days (I remember them
>too, you froze in winter because only the rich had decent heating, if
>you were lucky you had a clapped out old car, the food was lousy
>because it was all we could afford, we had lovely diseases like polio,
>smallpox, ricketts ,malnutrition, social events like the cold war
>(and hot ones as well) and most of your time was taken up with
>survival, not leasure pursuits)
>
>I think it says in the ARRL Handbook "The amateur is progressive" - it
>still holds true, we will adapt and prosper and do things the old
>timers could only dream about if we only stop saying "ITS TOO HARD, WE
>WILL GIVE UP!"

2748. Re: Local Oscillator Waveforms

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-01 18:12:02 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3D99E572.3080504@eznec.com>
Source record: 41011

My apology. I was thinking in terms of diode ring or other switching mixers. The dual-gate mosfet mixer can be categorized as a square-law mixer, and for that a clean sine wave should be used. The general procedure for getting a good sine wave is to reduce the oscillator loop gain to the lowest possible value that still gives reliable starting and running (to reduce the amount of limiting as much as possible), then run the output through a bandpass or lowpass filter, buffering if necessary.

The high frequency ringing certainly doesn't belong. This could occur with some topologies if the active device is allowed to shut off during the cycle (allowing a combination of inductors and capacitors to ring at their natural frequency). Or it could be due to unintended parasitics. It shouldn't be there, and you should fix it. Lowering the loop gain might help, or you might go to a different oscillator topology.

There's a very good discussion of both oscillators and mixers in Hayward's _Introduction to Radio Frequency Design_, available from the ARRL.

Roy Lewallen, W7EL

Gary Morton wrote:
> Roy Lewallen wrote:
>
>>An oscillator is an amplifier with feedback and a loop gain greater than
>>one. This means that the oscillation will build up, and up, until
>>something limits it. The more gain the loop has, the faster the
>>oscillator will start, and the more leeway you have for component
>>tolerance, temperature variation, etc., but the more severe the limiting
>>is. This limiting usually shows up as flat topping of the waveform. So
>>the raw output of most oscillators isn't very clean. (Getting control of
>>the limiting process is one secret to making stable and relatively clean
>>oscillators.) The obvious solution is to run the output through a
>>filter. And it helps to have a resonant circuit of reasonable Q as part
>>of the oscillator, and get the output from that tuned circuit, loading
>>it as lightly as possible.
>>
>>But the fact is that the ideal LO signal for diode and most other types
>>of mixers isn't a sine wave anyway -- it's a square wave. LO harmonics
>>don't necessarily translate to poor mixer performance. But you do want
>>the waveform to be symmetrical, so the resulting switching takes place
>>at regular intervals. Generally, the easiest way to do this is to tap
>>off the oscillator at a relatively clean point, run the signal through a
>>lowpass filter, and amplify as necessary. The Wein bridge approach is
>>another solution, but not one that's usually used.
>>

>>Roy Lewallen, W7EL
>
>
> Since the local oscillator feeds a mixer which generates a whole set of
> frequencies as well as the wanted fin-LO, I would have though having
> 2nd, 3rd or whatever harmonics would probably be a bad thing as they
> would all mix in wierd and complicated ways with all the other mixing
> products?
>
> This radio uses a simple dual gate MOSFET as a mixer.
>
> I assumed that a sine wave from the LO would be the best possible input
> to this mixer. Are you saying that a square wave would be better?
>
> I was also wondering what difference the signal level injected from the
> LO made?
>
> BTW the current oscillator is a basic Reinartz LC oscillator. The
> waveform is really really bad with some high frequency "ringing",
> possibly the resonance of one of the two smaller windings?
>
> regards...
>
> --Gary

2749. Re: A beginner say : Building a 20m transceiver...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-01 18:13:43 UTC
From: Rich <rich@iwantnospam.com>
Message-ID: <slrnapjphb.3u2.rich@zippy.aa2ys.ampr.org>
Source record: 41012

On 1 Oct 2002 06:41:54 -0700, Andrew VK3BFA <ablight@alphalink.com.au> wrote:
> marsgal42@hotmail.com (Laura Halliday) wrote in message
news:<d42b5a72.0209291023.2ca16771@posting.google.com>...
>> "Amir Kharbian" <blue_amir@gmx.net> wrote in message
news:<an4l2k$b1o3d$1@ID-157035.news.dfncis.de>...
>>
>> > I try to build a 20m ssb transceiver,
>>
>> > I found many schematics in :
>>
>> > 1.ARRL site
>>
>> > 2.ARRL handbook 1997
>>
>> > but it contain mini-circuit(SBL-1) as mixer.
>>
>> > How can replace it,please guide me.
>>
>>
>> It's a standard part, and a good one. Use it.
>>
>> What's the problem?
>>
>> Laura Halliday VE7LDH ï¿½ ï¿½ "Que les nuages soient notre
>> Grid: CN89lg ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½pied a terre..."
>> ICBM: 49 16.57 N 123 0.24 W ï¿½ ï¿½ ï¿½ ï¿½- Hospital/Shafte
>
> Maybe the problem is that in his local currency the SBL1 would cost a
> significan part of a weeks wages - we cant all live in (or next to)
> the USA with the assosciated standard of living and disposable income.

Germany is hardly a third-world country. ;-)

- Rich

2750. Re: advise required

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-01 18:52:44 UTC
From: g3pho@nospam.qsl.net
Message-ID: <3d9aabc1.5422237@usenet.free-online.net>
Source record: 41013

On Mon, 30 Sep 2002 19:49:07 +0100, "york-y-man"
<barryNO@SPAMashfield.karoo.co.uk> wrote:

>ok wnat to try out home brew as beer is way to expensive. i dont weant to
>shell out on loads of fancy formenting equipment. is there an easy way to
>produce a few bottels just to try? also any decent recipies. is simple
>kitchen equipment adicuate if i want to brew on a small scale. (10 bottels
>max) also how long will it take till i start yielding my results

Is this a troll or what!!

Mind you I'm partial to a couple of "807s" myself every now and then
:-)

Peter, G3PHO
>

2751. HP atu parts FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-01 20:43:28 UTC
From: 106312.1035@compuserve.com
Message-ID: <3d99b763.2027976@news.compuserve.com>
Source record: 41014

I have the basis of a HP atu FS.

twin ceramic formers with coil, approc 55mm dia, 150 long, twin wide spaced caps, fitted to 19 inch rack front.

20 Pound

BN.

2752. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 00:00:25 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <ZJqm9.31464$_32.4760@fe04>
Source record: 41015

I do homebrew with SMD parts down to 0402. I used my standard weller iron for years, but recently retired it for a Metcal, and a toaster-oven. A little paste, a little flux ,and 15 minutes at 450. :)

I'm 44, with failing near vision as well.

2753. Re: project boxes from circuit board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 01:56:01 UTC
From: Gary & Angela Belcaster <gbelcas@charter.net>
Message-ID: <gbelcas-84CB25.20560001102002@corp.supernews.com>
Source record: 41016

In article <1fc7b362.0210010508.64bc9fe1@posting.google.com>,
ablight@alphalink.com.au (Andrew VK3BFA) wrote:

> > > > don't waste good pcb for that for heaven's sake, use some brass shim
> > > > instead. sheesh!
>
> Depends on costing - I got squre metre pieces (nice fibreglass double
> sided) at the local trash and treasure for virtually nothing, so I use
> it for boxes. Brass shim costs a fortune by comparison!

Same here. 1x2 ft double clad boards were $1. Couldn't go wrong.
Jigged them up on a piece of pine, little flux, nice hot iron - bing!

Gary

2754. Re: Threat to worldwide use of 70cm band

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 02:05:33 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <Mvsm9.520$%P2.171956@news20.bellglobal.com>
Source record: 41017
Cross-posted to:
alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

"Alexander S. Wood" trolled alarmingly...
> 'to consider provision of up to 6 MHz of frequency
> spectrum to the Earth exploration-satellite service
> (active) in the frequency band 420-470 MHz...
> ...Active space borne sensors (Synthetic
> Aperture Radars (SARs) are needed to enable
> the monitoring of forest biomass.

Have the people that want the 6MHz chunk ever heard of 'spread spectrum' ?
They could easily design an adaptive, broadband radar waveform for their
(fleet of) satellite(s) that would be virtually immune to interference and
would also have a very low probability of detection. The technologies are
pretty much off-the-shelf. And why limit themselves to 6MHz ? Take the
full 50 MHz (or more) for their spread spectrum signal.

In other words, the required bandwidth could be shared. There is no need
for anyone to move off of the band. All they need is a secondary or
tertiary or etc. asignment for their little project.

BTW, in the depths of the Amazon (for example), I wonder how many users of
70-cm band Ham radio equipment are licensed Amateur Radio Operators ?
People in the less developed countries tend to use cheap Ham equipment (and
frequencies) for all sorts of purposes. Good luck getting them to QRT...

2755. Re: A beginner say : Building a 20m transceiver...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 03:16:58 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0210011916.3ed09067@posting.google.com>
Source record: 41019

Rich <rich@iwantnospam.com> wrote in message
news:<slrnapjphb.3u2.rich@zippy.aa2ys.ampr.org>...
> On 1 Oct 2002 06:41:54 -0700, Andrew VK3BFA <ablight@alphalink.com.au> wrote:
> > marsgal42@hotmail.com (Laura Halliday) wrote in message
news:<d42b5a72.0209291023.2ca16771@posting.google.com>...
> >> "Amir Kharbian" <blue_amir@gmx.net> wrote in message
news:<an4l2k$b1o3d$1@ID-157035.news.dfncis.de>...
> >>
> >> > I try to build a 20m ssb transceiver,
>
> >> > I found many schematics in :
>
> >> > 1.ARRL site
>
> >> > 2.ARRL handbook 1997
>
> >> > but it contain mini-circuit(SBL-1) as mixer.
>
> >> > How can replace it,please guide me.
> >>
> >>
> >> It's a standard part, and a good one. Use it.
> >>
> >> What's the problem?
> >>
> >> Laura Halliday VE7LDH ï¿½ ï¿½ "Que les nuages soient notre
> >> Grid: CN89lg ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½pied a terre..."
> >> ICBM: 49 16.57 N 123 0.24 W ï¿½ ï¿½ ï¿½ ï¿½- Hospital/Shafte
> >
> > Maybe the problem is that in his local currency the SBL1 would cost a
> > significan part of a weeks wages - we cant all live in (or next to)
> > the USA with the assosciated standard of living and disposable income.
>
> Germany is hardly a third-world country. ;-)
>
> - Rich

True, you got me there - which Germany do you mean, the economically
prosperous West or the basket case East - and yes, I know they have
been reunited, but the economic differences remain. And what is his
social/economic status in his society - and perhaps, too, he doesnt
want to buy a pre made mixer but would rather homebrew.

2756. Re: HP atu parts FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 03:42:22 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <5oqkpuo7bfa1j10kqbgefs3cjkqc471a9r@4ax.com>
Source record: 41018

On Tue, 01 Oct 2002 20:43:28 GMT 106312.1035@compuserve.com (Milrad)
wrote:

>I have the basis of a HP atu FS.
>
>twin ceramic formers with coil, approc 55mm dia, 150 long, twin wide
>spaced caps, fitted to 19 inch rack front.

What is an ATU?

-

Jim Adney jadney@vwtype3.org
Madison, Wisconsin USA

2757. Re: A beginner say : Building a 20m transceiver...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 04:28:41 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0210012028.2eb4dbae@posting.google.com>
Source record: 41020

Rich <rich@iwantnospam.com> wrote in message
news:<slrnapjphb.3u2.rich@zippy.aa2ys.ampr.org>...

> Germany is hardly a third-world country. ;-)

Indeed. My usual supplier for things European have
SBL-1s for (euro) 8.85, with clones (e.g. MD108) for
less than 5.

The original poster never did explain just what his
problem with the SBL-1 was.

Laura Halliday VE7LDH ï¿½ ï¿½ "Que les nuages soient notre

Grid: CN89lg ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½pied a terre..."

ICBM: 49 16.57 N 123 0.24 W ï¿½ ï¿½ ï¿½ ï¿½- Hospital/Shafte

2758. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 05:23:23 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0210012123.12251763@posting.google.com>
Source record: 41021

ronayling@hotmail.com (Ron) wrote in message
news:<3d99dd60.35911874@news.freeserve.co.uk>...
> Sounds wonderful, and you have sold it to me, but then I'm a Hb'er
> myself
> But if you think the average youngster is going to sit for hours with
> a magnifier trying to sweat componants from an old phone, then you
> are out of touch with the younger generation, they simply don't want
> to know, they have grown up in a different world where they are
> consumers, they buy, and if they can't buy it then they are simply
> not interested, its a fact......
> And without youngsters HB has no future.
>

Sorry, have to disagree with you on two counts, (and I am generalising like hell here, so can be asily shot down in flames) vis

1. The people who cant be bothered trying SMD/new techniques/home brewing are the same ones who couldnt be bothered playing with valves back in the fifties, so the attitudes of youngsters havent changed!
2. its not so much youngsters who are coming into the hobby, its the retirees who after a lifetime of work are now able to sit down, do the exams, and take up AR, and probably had always wanted to since they were kids!

I think AR is unique in that it is a "hard" hobby - you need to sit an exam before you are allowed to pursue it. We do it because its hard, not because its easy. 30 years ago I was lucky enough to be mentored by my "Elmer" (Ross VK1AN) and I have always remembered the time and effort he put into what must have been a sometimes annoying and frustrating task. I am eternally gratefull to him, his tutorials and sharing of knowledge and attitude were the basis of my lifelong career. In the past 30 years I have been able to do this for ONE newcomer, and he is doing really well - in 3rd year at university, and so knows heaps more than I ever will. But he has the Ham ethos, he scrounges, goes to junk sales, goes through the hard rubbish piles on the sidewalk - the difference is he is quite comfortable with SMD, Uprocessors, - because he grew up in a time when they were taken for granted.

Most of us can remember the time when we were kids (before we were hams,) and the commonality is the "how does it work, cant I fix it, can I take it to pieces" mindset" - where else can you go besides AR if you feel like that (And yes, there are probably heaps of areas you can get mildly obsessive about, I know...) AR has ALWAYS been a minority hobby for the technically inclined, and will attract the sort

of people who want to muck around with electronics and build things - for most of them, they only get on the air to try out a new piece of gear or to test new mods etc - the rest of the time they are busy building/scrounging/improvising etc.

In Australia we call it "Have a go" - this means, try it out, you might stuff it up, you might succeed, in any event you will have tried.

73 de VK3BFA Andrew

2759. Re: A beginner say : Building a 20m transceiver...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 06:32:54 UTC
From: Paul Keinanen <Paul.Keinanen@sci.fi>
Message-ID: <d80lpu061a6pe6o9bea57c80huan3hacl9@4ax.com>
Source record: 41022

On Tue, 01 Oct 2002 18:13:43 GMT, Rich <rich@iwantnospam.com> wrote:

>>> <an4l2k$b1o3d$1@ID-157035.news.dfncis.de>

>> Maybe the problem is that in his local currency the SBL1 would cost a
>> significan part of a weeks wages - we cant all live in (or next to)
>> the USA with the assosciated standard of living and disposable income.
>
> Germany is hardly a third-world country. ;-)

Except that the news server is a commonly used, good quality news server, which can be used when you just register to it, thus, it is commonly used by people whose own ISP does not provide a decent news server.

Thus, you should not draw too much conclusions about where the original poster is.

Why should a distributor in country X stock such exotic components as the SBL-1, if there is not any local industry using such components or it is needed by a radio repair shop. Ordering components abroad can be very expensive and time consuming due to the bureaucracy in some countries. Within EU and between USA and Canada, such bureaucracy has greatly been reduced, but can be quite common in other parts of the world.

Fortunately the SBL-1 can quite readily be replaced with four signal diodes 1N914/1N4148 and two transformers made of two ferrite cores and some wire.

Paul OH3LWR

2760. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 09:24:25 UTC
From: ronayling@hotmail.com
Message-ID: <3d9ab698.6434786@news.freeserve.co.uk>
Source record: 41023

.

Well you will probably hate me for this but it has to be said
Australia is about where the UK was about two years ago
as regards PMR and general thinking amateur radio wise
PMR is nearly over with in the UK its all going cellular or
broadband, during my last year as a comms engineer in the
UK we were told not to refer to the mobiles as radios but as
mobile interfaces, and that is the thinking, the actual transmit
function of these "interfaces" is treated as just a platform for
the interface to work through, its a different way of looking at
things, and this I'm sure will carry through to how communication
will be looked at in the future, in fact it already is here, the old
magic of some guy surrounded by dials and knobs pushing a
morse key and talking to some other guy in the rain forest of
central Africa is gone forever, youngsters just don't see it that
way, as far as they are concerned if you want to speak to
someone at a distance you reach in your pocket and get your
phone out, and they are not the slightest bit interested in how
it works, a bit like the average lady driving a car :)
And that goes right through to electronics as well, if its difficult
forget it is the general thinking, its not a bad thing, just a
different concept, we will enjoy electronics to the bitter end I'm
sure as we still see the magic of it, but its doomed as a hobby
for the future.....

>In Australia we call it "Have a go" - this means, try it out, you
>might stuff it up, you might succeed, in any event you will have
>tried.
>
>73 de VK3BFA Andrew

2761. FA: WE 416B Planar Triodes (2 ea) -- going, going....

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 10:32:32 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <4Xzm9.144623$TX5.5932335@news1.east.cox.net>
Source record: 41024
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1384212513

Thanks for looking..

2762. FA: B-I-G Air Variable -- For work or show!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 10:35:55 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <f_zm9.144625$TX5.5932950@news1.east.cox.net>
Source record: 41025
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1385282705

Thanks for looking...

2763. FA: KDKA item --- a piece of radio history..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 10:37:15 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <v%zm9.144629$TX5.5933087@news1.east.cox.net>
Source record: 41026
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=719593159

Thanks for looking..

2764. Re: Threat to worldwide use of 70cm band

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 16:45:35 UTC
From: nordland37@hotmail.com
Message-ID: <3d9b2287.5557273@news.freeserve.net>
Source record: 41027
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

On Wed, 02 Oct 2002 04:49:07 GMT, Dwight Stewart <stewart@sc.rr.com> wrote:

> The reasons we "need" those frequencies is laid out in the international
>agreements establishing the frequencies for ham radio. Perhaps you need a
>refresher course in what ham radio is all about. If so, you can find that
>information in almost any license study guide (for even the lowest license).

You miss the point. 432 MHz is NOT an amateur band, and never
has been, at least in Region 1.

UK amateurs use it on sufferance from the MOD (apparently).

Look up its status.

2765. Re: A beginner say : Building a 20m transceiver...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 17:15:07 UTC
From: Amir Kharbian <blue@greenmem.net>
Message-ID: <anf9im$dvhgm$1@ID-157035.news.dfncis.de>
Source record: 41028

SBL-1 doesn't exit in my country, and I can't buy from other counter.
Then I must replace it with ... for use in schematics. :-(

By the way, if anyone have a good Hi performance "20m SSB TRX" schematics
without
need special parts,send to me and happy me.

TNX
Amir Kharabian

"Laura Halliday" <marsgal42@hotmail.com> wrote in message
news:d42b5a72.0210012028.2eb4dbae@posting.google.com...
> Rich <rich@iwantnospam.com> wrote in message
news:<slrnapjphb.3u2.rich@zippy.aa2ys.ampr.org>...
>
>
>
> > Germany is hardly a third-world country. ;-)
>
>
> Indeed. My usual supplier for things European have
> SBL-1s for (euro) 8.85, with clones (e.g. MD108) for
> less than 5.
>
> The original poster never did explain just what his
> problem with the SBL-1 was.
>
> Laura Halliday VE7LDH "Que les nuages soient notre
>
> Grid: CN89lg pied a terre..."
>
> ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

2766. Re: HP atu parts FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 17:22:37 UTC
From: k7itm@aol.com
Message-ID: <3200347.0210020922.392e015b@posting.google.com>
Source record: 41029

Jim Adney <jadney@vwtype3.org> wrote in message
news:<5oqkpuo7bfa1j10kqbgefs3cjkqc471a9r@4ax.com>...
> On Tue, 01 Oct 2002 20:43:28 GMT 106312.1035@compuserve.com (Milrad)
> wrote:
>
> >I have the basis of a HP atu FS.
> >
> >twin ceramic formers with coil, approc 55mm dia, 150 long, twin wide
> >spaced caps, fitted to 19 inch rack front.
>
> What is an ATU?

Based on the items for sale, presumably an "Antenna Tuning Unit." See
the list of TLAs? :-)

Cheers,
Tom

2767. Re: Threat to worldwide use of 70cm band

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 17:35:06 UTC
From: Todd <ktm@lanset.com>
Message-ID: <3d9b2e4e@monitor.lanset.com>
Source record: 41030
Cross-posted to:
alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

I've got a better idea. Lets give them the freqs & then bomb them for
having and using them.

<lucifer@eternal-flames.gov> wrote in message
news:h34lpu8gsdc2u97nbvlnfus98dn4t8p5ll@4ax.com...
> On Tue, 01 Oct 2002 20:59:44 -0400, Mike Monett <Die@Spam.Bots> wrote:
>
> How about we use it as an excuse to bomb Iraq?
>
> Or Iran or India.... Any of those eastern countries beginning with
> 'I' will do..... How far east is Ireland?
>
> Old Nick.
>
> "Don't just 'Save the trees' - Talk to them!"

Hug them, Love them, They are our freinds!

2768. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 20:40:49 UTC
From: Harvey Babb <WB5MCT@arrl.net>
Message-ID: <3D9B59D1.8020301@arrl.net>
Source record: 41031

Well said Andrew!

Ham radio never has (and probably never WILL) appealed to more than a fraction of a percent of the population. It is fueled by a general curiosity about things technical. I've been amazed by the number of people in the local ham community that are also the "movers and shakers" of the local experimental aircraft community! You can get in any random group of hams and find someone to talk to about space, model rockets, robotics and just about anything else "too technical" for your average man. To such a group, the "hardship" of SMD work becomes more of a "challenge" and may actually increase the appeal. I've recently found myself becoming more intrested in things "microwave" and am finding that the plethora of SMD devices make it much easier than in years past.

Another thing I'd like to run past the group: Is it just my imagination or is there really a STRONG inverse correlation between active ham communities and the size of the "general population" community? It seems that the least active (and least friendly!) communities I've been in are those in large cities. Conversely, ham groups in small towns seem to be more active and ready to say "Hi" to a new call.

Harvey
WB5MCT

Andrew VK3BFA wrote:

> ronayling@hotmail.com (Ron) wrote in message
news:<3d99dd60.35911874@news.freeserve.co.uk>...
>
>>Sounds wonderful, and you have sold it to me, but then I'm a Hb'er
>>myself
>>But if you think the average youngster is going to sit for hours with
>>a magnifier trying to sweat componants from an old phone, then you
>>are out of touch with the younger generation, they simply don't want
>>to know, they have grown up in a different world where they are
>>consumers, they buy, and if they can't buy it then they are simply
>>not interested, its a fact......
>>And without youngsters HB has no future.
>>
>>
>
> Sorry, have to disagree with you on two counts, (and I am generalising
> like hell here, so can be asily shot down in flames) vis
>
> 1. The people who cant be bothered trying SMD/new techniques/home
> brewing are the same ones who couldnt be bothered playing with valves

> back in the fifties, so the attitudes of youngsters havent changed!
> 2. its not so much youngsters who are coming into the hobby, its the
> retirees who after a lifetime of work are now able to sit down, do the
> exams, and take up AR, and probably had always wanted to since they
> were kids!
>
> I think AR is unique in that it is a "hard" hobby - you need to sit an
> exam before you are allowed to pursue it. We do it because its hard,
> not because its easy. 30 years ago I was lucky enough to be mentored
> by my "Elmer" (Ross VK1AN) and I have always remembered the time and
> effort he put into what must have been a sometimes annoying and
> frustrating task. I am eternally gratefull to him, his tutorials and
> sharing of knowledge and attitude were the basis of my lifelong
> career. In the past 30 years I have been able to do this for ONE
> newcomer, and he is doing really well - in 3rd year at university, and
> so knows heaps more than I ever will. But he has the Ham ethos, he
> scrounges, goes to junk sales, goes through the hard rubbish piles on
> the sidewalk - the difference is he is quite comfortable with SMD,
> Uprocessors, - because he grew up in a time when they were taken for
> granted.
>
> Most of us can remember the time when we were kids (before we were
> hams,) and the commonality is the "how does it work, cant I fix it,
> can I take it to pieces" mindset" - where else can you go besides AR
> if you feel like that (And yes, there are probably heaps of areas you
> can get mildly obsessive about, I know...) AR has ALWAYS been a
> minority hobby for the technically inclined, and will attract the sort
> of people who want to muck around with electronics and build things -
> for most of them, they only get on the air to try out a new piece of
> gear or to test new mods etc - the rest of the time they are busy
> building/scrounging/improvising etc.
>
> In Australia we call it "Have a go" - this means, try it out, you
> might stuff it up, you might succeed, in any event you will have
> tried.
>
> 73 de VK3BFA Andrew
>

2769. Quecan Warning (Sunair-GSB900)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 20:53:41 UTC
From: Don Smith <desmith@innercite.com>
Message-ID: <upmn6rra1h8n17@corp.supernews.com>
Source record: 41032

Well it looks as though Quecan of Canada is going to try to shaft me on the Sunair GSB-900SC I purchased from them through Ebay.

I paid almost 500.00 for it plus 100.00 shipping. Upon arrival I found that there were problems in the power supply, It had a bad microphone, the power cord was missing, and that nine printed circuit boards were removed and missing.

I attempted to contact them and they avoided me for a couple of days. When they finally did I contact me I was told that it was sold AS-IS and I was stuck with it. I tried to get them to agree in either a partial or full refund or even to just send the boards. So far they have refused to try and correct the situation in any way.

While I can repair the problems in the power supply and even replace the mike cord, I do expect that the radio be complete.

Can I get any of my fellow green radio collectors to contact them and help get this resolved.

The contact person is Christiane Boplduc
813 St-Jacques
St-Jean-sur-Richelieu,
Quebec J3B 2N2

Telephone 450 346-7460
Fax 450 346-7638
Email quecan@qc.aira.com

Any help would be greatly appreciated. Thanks Don Smith KB6GQA

2770. Re: Quecan warning (Sunair GSB-900)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 21:17:25 UTC
From: Don Smith <desmith@innercite.com>
Message-ID: <upmoseche7i304@corp.supernews.com>
Source record: 41033

"Don Smith" <desmith@innercite.com> wrote in message news:...
> Well it looks as though Quecan of Canada is going to try to shaft me on
the
> Sunair GSB-900SC I purchased from them through Ebay.
>
> I paid almost 500.00 for it plus 100.00 shipping. Upon arrival I found
that
> there were problems in the power supply, It had a bad microphone, the
power
> cord was missing, and that nine printed circuit boards were removed and
> missing.
>
> I attempted to contact them and they avoided me for a couple of days.
When
> they finally did I contact me I was told that it was sold AS-IS and I was
> stuck with it. I tried to get them to agree in either a partial or full
> refund or even to just send the boards. So far they have refused to try
> and correct the situation in any way.
>
> While I can repair the problems in the power supply and even replace the
> mike cord, I do expect that the radio be complete.
>
> Can I get any of my fellow green radio collectors to contact them and help
> get this resolved.
>
> The contact person is Christiane Boplduc
> 813 St-Jacques
> St-Jean-sur-Richelieu,
> Quebec J3B 2N2
>
> Telephone 450 346-7460
> Fax 450 346-7638
> Email quecan@qc.airca.com
>
> Any help would be greatly appreciated. Thanks Don Smith KB6GQA
>
>
>

2771. Re: A beginner say : Building a 20m transceiver...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 21:53:13 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <upmqo429412171@corp.supernews.com>
Source record: 41034

OK, so getting back to the original topic, the SBL1 can be pretty equivalently replaced by 4 diodes and 2 transformers. For HF, the transformers are commonly made from ferrite toroids, the exact size and mix being somewhat dependent on frequency.

Take a look at Jim Kortge's 2N2/40 page (http://www.qsl.net/k8iqy) for lots of examples. This basically is pretty standard fare. It isn't at all unusual to use this approach rather than the SBL. The SBL is a dandy performer, but a few minutes spent winding a couple of transformers will produce a mixer almost as good.

..

"Amir Kharbian" <blue@greenmem.net> wrote in message
news:anf9im$dvhgm$1@ID-157035.news.dfncis.de...
> SBL-1 doesn't exit in my country, and I can't buy from other counter.
> Then I must replace it with ... for use in schematics. :-(
>
> By the way, if anyone have a good Hi performance "20m SSB TRX" schematics
> without
> need special parts,send to me and happy me.
>
> TNX
> Amir Kharabian
>
>
> "Laura Halliday" <marsgal42@hotmail.com> wrote in message
> news:d42b5a72.0210012028.2eb4dbae@posting.google.com...
> > Rich <rich@iwantnospam.com> wrote in message
> news:<slrnapjphb.3u2.rich@zippy.aa2ys.ampr.org>...
> >
> >
> >
> > > Germany is hardly a third-world country. ;-)
> >
> >
> > Indeed. My usual supplier for things European have
> > SBL-1s for (euro) 8.85, with clones (e.g. MD108) for
> > less than 5.
> >
> > The original poster never did explain just what his
> > problem with the SBL-1 was.
> >
> > Laura Halliday VE7LDH "Que les nuages soient notre
> >

> > Grid: CN89lg pied a terre..."
> >
> > ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte
>
>
>
>

2772. Re: advise required

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 21:53:43 UTC
From: Edward Zeranski <ejz@spawar.navy.mil>
Message-ID: <3D9B6AE7.9000404@spawar.navy.mil>
Source record: 41037

Bruce Lane wrote:

>
>
>>ok wnat to try out home brew as beer is way to expensive. ......
>>
>>
>
> Perhaps you'd get better results by asking in the correct
>newsgroup.....
>
> Read the name of this group again: rec.RADIO.AMATEUR.homebrew.
>In that context, 'homebrew' refers to the design and construction of
>self-designed electronic equipment specific to the hobby of amateur
>radio.
>
>
>
Besides, you can get a good deal on Sam Adams, Sierra Nevada
etc. right at COSCO. A cold 807 works well with a hot 813 ~;^o

>
>

2773. Re: HP atu parts FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 22:54:35 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3D9B792A.980730E1@ix.netcom.com>
Source record: 41035

Tom Bruhns wrote:
> What is an ATU?
I'd no idea that HP ever made any ATUs :-)
dr

2774. FA: WE416B's -- almost gone...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-02 23:43:36 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <IwLm9.148140$TX5.6077687@news1.east.cox.net>
Source record: 41036
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1384212513

thanks for looking..

2775. LF SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 03:28:14 UTC
From: erik tesnau <sumpcaver@worldnet.att.net>
Message-ID: <iPOm9.67445$1C2.3282810@bgtnsc04-news.ops.worldnet.att.net>
Source record: 41038

Hello All

Is there a commercially available SWR meter for LF? If anyone has schematics on one I would be happy with that too.

Thanks,

Erik

2776. Wanted datasheet to Ericsson PTF10158 fet

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 04:57:22 UTC
From: Rami Vainio <ramppa.maps.on@iki.fi>
Message-ID: <3D9BCE14.9C93E01E@iki.fi>
Source record: 41039
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

I'm trying to find datasheet to FET manufactured by Ericsson. Type of
fet is PTF10158.

please remove .maps.on from mail address...
--
Rami Vainio, OH2LIY <ramppa@iki.fi>

2777. Re: LF SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 05:18:33 UTC
From: lc <larryc@northwest.com>
Message-ID: <3D9BD329.9505D8DC@northwest.com>
Source record: 41040

How low are you talking about?

1mHz? 150kHz?
========

erik tesnau wrote:

> Hello All
>
> Is there a commercially available SWR meter for LF? If anyone has
> schematics on one I would be happy with that too.
>
> Thanks,
>
> Erik

2778. camnis

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 07:48:08 UTC
From: Jillian Irma Fryer <jokast@bigpond.com>
Message-ID: <tuSm9.45233$g9.128535@newsfeeds.bigpond.com>
Source record: 41041
Cross-posted to: alt.radio.scanner,alt.radio.scanner.uk,aus.radio.scanner,rec.radio.amateur.homebrew,rec.radio.scanner

Thankyou to those of you who helped me
Mark.

2779. Re: LF SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 08:31:57 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0310020432570001@c-66-176-144-254.se.client2.attbi.com>
Source record: 41042

In article <iPOm9.67445$1C2.3282810@bgtnsc04-news.ops.worldnet.att.net>,
"erik tesnau" <sumpcaver@worldnet.att.net> wrote:

> Hello All
>
> Is there a commercially available SWR meter for LF? If anyone has
> schematics on one I would be happy with that too.
>
> Thanks,
>
> Erik

Try the guys on:

http://www.geocities.com/CapeCanaveral/Hall/8701/73khz.htm

2780. Re: LF SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 09:28:49 UTC
From: Ralf Ballis <rballis@consult.m.uunet.de>
Message-ID: <20021003.9284900@viviana.santiagosoft.de>
Source record: 41043

Hello Erik!

There are no ready to use equipment which like plug and play available.
This need to build a test assembly.
One method is to use a signal source and a VSWR bridge and another more
expensive to use a network analyser. Some of them works from 10 kHz.
Actually could find a VSWR bridge from 40 kHz.

Vy 73 de Ralf, DC2MRB

2781. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 10:40:29 UTC
From: ronayling@hotmail.com
Message-ID: <3d9c1aec.9321782@news.freeserve.co.uk>
Source record: 41044

Well the whole point of this argument is being lost, I agree with all thats said here, smd's are fun, I still enjoy home brew as much as I always did, so obviously does everyone contributing here, BUT when we are gone it will be no more, simply as I keep saying there are very few yougsters doing it!!!!
Not sure about the community bit, I remember as a child we knew everyone in our street and what they did, these days I know my neighbours two doors either way and across the road and thats it! people don't seem to want to talk much these days, they say "Hello" but don't let you into their lives, now what would be interesting would be a survey of the ages of Amateur radio group members and electronics clubs, the RSGB must have a good idea about their membership, and thats probably the reason for all these licence changes that seem to be upsetting quite a few, perhaps they see themselves out of a job in a few years hi!!

>Well said Andrew!
>
>Ham radio never has (and probably never WILL) appealed to more than a
>fraction of a percent of the population. It is fueled by a general
>curiosity about things technical. I've been amazed by the number of
>people in the local ham community that are also the "movers and shakers"
>of the local experimental aircraft community! You can get in any random
>group of hams and find someone to talk to about space, model rockets,
>robotics and just about anything else "too technical" for your average
>man. To such a group, the "hardship" of SMD work becomes more of a
>"challenge" and may actually increase the appeal. I've recently found
>myself becoming more intrested in things "microwave" and am finding that
>the plethora of SMD devices make it much easier than in years past.
>
>Another thing I'd like to run past the group: Is it just my imagination
>or is there really a STRONG inverse correlation between active ham
>communities and the size of the "general population" community? It seems
>that the least active (and least friendly!) communities I've been in are
>those in large cities. Conversely, ham groups in small towns seem to be
>more active and ready to say "Hi" to a new call.
>
>Harvey
>WB5MCT
>
>

2782. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 11:30:54 UTC
From: William Webster <webster@godzilla.gsfc.nasa.gov>
Message-ID: <pan.2002.10.03.11.30.54.579608.7094@godzilla.gsfc.nasa.gov>
Source record: 41045

On Thu, 03 Oct 2002 06:40:29 -0400, Ron wrote:

> Well the whole point of this argument is being lost, I agree with all
> thats said here, smd's are fun, I still enjoy home brew as much as I
> always did, so obviously does everyone contributing here, BUT when we
> are gone it will be no more, simply as I keep saying there are very few
> yougsters doing it!!!!
> Not sure about the community bit, I remember as a child we knew everyone
> in our street and what they did, these days I know my neighbours two
> doors either way and across the road and thats it! people don't seem to
> want to talk much these days, they say "Hello" but don't let you into
> their lives, now what would be interesting would be a survey of the ages
> of Amateur radio group members and electronics clubs, the RSGB must have
> a good idea about their membership, and thats probably the reason for
> all these licence changes that seem to be upsetting quite a few, perhaps
> they see themselves out of a job in a few years hi!!
>
>
>>Well said Andrew!
>>
>>Ham radio never has (and probably never WILL) appealed to more than a
>>fraction of a percent of the population. It is fueled by a general
>>curiosity about things technical. I've been amazed by the number of
>>people in the local ham community that are also the "movers and shakers"
>>of the local experimental aircraft community! You can get in any random
>>group of hams and find someone to talk to about space, model rockets,
>>robotics and just about anything else "too technical" for your average
>>man. To such a group, the "hardship" of SMD work becomes more of a
>>"challenge" and may actually increase the appeal. I've recently found
>>myself becoming more intrested in things "microwave" and am finding that
>>the plethora of SMD devices make it much easier than in years past.
>>
>>Another thing I'd like to run past the group: Is it just my imagination
>>or is there really a STRONG inverse correlation between active ham
>>communities and the size of the "general population" community? It seems
>>that the least active (and least friendly!) communities I've been in are
>>those in large cities. Conversely, ham groups in small towns seem to be
>>more active and ready to say "Hi" to a new call.
>>
>>Harvey
>>WB5MCT
>>
>>
>>

With respect, gentlemen, I suggest that you missed a major development that suggests this argument misses the point. The point is, like everything else, amateur radio changes. Observe what is going on. The youngsters ARE there and they ARE licensed. You just don't see them in your particular spheres of interest.

With the advent of cheap (relatively speaking) computers and their associated sound cards etc, there has been a tremendous jump in the amount amateur radio-based software. New digital modes have been invented and have taken over the traditional RTTY segements (execpt on RTTY contests). Logging programs that rival commercial database management systems are common. The bulk of this software is FREEWARE with SHAREWARE a very close second. In fact, just last night, I realized that 75% of the programs I run on my home PC are freeware ham programs. Not counting Windows (shudder!!), 95% of my software was programmed by hams.

The "kids" are into software development, digital communications, and computer-based ham operations (xcvr control) with a vengance. What they are producing is top of the line, user friendly (take THAT Microsoft!) nearly bug free ham software for the sheer joy of it, it would seem. Why else would so much first class software be freeware?

Things change; ham radio changes.
"Think of it as evolution in action!" Larry Niven

Will Webster
WB2TNC
(Who can't wait to see what the "kids" come up with next!)

2783. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 13:05:46 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0210030505.2b5611e3@posting.google.com>
Source record: 41046

ronayling@hotmail.com (Ron) wrote in message
news:<3d9ab698.6434786@news.freeserve.co.uk>...
> .
>
> Well you will probably hate me for this but it has to be said
> Australia is about where the UK was about two years ago
> as regards PMR and general thinking amateur radio wise
> PMR is nearly over with in the UK its all going cellular or
> broadband, during my last year as a comms engineer in the
> UK we were told not to refer to the mobiles as radios but as
> mobile interfaces, and that is the thinking, the actual transmit
> function of these "interfaces" is treated as just a platform for
> the interface to work through, its a different way of looking at
> things, and this I'm sure will carry through to how communication
> will be looked at in the future, in fact it already is here, the old
> magic of some guy surrounded by dials and knobs pushing a
> morse key and talking to some other guy in the rain forest of
> central Africa is gone forever, youngsters just don't see it that
> way, as far as they are concerned if you want to speak to
> someone at a distance you reach in your pocket and get your
> phone out, and they are not the slightest bit interested in how
> it works, a bit like the average lady driving a car :)
> And that goes right through to electronics as well, if its difficult
> forget it is the general thinking, its not a bad thing, just a
> different concept, we will enjoy electronics to the bitter end I'm
> sure as we still see the magic of it, but its doomed as a hobby
> for the future.....

Soory, it really means a wonderful opportunity (gee, I sound like
Pollyanna here) - trunk radio has happened here, and suddenly there
were literally truckloads of used VHF and UHF commercila radios for
scrap metal prices - I got a Philips FM900 for $30, a fellow club
member converted it for another $30 (he had the Philips programmer and
an IFR) and so I now have a good quality 100 channel 2m radio for the
work vehicle - and it wont worry me too much if it gets knocked off,
but I would be really cranky if a Yaesu/Kenwood?Icom mega dollar
transceiver went!

A few months later, the same thing happened with UHF AWA RT85, same
procedure, so now I have 2m and 70cm mbile for virtually nothing ! if
we as amateurs cant see golden opportunities from new technology then
there is something wrong!

There is hepas of commercial UHF and uwave stuff out there at give
away prices, most of it readily adaptable to amateur use - If I cantr

figure out how to do it, someone else will, and spread the message via this medium, a wonderful piece of technology we are having this discussion on. Its 11pm at night after a long day, and I can sit down, relax, and have a good QSO via the keyboard - sure, its not real time, but it beats the hell out of 45 baud RTTY on HF, and I dont miss having to fix the Model 15 teletype every few weeks!

And I love my "Whitegoods" car - I get it serviced 3 times a year, dont even need to check the oil, just put petrol init. And it doesnt leak oil all over the driveway (dont know if Pommy engineering has mastered thsi one yet hi hi) and I dont need to spent every weekend doing "routine" maintenance.

Nothing has changed, and fathers and grandfathers did the same, they looked around to see what was available and how can we hack it to amateur use.

Saw a wonderful piece of lateral thinking on thsi medium the other night, some bloke (forget the call) had worked out that a TV tuner from the tip made a wonderful 6m preamp for his converted CB - varacter tuning on input and output so its fairly sharp, tuneable via a pot and 12v, disanbled the LO by cutting out the osc. coil - and voila, a hot 6m preamp for a visit to the tip!

We will survive, we will prosper, we will go on to bigger and better and probably more looney projects as the years go by, and I honestly think (as mentioned in this discussion) that there will always be a small group of people who love to tinker, to adapt, and just plain muck around with technolgy!

Andrew VK3BFA

2784. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 13:12:02 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0210030512.7e15d821@posting.google.com>
Source record: 40947

ronayling@hotmail.com (Ron) wrote in message
news:<3d9c1aec.9321782@news.freeserve.co.uk>...
> Well the whole point of this argument is being lost, I agree with all
> thats said here, smd's are fun, I still enjoy home brew as much as I
> always did, so obviously does everyone contributing here, BUT when
> we are gone it will be no more, simply as I keep saying there are very
> few yougsters doing it!!!!
> Not sure about the community bit, I remember as a child we knew
> everyone in our street and what they did, these days I know my
> neighbours two doors either way and across the road and thats it!
> people don't seem to want to talk much these days, they say
> "Hello" but don't let you into their lives, now what would be
> interesting would be a survey of the ages of Amateur radio group
> members and electronics clubs, the RSGB must have a good idea
> about their membership, and thats probably the reason for all these
> licence changes that seem to be upsetting quite a few, perhaps they
> see themselves out of a job in a few years hi!!
>

Harvey,what about the people you are yacking to in this discussion - I dont know my neighbours (I dont really want to, they dont have any test equipmet I can borrow) - this is our new community, the spread of technology has enabled us to do this - I probably would never have heard you on HF, and it would most likely have been "59 QSL via bureau" if we had! - dont be too down, its a changing world (as its always been) and we will change with it, new techniques, new modes of communications, new amateurs to ragchew with -what could be nicer than that!

Andrew VK3BFA

2785. Re: LF SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 15:44:29 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <anhokt$78e$1@helle.btinternet.com>
Source record: 40948

Are you sure you need an SWR meter ?

If you want something to insert in the very short length of wire between transmitter and the antenna tuner to check that the transmitter is correctly loaded with 50 ohms (or whatever your transmitter is designed for) then you don't need an SWR meter. You need a TLI. (Transmitter Loading Indicator).

Reg, G4FGQ.

2786. Re: Newbie needs some Hot-To Info for an interesting idea

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 16:10:31 UTC
From: Frank <fworm@norpak.ca>
Message-ID: <3D9C963F.90802@norpak.ca>
Source record: 40949

Whatever you do, Don't amplify it!
It's a piece of junk thats spews crap all over the spectrum.

Earthling wrote:

> Hey Guys,
>
> I'm not a Ham Radio operator, but I am an
> Electronic Tech who has had no experience
> in this mysterious world of RF.
>
> This is my situation:
> I recently purchased a tiny 100 mw FM Stereo
> Transmitter from the C.Crane Company (ccrane.com).
> The problem is that it's signal is too weak to
> listen to once I get more than one room away
> from it. I need to be able receive it's signal
> anywhere in the house, basement, garage, and
> anywhere outside within about 50 feet of the house.
> I'm trying to operate it at 88.3 Mhz, which is the
> cleanest spot on the FM dial in my area.
>
> 1st Question
> Assuming that it would have much better range if it
> was driving a decent antenna, what type of antenna
> would you recommend for use with it?
>
> 2nd Question
> I prefer not to open the case up and modify anything
> in the unit as my eyesight isn't good enough these
> days to work with Surface Mount Devices mounted on
> those tiny solder pads. Based on that condition,
> what would would be the best way to couple the
> maximum signal from the built-in 10.5 inch telescoping
> antenna to another much more efficient antenna.
>
> 3rd Question
> Assuming the above will not achieve what my goal is,
> would anyone be willing to share a circuit with me
> for a 100 mw Linear Amplifier that could be easily
> interfaced to a decent antenna. If anyone can help
> in this area, I would still need to know how I could
> couple the signal efficiently from the existing
> 10.5 inch telescoping antenna to the input of this
> Amp.

>
> Any ideas would be greatly appreciated.....
> Thanks a bunch, Guys.
>
> Larry
>

2787. FS: Linx Tech keyfob system RF eval kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 17:36:10 UTC
From: Brett <b@verizon.net>
Message-ID: <ee%m9.33698$CN2.7776@nwrddc01.gnilink.net>
Source record: 40950
Cross-posted to: sci.electronics,rec.radio.amateur.homebrew,rec.radio.amateur.digital

Linx Technologies Keyfob Evaluation System. EVAL-418-KEY-2. NIB.
This is an evaluation kit that Linx sells for their FCC pre-approved keyfob transmitters and receivers. They are configurable up to 5 channels. This kit is a two-button, two-channel version, operating at 418 Mhz. The kit comes with two modular key fob transmitters, one receiver board, and a spare receiver chip.

The chip set can also be used for passing 9600 baud data, and there is enough hardware here to establish a complete two-way half duplex link. All documentation included.

The evaluation board is equipped with a buzzer and an LED to demonstrate two function capability. However, due to an actual design error in the kit itself, the buzzer doesn't sound unless you reconfigure the modular keyfob.
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1385102773

2788. Re: Threat to worldwide use of 70cm band

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 17:38:35 UTC
From: lucifer@eternal-flames.gov
Message-ID: <t0vopugv3jgevf0aeuj3v9m8mf7atbpus6@4ax.com>
Source record: 40958
Cross-posted to: alt.ham-radio.hf,alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

On Thu, 03 Oct 2002 09:16:11 +0200, Rob N.
<robnews3@xs4all.nl.removethis> wrote:

>Let me make a well-known statement: use it or loose it.

As Edwina said to John.

Old Nick.

2789. Re: LF SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 17:57:08 UTC
From: k7itm@aol.com
Message-ID: <3200347.0210030957.7264f76d@posting.google.com>
Source record: 40951

I'm a bit curious why you care...since any transmission lines you use will likely be quite short compared with a wavelength, and the characteristic impedance of small "50 ohm" coax deviates noticably from 50 ohms by the time you get down ~100kHz anyway. I suspect it would be more interesting to be able to actually measure the impedance, which you should be able to do with one of the classic impedance bridge circuits.

For an SWR meter, if you look at the schematics of HF SWR bridges, you'll find that some of them are simply resistive bridges, perhaps using a capacitor in the detector circuit (which could be scaled to a larger value). If you have a circuit for an HF bridge which uses a capacitive divider, you should be able to scale the capacitor values. If you have one that uses transformers, you can instead use transformers appropriate to your freq range. ~100kHz is much more forgiving of lead length than 30MHz, so it shouldn't be much of a problem.

To make a bridge that covers a 1000:1 frequency range accurately is something of a challenge, but a 10:1 range down around 100kHz should be fairly straightforward.

Cheers,
Tom

"erik tesnau" <sumpcaver@worldnet.att.net> wrote in message news:<iPOm9.67445$1C2.3282810@bgtnsc04-news.ops.worldnet.att.net>...
> Hello All
>
> Is there a commercially available SWR meter for LF? If anyone has
> schematics on one I would be happy with that too.
>
> Thanks,
>
> Erik

2790. Re: HP atu parts FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 18:04:17 UTC
From: k7itm@aol.com
Message-ID: <3200347.0210031004.3d1ddfe4@posting.google.com>
Source record: 40952

Dan Rae <rae4@ix.netcom.com> wrote in message news:<3D9B792A.980730E1@ix.netcom.com>...
> Tom Bruhns wrote:
> > What is an ATU?

Excuse me?? That's a quote from the previous poster to whom I was
replying, not what I wrote. :-)

> I'd no idea that HP ever made any ATUs :-)
> dr

No, they make a fairly nice cooking sauce though.
http://www.higherdesign.com/brownsauce/hpsauce.htm

Perhaps the OP meant "High Power"? Or maybe just "High Price"!

Cheers,
Tom

2791. Re: Newbie needs some Hot-To Info for an interesting idea

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 18:10:31 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <ani16i$pm1$1@slb7.atl.mindspring.net>
Source record: 40953

Any of the modifications/changes you talk about are not legal. What you have is what you get.

Now you could improve the RECEIVER part. Thats perfectly legal.

Try something simple to start with. Just grab some hookup wire. Wrap it around the existing Receive antenna, or connect it to the receiver you are using. Stick it on the wall and see if that helps. Go from there.

Dan/W4NTI

"Earthling" <anon@anon.net> wrote in message
news:ganopu075r8fu8d0elc6s8mie6mc9sna5j@4ax.com...
> Hey Guys,
>
> I'm not a Ham Radio operator, but I am an
> Electronic Tech who has had no experience
> in this mysterious world of RF.
>
> This is my situation:
> I recently purchased a tiny 100 mw FM Stereo
> Transmitter from the C.Crane Company (ccrane.com).
> The problem is that it's signal is too weak to
> listen to once I get more than one room away
> from it. I need to be able receive it's signal
> anywhere in the house, basement, garage, and
> anywhere outside within about 50 feet of the house.
> I'm trying to operate it at 88.3 Mhz, which is the
> cleanest spot on the FM dial in my area.
>
> 1st Question
> Assuming that it would have much better range if it
> was driving a decent antenna, what type of antenna
> would you recommend for use with it?
>
> 2nd Question
> I prefer not to open the case up and modify anything
> in the unit as my eyesight isn't good enough these
> days to work with Surface Mount Devices mounted on
> those tiny solder pads. Based on that condition,
> what would would be the best way to couple the
> maximum signal from the built-in 10.5 inch telescoping
> antenna to another much more efficient antenna.
>
> 3rd Question

> Assuming the above will not achieve what my goal is,
> would anyone be willing to share a circuit with me
> for a 100 mw Linear Amplifier that could be easily
> interfaced to a decent antenna. If anyone can help
> in this area, I would still need to know how I could
> couple the signal efficiently from the existing
> 10.5 inch telescoping antenna to the input of this
> Amp.
>
> Any ideas would be greatly appreciated.....
> Thanks a bunch, Guys.
>
> Larry

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.393 / Virus Database: 223 - Release Date: 30-Sep-02

2792. Re: Need Sunair GSB-900 boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 19:05:15 UTC
From: Dave Allen <david_e_allen@agilent.com>
Message-ID: <3D9C94EB.1346EDF@agilent.com>
Source record: 40959
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

Hopefully you have told eBay about your experience. You can at least give the dealer a black mark on eBay which will hopefully warn other potential customers. And enough black marks can even ban them from eBay.

dave allen, wb0taq, colorado

2793. FS: HV Plate xsfrmr

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 19:13:06 UTC
From: lc <larryc@northwest.com>
Message-ID: <3D9C96C1.C282DA6F@northwest.com>
Source record: 40954
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap,rec.radio.amateur.boatanchors

HV plate transformer. Chicago Plate xfmr # 52C-219

Dual primaries 0-117-141VAC

Secondary 5760V @ 320MA
Derated to 4800V at 475MA

Weighs about 100#

Asking $30 OBO.

Local pickup to Portland, Oregon.

2794. FT-ONE Parting Out!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 19:51:03 UTC
From: "Mitch, W4OA" <w4oa@arrl.net>
Message-ID: <upp7t8112q4v93@corp.supernews.com>
Source record: 40960
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.s

ups trashed my ft-one beyond repair... so i am parting
it out...

gone - if board, ram board, fm board
left - everything else, including knobs, meters, power
supply, etc.

i also have the original owners manual and the yaesu
technical (service) manual...

no reasonable offer(s) refused!

mitch, w4oa
w4oa@vibroplex.com

2795. Re: FT-ONE Parting Out!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 19:56:20 UTC
From: "Mitch, W4OA" <w4oa@arrl.net>
Message-ID: <upp875pvbk4h89@corp.supernews.com>
Source record: 40961
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.swap

"Mitch, W4OA" <w4oa@arrl.net> wrote in message news:...
>
> ups trashed my ft-one beyond repair... so i am parting
> it out...
>
> gone - if board, ram board, fm board
> left - everything else, including knobs, meters, power
> supply, etc.
>
> i also have the original owners manual and the yaesu
> technical (service) manual...
>
> no reasonable offer(s) refused!
>
> mitch, w4oa
> w4oa@vibroplex.com
>
>
>

2796. Re: A beginner say : Building a 20m transceiver...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 20:20:27 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0210031220.3540ffb0@posting.google.com>
Source record: 40955

"Amir Kharbian" <blue@greenmem.net> wrote in message
news:<anf9im$dvhgm$1@ID-157035.news.dfncis.de>...
> SBL-1 doesn't exit in my country, and I can't buy from other counter.
> Then I must replace it with ... for use in schematics. :-(
>
> By the way, if anyone have a good Hi performance "20m SSB TRX" schematics
> without
> need special parts,send to me and happy me.

May I suggest you try somebody other than the ARRL for
designs?

ARRL designs tend to assume parts that are available in
the U.S.A. Even us Canadians, right next door, sometimes
have parts procurement problems. If you stick with an
ARRL design you are likely to experience lots more parts
problems than just SBL-1.

Perhaps you should see what you can get, *then* choose
a design. If you can't get high-performance parts, it's
unrealistic to attempt to build high-performance
equipment. And a 20m SSB transceiver is hardly a
beginner's project!

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

2797. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 21:13:39 UTC
From: ronayling@hotmail.com
Message-ID: <3d9caf70.47348050@news.freeserve.co.uk>
Source record: 40956

>Soory, it really means a wonderful opportunity (gee, I sound like
>Pollyanna here) - trunk radio has happened here, and suddenly there
>were literally truckloads of used VHF and UHF commercila radios for
>scrap metal prices - I got a Philips FM900 for $30, a fellow club
>member converted it for another $30 (he had the Philips programmer and
>an IFR) and so I now have a good quality 100 channel 2m radio for the
>work vehicle - and it wont worry me too much if it gets knocked off,
>but I would be really cranky if a Yaesu/Kenwood?Icom mega dollar
>transceiver went!

>Andrew VK3BFA

Good for you, the old FM900 has been and gone here quite a few
years back, the latest arrival on the surplus market has been the
Philips FM1000 series, which is a good point in mention, I made up
what I thought was a nice little mod for this radio, I made a little
interface and a program in VB to take control of it using my PC it
has a dynamic range of 140 - 180 mhz,scanning, lockouts, shifts
memory scanning, offsets you name it, and I've had a great deal of
interest in it when I use it, BUT when I say it needs a small home
brew interface then the interest wanes rapidly hi!!

2798. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 21:21:58 UTC
From: ronayling@hotmail.com
Message-ID: <3d9db363.48359187@news.freeserve.co.uk>
Source record: 40957

>>>

Well one thing this isn't and thats home brew in the componant sense!
though I wouldn't argue the fact that this is probably where home brew
if you can call it that will probably end up, provided there's no
soldering irons and componants to complicate things hi!

>With respect, gentlemen, I suggest that you missed a major development
>that suggests this argument misses the point. The point is, like
>everything else, amateur radio changes. Observe what is going on. The
>youngsters ARE there and they ARE licensed. You just don't see them in
>your particular spheres of interest.
>
>With the advent of cheap (relatively speaking) computers and their
>associated sound cards etc, there has been a tremendous jump in the
>amount amateur radio-based software. New digital modes have been invented
>and have taken over the traditional RTTY segements (execpt on RTTY
>contests). Logging programs that rival commercial database management
>systems are common. The bulk of this software is FREEWARE with SHAREWARE
>a very close second. In fact, just last night, I realized that 75% of the
>programs I run on my home PC are freeware ham programs. Not counting
>Windows (shudder!!), 95% of my software was programmed by hams.
>
>The "kids" are into software development, digital communications, and
>computer-based ham operations (xcvr control) with a vengance. What they
>are producing is top of the line, user friendly (take THAT Microsoft!)
>nearly bug free ham software for the sheer joy of it, it would seem. Why
>else would so much first class software be freeware?
>
>Things change; ham radio changes.
>"Think of it as evolution in action!" Larry Niven
>
>Will Webster
>WB2TNC
>(Who can't wait to see what the "kids" come up with next!)

2799. Icom IC-T7H Output power question 2m 4Watts-6Watts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 22:28:45 UTC
From: timfranz@starband.net
Message-ID: <f279398d.0210031428.67442fff@posting.google.com>
Source record: 40962

Hello all,

Let me start by saying I'm new, new to the group, new to amateur radios and I'm a Vol. Firefighter This is why I'm getting into radios. I recently bought a
Icom T2H VHF radio and it transmits great! documentation say 6Watts and I
belive it... I have had many other firefighters ask "What kind of radio is that thing" Now wanting more ability I bought a IC-T7H Transmitting on the same VHF band I get very poor transmit strength (I'm not on low power seting)
I read the documentation and get confused 4 watts with this battery 5W with that one, then again 6W with a corded powersupply... Why would I want a handheld radio if I wanted to be tied to a power source.

Has anyone seen anything on how I can get 6 Watts from this thing? is there a mod? Or can someone suggest something besides using my old radio?
Battery life is not an issue if this is the reason fo the lower output.
I only use the radio for a few minutes to an hour 2 to 3 times a week.

Thanks for any help you can provide.
Feel free to email me at timfranz@starband.net

2800. Re: Need Sunair GSB-900 boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-03 23:16:30 UTC
From: Don Smith <desmith@innercite.com>
Message-ID: <uppjugegbp8j9b@corp.supernews.com>
Source record: 40963
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

I have filed a complaint against the Quecan company in Canada with the Ebay Safe Harbor site. Not sure if it will do any good. Thanks for your support. Don
"Dave Allen" <david_e_allen@agilent.com> wrote in message news:3D9C94EB.1346EDF@agilent.com...
> Hopefully you have told eBay about your experience. You can at least
> give the dealer a black mark on eBay which will hopefully warn other
> potential customers. And enough black marks can even ban them from eBay.
>
> dave allen, wb0taq, colorado
>

2801. Re: Icom IC-T7H Output power question 2m 4Watts-6Watts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 03:36:59 UTC
From: Roger Leone <arleoneNoSpam@inreach.com>
Message-ID: <r18n9.70$jO5.22711490@news.inreach.com>
Source record: 40964

Tim:

I am not familiar with the particular radios you mentioned, but it is very common for handheld radios to have different power output ratings with different battery packs or external power sources. It is because the different battery packs or external power sources supply the radio with a different voltage. For example, a radio that puts out 4 watts with a 7.5 volt battery might put out 6 watts with a 9 volt battery (or external power source). If you read the instruction manuals where the optional batteries are listed, they will probably indicate what the voltage is.

Second, you will probably not notice the difference between 6 watts and 4 watts under normal conditions. That difference is less than 3 db (decibels) and under most circumstances the station you are talking to won't notice it.

Roger K6XQ

2802. Re: Threat to worldwide use of 70cm band

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 04:08:01 UTC
From: Dwight Stewart <stewart@sc.rr.com>
Message-ID: <B9C28C53.B87D%stewart@sc.rr.com>
Source record: 40965
Cross-posted to:
alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

"Barry OGrady" wrote:
>
> Ham radio is a hobby. (snip)

You forgot the last part of that sentence - ham radio is a hobby that serves a public service. And it is that public service that sets ham radio apart from the other hobby or recreational radio users (CB, GMRS, FRS, or whatever).

And please don't now claim that hams don't do public service, because I know for a fact that large numbers do. In fact, based on my experience, the only hams making these claims are the hams not doing public service themselves (perhaps to justify their own inactivity).

> It can not justify the frequencies it has.

Ham operators don't have to "justify" the frequencies allocated to them. We don't allocate frequencies to ourselves - government agencies do. And it is those agencies that have to justify their decisions to allocate frequencies. And judging from the number of bands and frequencies available to us, they have not had a problem justifying their decisions so far.

> 70 cm should be reallocated to commercial use
> since hams do not deserve it.

A bold statement, Barry, especially when absolutely nothing is offered to back it up. Why don't you explain why we don't "deserve" it? Are you going to claim nobody is using those frequencies? If so, I suggest you listen a little more closely. True, the the band is not being used as much as it could, but the same could have been said about the 6m band a few years ago (a band growing more popular each day).

> They may as well have them since hams do not
> need them.

You consistently refer to hams in the third person. Are you even an ham operator? If not, why is this of interest to you? If you are a ham, why do you have such a negative opinion of your fellow ham operators - and such a destructive attitude towards this radio service? Instead of advocating the removal of our frequencies, why don't you do something more constructive - like actually using the frequencies?

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

2803. Re: Threat to worldwide use of 70cm band

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 04:41:44 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <upq70erjns660a@corp.supernews.com>
Source record: 40966
Cross-posted to:
alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

Dwight is a troll from the CB world. He enjoys jerking HAM chains when ever
he can.

"Dwight Stewart" <stewart@sc.rr.com> wrote in message
news:B9C28C53.B87D%stewart@sc.rr.com...
> "Barry OGrady" wrote:
> >
> > Ham radio is a hobby. (snip)
>
>
> You forgot the last part of that sentence - ham radio is a hobby that
> serves a public service. And it is that public service that sets ham radio
> apart from the other hobby or recreational radio users (CB, GMRS, FRS, or
> whatever).
>
> And please don't now claim that hams don't do public service, because I
> know for a fact that large numbers do. In fact, based on my experience,
the
> only hams making these claims are the hams not doing public service
> themselves (perhaps to justify their own inactivity).
>
>
> > It can not justify the frequencies it has.
>
>
> Ham operators don't have to "justify" the frequencies allocated to them.
> We don't allocate frequencies to ourselves - government agencies do. And
it
> is those agencies that have to justify their decisions to allocate
> frequencies. And judging from the number of bands and frequencies
available
> to us, they have not had a problem justifying their decisions so far.
>
>
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> > since hams do not deserve it.
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>
> A bold statement, Barry, especially when absolutely nothing is offered
to
> back it up. Why don't you explain why we don't "deserve" it? Are you going
> to claim nobody is using those frequencies? If so, I suggest you listen a
> little more closely. True, the the band is not being used as much as it

> could, but the same could have been said about the 6m band a few years ago
> (a band growing more popular each day).
>
>
> > They may as well have them since hams do not
> > need them.
>
>
> You consistently refer to hams in the third person. Are you even an ham
> operator? If not, why is this of interest to you? If you are a ham, why do
> you have such a negative opinion of your fellow ham operators - and such a
> destructive attitude towards this radio service? Instead of advocating the
> removal of our frequencies, why don't you do something more constructive -
> like actually using the frequencies?
>
>
> Dwight Stewart (W5NET)
>
> http://www.qsl.net/w5net/
>

2804. Fa: 6LB6, 6LF6, 6JS6C Xcvr/Xmttr Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 04:48:15 UTC
From: zoxx@my-deja.com
Message-ID: <anj6if$e9t$1@news.netmar.com>
Source record: 40968
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

Now on Ebay...

(2) Realistic 6LB6 Tubes - NIB/Tested... used in the following transceivers: Galaxy GT-550, Swan 270-B, and WRL Duo-Bander II. It's also used in the Galaxy 2000B and other linears:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1384607999

6LF6/6MH6 GE Tube - NIB Tested... found in the Swan 1011 transceiver, Palomar Skipper 300 linear, and the following audio amplifiers: Berning EA-2100, Counterpoint SA-4, and Futterman H-3aa, OTL-1 and OTL-3 amplifiers:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1384602728

NIB Pair Of 6JS6C RCA Tubes... found in several Ham rigs, including the Yaesu FT-101 and FT-200 transceivers, Yaesu FL-101 and FLDX-400 transmitters, Henry Radio Tempo One Transmitter, and the Lafayette HA-250A linear amplifier.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1384605552

International bidders OK. Auctions end soon.

..Thanks for looking.

----- Posted via NewsOne.Net: Free (anonymous) Usenet News via the Web -----
http://newsone.net/ -- Free reading and anonymous posting to 60,000+ groups
NewsOne.Net prohibits users from posting spam. If this or other posts
made through NewsOne.Net violate posting guidelines, email abuse@newsone.net

2805. Re: LF SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 04:52:19 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3D9D1E84.480DEF71@cox.net>
Source record: 40967

If it is low power, a resistive bridge SWR meter could easily be built. QRPers use these all the time at HF. They would work equally well at LF.

A schematic of such a thing is at:

http://www.extremezone.com/~nk7m/n7veswr.htm

At such low frequencies, the ferrite core and LED should be eliminated in favor of a series combination of a 0.1 to 1 ma meter, a 25K pot and diode. The rf step up transformer was used to improve the sensitivity. You could keep the LED and transformer is you substituted a higher permeability FT37-77 type core.

- Dan Tayloe, N7VE; Phoenix, Az; Az ScQRPions

2806. Re: Threat to worldwide use of 70cm band

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 07:19:31 UTC
From: Dwight Stewart <stewart@sc.rr.com>
Message-ID: <B9C2B93A.B8A8%stewart@sc.rr.com>
Source record: 40969
Cross-posted to:
alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

"Fred Hambrecht" wrote:
>
> Dwight is a troll from the CB world. He enjoys
> jerking HAM chains when ever he can.

Well, since I haven't trolled from the CB world, or posted anything that
might jerk any ham's chain recently, I assume you must be talking about
Barry instead of me above.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

2807. Air-core coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 09:10:33 UTC
From: Sidevalve <Sabbatai_zvi@hotmail.com>
Message-ID: <kkmqpu88ppsdv7pirvutoh1ai8h4cghudc@4ax.com>
Source record: 40970

Hi - I just want to mention to everyone that
I am disposing of some airwound (Airdux style) coils.

I won't list them here because I know ads are frowned on
in this group.

If you would like to see some of the coils, I have listed them in:

rec.radio.amateur.boatanchors
rec.radio.swap
AND
alt.ham-radio.marketplace

Thank you & 73

- - -
Commyanism is the woyste thing I evah hoyde - Robin Williams

2808. AMP PARTS FOR SALE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 14:56:46 UTC
From: ni4l@msn.com
Message-ID: <d4a0748e.0210040656.4eb63f97@posting.google.com>
Source record: 40971
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

PANEL METERS ALL VINTAGE BLACK MILITARY STYLE UNLESS NOTED

DC AMPERES 0-600 3 SCALES 4 3/4" SQUARE $10.00

DC AMPERES 0-1 SHURITE 2 1/2" SQUARE $10.00

DC AMPERES 0-50 SHURIE 2 1/2" SQUARE $10.00

DC VOLTS 0-5 SHURITE 2 1/2" SQUARE $10.00

DC VOLTS 0-50 SHURITE 2 1/2" SQUARE $10.00

DC VOLTS 0-1 SHURITE 2 1/2" SQUARE $10.00

MAIN LOAD AMPS 0-50 2 SCALES WESTON 3" SQUARE $10.00

DC MICROAMPERES 0-500 2 3/4" ROUND $10.00

AMPS 0-300 3 1/4" ROUND $10.00

HICKOK MODEL 56R 0-2 F.S.=50UA 2 3/4" ROUND $10.00

DC AMPERES SIMPSON 0-50 3" SQUARE $10.00

INPUT AMPS DC 0-200 3 SCALES 3" SQUARE $10.00

DC VOLTS 0 CENTER 50 0-250 2 SCALES DEJUA R330 3 1/2" ROUND $10.00

DC AMPERES 0-600 3 1/2" ROUND $10.00

AC MILLIAMPERES 0-10 SIMPSON 3 1/4" SQUARE $10.00

DC MICROAMPERES 0-50 SIMPSON 2 1/2" SQUARE $10.00

AC AMPERES 0-1.5 SIMPSON 2 1/2" SQUARE $10.00

NOTE ALL IN GOOD SHAPE , All deflect and work fine.
All prices include shipping.

I have pictures of the meters.

Really nice capacitor bank with board and eq resistors already
mounted.
It has the screw type filter capacitors. They are mounted on a
commercial made PC board with eq. resistors. It consist of 15 -
1500mfd @ 450vdc
computer grade capacitors in series. There is room for one more cap,
of
which I have a couple of spares 17 total caps. There are also some
extra resistors mounted on the board you could use to add the last

one.
That would give 93 mf at 7200wvdc. That is nothing to sneeze at! Most of the HARD work is already done for you.
Great for your next high powered project. It will fit in a standard 19" rackmount chassis it is 6" tall 9 3/4" depth
Figure about 25lbs packed weight shipped from 28681 would like 100.00 + shipping open to offers

2809. Re: Newbie needs some Hot-To Info for an interesting idea

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 15:28:56 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.000001ef.0062985b@btinternet.com>
Source record: 40972

Hi,

For what it is worth, have a look at the following -

http://www.nfbnet.org/weblist/gui-talk/msg10466.html

Stereo needs something like 10 - 15dB more of a signal
than mono to produce the same SINAD, so you might try
switching away from it if that is possible. Another
possibility is moving up toward the top of the band as
shorter whips will be more efficient up there. I also
notice that one of the list posters mentions a tuning slug
round the back which may be adjusted to your advantage.

Cheers - Joe, G3LLV

2810. Re: Quecan warning (Sunair GSB-900)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 17:05:55 UTC
From: Skipp does way too much Ebay <howhotisitat@hotmail.com>
Message-ID: <ankhpjete2@woodrow.ucdavis.edu>
Source record: 40973

Don,

Go back to the original Ebay listing to see if the as-is statement is
mentioned... yes, then your out of luck. I've purchased a lot of stuff
from them, all of it just as advertised. Not to mention, as a Canadian
Business, they seem to get items delivered to me faster than any other
North of the US Border business. In fact, I receive their items faster
than many US Ebay sellers work...

In you next post, provide the item number so we can all have a look at the
actual original listing while it's still up.

cheers
skipp

: Don Smith <desmith@innercite.com> wrote:
: "Don Smith" <desmith@innercite.com> wrote in message news:...
:> Well it looks as though Quecan of Canada is going to try to shaft me on
: the
:> Sunair GSB-900SC I purchased from them through Ebay.
:>
:> I paid almost 500.00 for it plus 100.00 shipping. Upon arrival I found
: that
:> there were problems in the power supply, It had a bad microphone, the
: power
:> cord was missing, and that nine printed circuit boards were removed and
:> missing.
:>
:> I attempted to contact them and they avoided me for a couple of days.
: When
:> they finally did I contact me I was told that it was sold AS-IS and I was
:> stuck with it. I tried to get them to agree in either a partial or full
:> refund or even to just send the boards. So far they have refused to try
:> and correct the situation in any way.
:>
:> While I can repair the problems in the power supply and even replace the
:> mike cord, I do expect that the radio be complete.
:>
:> Can I get any of my fellow green radio collectors to contact them and help
:> get this resolved.
:>
:> The contact person is Christiane Boplduc
:> 813 St-Jacques
:> St-Jean-sur-Richelieu,
:> Quebec J3B 2N2

:>
:> Telephone 450 346-7460
:> Fax 450 346-7638
:> Email quecan@qc.airca.com
:>
:> Any help would be greatly appreciated. Thanks Don Smith KB6GQA
:>
:>
:>

2811. Re: Need Sunair GSB-900 boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 17:25:12 UTC
From: ni4l@msn.com
Message-ID: <d4a0748e.0210040925.1dd59f34@posting.google.com>
Source record: 40974
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1375531710
http://procyonhosts.net/quecan/photo_en_permanace/afterauctionrules.html

"Don Smith" <desmith@innercite.com> wrote in message
news:<uppjugegbp8j9b@corp.supernews.com>...
> I have filed a complaint against the Quecan company in Canada with the Ebay
> Safe Harbor site. Not sure if it will do any good. Thanks for your
> support. Don
> "Dave Allen" <david_e_allen@agilent.com> wrote in message
> news:3D9C94EB.1346EDF@agilent.com...
> > Hopefully you have told eBay about your experience. You can at least
> > give the dealer a black mark on eBay which will hopefully warn other
> > potential customers. And enough black marks can even ban them from eBay.
> >
> > dave allen, wb0taq, colorado
> >

2812. Re: Quecan warning (Sunair GSB-900)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 17:26:01 UTC
From: ni4l@msn.com
Message-ID: <d4a0748e.0210040926.5b43e285@posting.google.com>
Source record: 40975

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1375531710
http://procyonhosts.net/quecan/photo_en_permanace/afterauctionrules.html

"Don Smith" <desmith@innercite.com> wrote in message
news:<upmoseche7i304@corp.supernews.com>...
> "Don Smith" <desmith@innercite.com> wrote in message news:...
> > Well it looks as though Quecan of Canada is going to try to shaft me on
> the
> > Sunair GSB-900SC I purchased from them through Ebay.
> >
> > I paid almost 500.00 for it plus 100.00 shipping. Upon arrival I found
> that
> > there were problems in the power supply, It had a bad microphone, the
> power
> > cord was missing, and that nine printed circuit boards were removed and
> > missing.
> >
> > I attempted to contact them and they avoided me for a couple of days.
> When
> > they finally did I contact me I was told that it was sold AS-IS and I was
> > stuck with it. I tried to get them to agree in either a partial or full
> > refund or even to just send the boards. So far they have refused to try
> > and correct the situation in any way.
> >
> > While I can repair the problems in the power supply and even replace the
> > mike cord, I do expect that the radio be complete.
> >
> > Can I get any of my fellow green radio collectors to contact them and help
> > get this resolved.
> >
> > The contact person is Christiane Boplduc
> > 813 St-Jacques
> > St-Jean-sur-Richelieu,
> > Quebec J3B 2N2
> >
> > Telephone 450 346-7460
> > Fax 450 346-7638
> > Email quecan@qc.airca.com
> >
> > Any help would be greatly appreciated. Thanks Don Smith KB6GQA
> >
> >
> >

2813. FA: Big Variable Cap, vintage Sig Gen, and KDKA mike flag -- all cheap!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 17:29:55 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <nekn9.160772$TX5.6453747@news1.east.cox.net>
Source record: 40976
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment

Vintage Signal Generator

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=719551002

L-A-R-G-E Air Variable Capacitor

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1385282705

KDKA Radio Microphone Flag

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=719593159

Thanks for Looking (and bidding!)

2814. Re: LF SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 17:58:16 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <t0-dnfd9yPM7SwCgXTWcow@News.GigaNews.Com>
Source record: 40977

There is no such thing as SWR at these frequencies. Why? SWR is defined as the ratio between the highest Voltage (or current) on the line to the lowest. These are located a quarter wave apart.

You could build a reflected power meter or an impecance bridge, but SWR? If you have a transmission line that is more than a quarter wave long then you can have SWR. A quarter wave at 3 MHz is 25 meters. At 300 kHz, it's 250 meters. At 100 kHz, it's 750 meters. Of course it's really a bit less, depending on the propagation constant of the transmission line.

So if you are operating at 100 kHz, your line has to be half a mile long or so to make the discussion of SWR valid.

73, Bob

2815. Re: Threat to worldwide use of 70cm band

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 18:30:05 UTC
From: Richard Clark <kb7qhc@attbi.com>
Message-ID: <v6nrpuk1sfhd6c467dmvualdga98e47ohd@4ax.com>
Source record: 40979
Cross-posted to:
alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

On Fri, 04 Oct 2002 04:08:01 GMT, Dwight Stewart <stewart@sc.rr.com>
wrote:

>> They may as well have them since hams do not
>> need them.
>
>
> You consistently refer to hams in the third person. Are you even an ham
>operator?

Hi Dwight,

Such is the personality type that is so willing to give away our
rights in the name of freedom, security, and the american way. Given
any success in that agenda, the Taliban has already won the war even
if they lie buried in their caves moldering away.

73's
Richard Clark, KB7QHC and veteran of less popular wars

2816. Re: LF SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 18:35:23 UTC
From: lc <larryc@northwest.com>
Message-ID: <3D9DDF6B.E4D01922@northwest.com>
Source record: 40978

I suspect that was what he talked about...it's easy to flip SWR for reflected power.
=======

Bob wrote:

> There is no such thing as SWR at these frequencies. Why? SWR is defined as
> the ratio between the highest Voltage (or current) on the line to the
> lowest. These are located a quarter wave apart.
>
> You could build a reflected power meter or an impecance bridge, but SWR? If
> you have a transmission line that is more than a quarter wave long then you
> can have SWR. A quarter wave at 3 MHz is 25 meters. At 300 kHz, it's 250
> meters. At 100 kHz, it's 750 meters. Of course it's really a bit less,
> depending on the propagation constant of the transmission line.
>
> So if you are operating at 100 kHz, your line has to be half a mile long or
> so to make the discussion of SWR valid.
>
> 73, Bob

2817. Program TOPHAT2

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 18:38:03 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ankn6aakv1@venus.btinternet.com>
Source record: 40980

Program TOPHAT2.exe is an improved version of TopHat1.

Part of introductory notes -

"PERFORMANCE OF SHORT, VERTICAL, TOP-CAPACITANCE-LOADED ANTENNAS

Capacitance loading of a short vertical antenna can improve radiating efficiency better than inductance loading. Best possible improvement for a 2/3-height loading coil relative to base loading is typically 3 dB. But a large top hat can improve performance by more than 6 dB. In this program the hat is a number of horizontal radial wires or rods optionally surrounded by a wire circle.

Top-capacitance loading improves radiating efficiency in two ways -

(1) A more uniform distribution of antenna current versus height results in an increase in radiation resistance for no loss in the top-hat. Whereas the high loss resistance of a raised coil can outweigh the benefit of increased radiation resistance.

(2) A tuning coil is always necessary. But its inductance is less when a capacitance hat is fitted and if overall coil dimensions are unchanged then loss in the coil is much smaller. A more uniform current due to a top hat lessens the advantage of fitting the coil part-way up the antenna. The coil can then be combined with the Z-match network located between antenna and the transmitter as in this program."

Download program TOPHAT2 from website below.
==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========

2818. Re: Threat to worldwide use of 70cm band

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 20:17:08 UTC
From: Fred Hambrecht <w4jle@charter.net>
Message-ID: <uprtq7rmb50v7b@corp.supernews.com>
Source record: 40981
Cross-posted to:
alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

Sorry Dwight, it was supposed to read "Dwight, he (meaning Berry)

Since my recent stroke, I sometimes get my words mixed up. I try to
carefully read before hitting send. I screwed this one up.

"Dwight Stewart" <stewart@sc.rr.com> wrote in message
news:B9C2B93A.B8A8%stewart@sc.rr.com...
> "Fred Hambrecht" wrote:
> >
> > Dwight is a troll from the CB world. He enjoys
> > jerking HAM chains when ever he can.
>
>
> Well, since I haven't trolled from the CB world, or posted anything that
> might jerk any ham's chain recently, I assume you must be talking about
> Barry instead of me above.
>
>
> Dwight Stewart (W5NET)
>
> http://www.qsl.net/w5net/
>

2819. Re: Need Sunair GSB-900 boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 21:53:19 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <anl2ka$6tb$1@slb6.atl.mindspring.net>
Source record: 40982
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

OT:

Is Sunair still in business, I tried to bring up their web site and got a "404" message?

--Peter K1PO
Indialantic By-the-Sea, FL

"Don Smith" <desmith@innercite.com> wrote in message news:upkr3ncn7ibe35@corp.supernews.com...
> I am in need of a Sunair GSB-900SC or most any model GSB-900's for parts.
>
> The radio I bought from a dealer in Canada was stripped and nine pc boards
> were removed and missing.
>
> Might anyone out there have any spare boards or a unit that can be used for
> parts. Also need the manual or a copy of it. Please reply via email.
> Thanks Don Smith KB6GQAhg
>
>

2820. Re: Need Sunair GSB-900 boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 22:04:29 UTC
From: N8KDV <n8kdv@iserv.net>
Message-ID: <3D9E106D.56188317@iserv.net>
Source record: 40983
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

Hi Peter,

I just did a web search for Sunair and came up with this for Sunair Electronics.
Hope it might be what you want.

http://www.sunairhf.com/

Steve
Holland, MI

"Peter O. Brackett" wrote:

> OT:
>
> Is Sunair still in business, I tried to bring up their web site and got a
> "404" message?
>
> --Peter K1PO
> Indialantic By-the-Sea, FL
>
> "Don Smith" <desmith@innercite.com> wrote in message
> news:upkr3ncn7ibe35@corp.supernews.com...
> > I am in need of a Sunair GSB-900SC or most any model GSB-900's for parts.
> >
> > The radio I bought from a dealer in Canada was stripped and nine pc boards
> > were removed and missing.
> >
> > Might anyone out there have any spare boards or a unit that can be used
> for
> > parts. Also need the manual or a copy of it. Please reply via email.
> > Thanks Don Smith KB6GQAhg
> >
> >

2821. Re: Quecan warning (Sunair GSB-900)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 22:25:08 UTC
From: We see that <DonSmithScrewedHimself@hotmail.com>
Message-ID: <anl4g4$se4$3@woodrow.ucdavis.edu>
Source record: 40984

I'm looking at their clearly displayed policy page which is/was included
in the original auction... right about mid page... "YOU ARE BUYING ITEMS
SOLD AS IS."

Looks like it's your problem Don, not theirs...

toasty

: Don Smith <desmith@innercite.com> wrote:
: "Don Smith" <desmith@innercite.com> wrote in message news:...
:> Well it looks as though Quecan of Canada is going to try to shaft me on
: the
:> Sunair GSB-900SC I purchased from them through Ebay.
:>
:> I paid almost 500.00 for it plus 100.00 shipping. Upon arrival I found
: that
:> there were problems in the power supply, It had a bad microphone, the
: power
:> cord was missing, and that nine printed circuit boards were removed and
:> missing.
:>
:> I attempted to contact them and they avoided me for a couple of days.
: When
:> they finally did I contact me I was told that it was sold AS-IS and I was
:> stuck with it. I tried to get them to agree in either a partial or full
:> refund or even to just send the boards. So far they have refused to try
:> and correct the situation in any way.
:>
:> While I can repair the problems in the power supply and even replace the
:> mike cord, I do expect that the radio be complete.
:>
:> Can I get any of my fellow green radio collectors to contact them and help
:> get this resolved.
:>
:> The contact person is Christiane Boplduc
:> 813 St-Jacques
:> St-Jean-sur-Richelieu,
:> Quebec J3B 2N2
:>
:> Telephone 450 346-7460
:> Fax 450 346-7638
:> Email quecan@qc.airca.com
:>
:> Any help would be greatly appreciated. Thanks Don Smith KB6GQA
:>

:>
:>

2822. Re: Need Sunair GSB-900 boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 22:29:35 UTC
From: Skipp <skippsaysnothankstospam@yahoo.com>
Message-ID: <anl4of$se4$4@woodrow.ucdavis.edu>
Source record: 40985
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

Hate to rain your parade Don, but the auction original policy page
included the proper sold as-is statement. Your pretty much out of luck...
caused by your own actions.

I've had nothing but great results with Quecan and the many items I've
bought through/from them. You simply didn't ask enough or the
right type of questions...

cheers
skipp

: In rec.radio.amateur.homebrew Don Smith <desmith@innercite.com> wrote:
: I have filed a complaint against the Quecan company in Canada with the Ebay
: Safe Harbor site. Not sure if it will do any good. Thanks for your
: support. Don
: "Dave Allen" <david_e_allen@agilent.com> wrote in message
: news:3D9C94EB.1346EDF@agilent.com...
:> Hopefully you have told eBay about your experience. You can at least
:> give the dealer a black mark on eBay which will hopefully warn other
:> potential customers. And enough black marks can even ban them from eBay.
:>
:> dave allen, wb0taq, colorado
:>

2823. price for Collins 516F2 unit..?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 22:34:18 UTC
From: Skipp <postyourrepliesherelllreadthem@yahoo.com>
Message-ID: <anl51a$se4$5@woodrow.ucdavis.edu>
Source record: 40986
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

I dug out my original Collins 516F2 power supply speaker. Great condition, used with my original kwm-2a which I sold circa 1995 with the PM-1 power supply on the back. When parked, this unit worked great...

So what is one worth now'a days..? I see some ads in various mags by guys buying them direct, but I've no idea what to ask...

your thoughts...?

thanks
skipp

2824. Re: price for Collins 516F2 unit..?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 22:38:57 UTC
From: Alfred Carlson <wa7uhr@gte.net>
Message-ID: <3D9E18A5.7559C41A@gte.net>
Source record: 40987
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

Put it up on epay. I am sure some idiot will pay 300 or more dollars for it.
de Fred...

Skipp wrote:

> I dug out my original Collins 516F2 power supply speaker. Great condition,
> used with my original kwm-2a which I sold circa 1995 with the PM-1 power
> supply on the back. When parked, this unit worked great...
>
> So what is one worth now'a days..? I see some ads in various mags by
> guys buying them direct, but I've no idea what to ask...
>
> your thoughts...?
>
> thanks
> skipp

2825. Re: price for Collins 516F2 unit..?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-04 23:59:14 UTC
From: Larry Saletzki <wa9vrh@ocslink.com>
Message-ID: <3d9e26df_1@corp.newsgroups.com>
Source record: 40988
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

Why is it that we must feel like we need to screw someone out of every penny that we can get for something?? Is that what this hobby and country have gone to?? I have given away parts to various rigs because I didn't have much invested. In fact there were times I gave someone a part to get their rig going just to keep another boatanchor on the air even though I had $$ invested in it. I belive for the most part everyone is not a gold digger. Keep asking an ignore the "freds" that want as much as they can squeeze the turnip for. 73 Larry WA9VRH

"Alfred Carlson" <wa7uhr@gte.net> wrote in message news:3D9E18A5.7559C41A@gte.net...
> Put it up on epay. I am sure some idiot will pay 300 or more dollars for it.
> de Fred...
>
> Skipp wrote:
>
> > I dug out my original Collins 516F2 power supply speaker. Great condition,
> > used with my original kwm-2a which I sold circa 1995 with the PM-1 power
> > supply on the back. When parked, this unit worked great...
> >
> > So what is one worth now'a days..? I see some ads in various mags by
> > guys buying them direct, but I've no idea what to ask...
> >
> > your thoughts...?
> >
> > thanks
> > skipp
>

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

2826. Info on Harris RE 6001 mobile repeater?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 01:10:33 UTC
From: Randy & Cara Randall <crrandal@earthlink.net>
Message-ID: <3D9E3CE6.8040009@earthlink.net>
Source record: 40989
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.boatanchors,rec.radio.amateur.misc,rec.radio.amateur.homebrew

Thanks for looking. I am looking for a manual, schematic or any other info on my Harris (RF Communications) RE 6001 mobile repeater. The boards inside the unit were made by Public Systems of Sunnyvale California. From the code dates on the components it looks to be made in 1977-1978 time frame. It is also currently on 153.83 Mhz. I would like to recycle the receiver and transmitter boards for another purpose.

73
Randy AB9GO

2827. Re: Info on Harris RE 6001 mobile repeater?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 01:18:42 UTC
From: Randy & Cara randall <crrandal@earthlink.net>
Message-ID: <3D9E3EFC.5070907@earthlink.net>
Source record: 40990
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.boatanchors,rec.radio.amateur.misc,rec.radio.amateur.homebrew

p.s. Please reply to:

crrandal@earthlink.net

Please DO NOT reply to the news group!!!!
Thanks.

Randy & Cara Randall wrote:

> Thanks for looking. I am looking for a manual, schematic or any other
> info on my Harris (RF Communications) RE 6001 mobile repeater. The
> boards inside the unit were made by Public Systems of Sunnyvale
> California. From the code dates on the components it looks to be made
> in 1977-1978 time frame. It is also currently on 153.83 Mhz. I would
> like to recycle the receiver and transmitter boards for another purpose.
>
> 73
> Randy AB9GO
>

2828. Re: price for Collins 516F2 unit..?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 02:42:20 UTC
From: gaschafer@attbi.com
Message-ID: <3d9e517e.43843583@netnews.attbi.com>
Source record: 40991
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

I can't figure out whether he should give it away, sell it at a loss,
make a small profit or keep it in
case someone really needs it.

73
Gary K4FMX

On Fri, 4 Oct 2002 18:59:14 -0500, "Larry Saletzki"
<wa9vrh@ocslink.com> wrote:

>Why is it that we must feel like we need to screw someone out of every penny
>that we can get for something?? Is that what this hobby and country have
>gone to?? I have given away parts to various rigs because I didn't have much
>invested. In fact there were times I gave someone a part to get their rig
>going just to keep another boatanchor on the air even though I had $$
>invested in it. I belive for the most part everyone is not a gold digger.
>Keep asking an ignore the "freds" that want as much as they can squeeze the
>turnip for. 73 Larry WA9VRH
>
>"Alfred Carlson" <wa7uhr@gte.net> wrote in message
>news:3D9E18A5.7559C41A@gte.net...
>> Put it up on epay. I am sure some idiot will pay 300 or more dollars for
>it.
>> de Fred...
>>
>> Skipp wrote:
>>
>> > I dug out my original Collins 516F2 power supply speaker. Great
>condition,
>> > used with my original kwm-2a which I sold circa 1995 with the PM-1 power
>> > supply on the back. When parked, this unit worked great...
>> >
>> > So what is one worth now'a days..? I see some ads in various mags by
>> > guys buying them direct, but I've no idea what to ask...
>> >
>> > your thoughts...?
>> >
>> > thanks
>> > skipp
>>
>
>
>
>

>-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
>http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
>------== Over 80,000 Newsgroups - 16 Different Servers! =-----

2829. Re: LF SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 03:30:32 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3D9E5CD8.4782C1EC@cox.net>
Source record: 40992

I do not see your point is relevant. The man wants to know when he has
a good 50 ohm match to his transmitter. That is the whole point of a
"SWR" bridge. Matching the load to the designated output impedance of
the transmitter is relevant at any frequency. A resistive bridge "SWR"
circuit will do just that, even down to audio frequencies.

What is the point of whether a wave length happens to be very short or
very long? It simply means that some methods of measuring the goodness
of that impedance match work better at some frequencies than at others.

- Dan, N7VE

Bob wrote:
>
> There is no such thing as SWR at these frequencies. Why? SWR is defined as
> the ratio between the highest Voltage (or current) on the line to the
> lowest. These are located a quarter wave apart.
>
> You could build a reflected power meter or an impecance bridge, but SWR? If
> you have a transmission line that is more than a quarter wave long then you
> can have SWR. A quarter wave at 3 MHz is 25 meters. At 300 kHz, it's 250
> meters. At 100 kHz, it's 750 meters. Of course it's really a bit less,
> depending on the propagation constant of the transmission line.
>
> So if you are operating at 100 kHz, your line has to be half a mile long or
> so to make the discussion of SWR valid.
>
> 73, Bob

2830. Antennas and MORE, MORE, MORE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 03:48:18 UTC
From: George Kinzer <horseflygk@worldnet.att.net>
Message-ID: <6itn9.3531$ue4.200498@bgtnsc04-news.ops.worldnet.att.net>
Source record: 40993

Plans on how to make your own base and mobile antennas, from quarter waves
to beams, quads, and MORE. (These files alone will pay for itself)

UNDERSTANDING coax, swr's, line loss, co-phasing, grounding and MORE. (you
could go to library, copy and forget where you put it..)

CD also includes tuning AND modifications on just about every cb as well as
most 10 meter radios. (for educational purposes) golderscrewdriver is what
$39.95?

Mic wiring to all popular cbs, D104, Sedelata, Turner, standard and of
course MORE. (heck, wanna know whats IN a D-104?)

PLL convertions, adding talk-back, swing kits, roger beeps and MORE
(go to your local shop and ask them to do it, what? more money?)

Packed with pictures, how toos, parts and MORE.

How bout takin a radio and electronics course? FREE
Now includes NTE's cross reference 10.0 program to find over 14,000 parts
!!!! FREE
Schematics, figs, how too's, plus a lot of Amplifier stuff, programs that'll
help you BUILD your own stuff..
need I say MORE?

email for more info, over 130 megs of info in easy to understand format.

Organized for EASY reference.
$20.00

--
If first you don't succeed, do the same thing again...see what happens

.* *)) -:*:-
. .****))
George Kinzer
((**.** ..**
-:*:- ((**
**.*

Those who want to be successful, will find a way,
those that don't, will find an excuse!

2831. Re: LF SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 04:56:26 UTC
From: k7itm@aol.com
Message-ID: <3200347.0210042056.55d52ec4@posting.google.com>
Source record: 40994

Well, gosh, you're absolutely right. We definitely should quit calling them "SWR meters" at _any_ frequency since we can never be sure they are used in lines at least a quarter wave long (unless they are themselves that long). "Reflected power meter" doesn't quite do it either, for those that are not designed to measure power but rather just the ratio of reflected to forward. Of course, those aren't "impedance bridges" either. Even the forward/reflected power thing is misleading, though, unless you calibrate the meter for the line you are actually using it with. Sigh. What's a poor ham to do? I fear we'll be stuck forever with calling them "SWR meters," and understanding that they aren't really, but that they still may give us useful information if we just understand what they really are measuring.

You may also find there is not universal acceptance of the definition of SWR, either, just as a second is no longer defined as 1/(60*60*24) of a mean solar day. The definiton for SWR involving measurement at separate points along the line leaves me with some problems not too different than those with that old definition of "second."

(Now can someone tell me where to find coax which is specified to be within 1% [0.5% would be better] of 50+j0 ohms from, say, 100MHz to 3GHz? Yes, that's a serious question...)

Cheers,
Tom

"Bob" <balbert@cnmnetwork.com> wrote in message news:<t0-dnfd9yPM7SwCgXTWcow@News.GigaNews.Com>...
> There is no such thing as SWR at these frequencies. Why? SWR is defined as
> the ratio between the highest Voltage (or current) on the line to the
> lowest. These are located a quarter wave apart.
>
> You could build a reflected power meter or an impecance bridge, but SWR? If
> you have a transmission line that is more than a quarter wave long then you
> can have SWR. A quarter wave at 3 MHz is 25 meters. At 300 kHz, it's 250
> meters. At 100 kHz, it's 750 meters. Of course it's really a bit less,
> depending on the propagation constant of the transmission line.
>
> So if you are operating at 100 kHz, your line has to be half a mile long or
> so to make the discussion of SWR valid.
>
> 73, Bob

2832. Re: Need Sunair GSB-900 boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 05:24:44 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <anlt2n$3h1$1@nntp9.atl.mindspring.net>
Source record: 40995
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

Steve: Yep, that's the Sunair URL, the site seems to be working now. Must have been off the air or hung for a while... --Peter K1PO

"N8KDV" <n8kdv@iserv.net> wrote in message news:3D9E106D.56188317@iserv.net...
> Hi Peter,
>
> I just did a web search for Sunair and came up with this for Sunair Electronics.
> Hope it might be what you want.
>
> http://www.sunairhf.com/
>
> Steve
> Holland, MI
>
> "Peter O. Brackett" wrote:
>
> > OT:
> >
> > Is Sunair still in business, I tried to bring up their web site and got a
> > "404" message?
> >
> > --Peter K1PO
> > Indialantic By-the-Sea, FL
> >
> > "Don Smith" <desmith@innercite.com> wrote in message
> > news:upkr3ncn7ibe35@corp.supernews.com...
> > > I am in need of a Sunair GSB-900SC or most any model GSB-900's for parts.
> > >
> > > The radio I bought from a dealer in Canada was stripped and nine pc boards
> > > were removed and missing.
> > >
> > > Might anyone out there have any spare boards or a unit that can be used
> > for
> > > parts. Also need the manual or a copy of it. Please reply via email.
> > > Thanks Don Smith KB6GQAhg
> > >

> > >
>

2833. SMPS problems

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 07:33:12 UTC
From: brocktschuler@aol.com
Message-ID: <20021005033312.09238.00000437@mb-da.aol.com>
Source record: 40996

I'm having problems getting a 100kHz switching power supply to work. I want to use this to power a RF amp using a 12V source. I'm using a PWM IC (TL494) and a pair of irf510 mosfets with a transformer core from a computer power supply. The core is rated for 200W and the circuit is a push pull type with a center-taped primary 10Tx2 & 30T sec..

The problem is it takes 8 or more primary turns to get the inductance needed so the primary won't short which then results in a secondary with such a high inductance that it won't put out the needed current, about 1A.

Brock, VA6BTS

2834. homebrew>>>>> mrf238

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 07:43:44 UTC
From: ton@zentelcom.zzn.com
Message-ID: <bd02e60f.0210042343.6bcd7bf@posting.google.com>
Source record: 40897

make liniair with the mrf238 if you have
some one...http://www.megaone.com/tnwradio/index.html

2835. Re: LF SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 09:04:03 UTC
From: Paul Keinanen <Paul.Keinanen@sci.fi>
Message-ID: <9d5tpu4ahkl6fnm4anv8mhi6p3jsau2fce@4ax.com>
Source record: 40898

On Thu, 03 Oct 2002 03:28:14 GMT, "erik tesnau"
<sumpcaver@worldnet.att.net> wrote:

>Is there a commercially available SWR meter for LF? If anyone has
>schematics on one I would be happy with that too.

I assume that you want to know if the antenna is a good load to your transmitter and if not, do some adjustments to the antenna or the loading coil and then measure the match again to see if it helped.

Why not use a noise bridge to directly measure the antenna resistance and reactance ? In this way, you know how capacitive or how inductive the antenna is and thus, you are able to determine how much inductance or capacitance will be needed to bring the reactance down to 0 ohms.

At LF, the band noise is quite strong, so you need a strong noise source. Fortunately, since the typical 135 kHz ham transmitter antenna efficiency is below 0.1 % (-30 dB) this will reduce the noise generator power required.

Paul OH3LWR

2836. Pointer to Digital Scope FAQ

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 10:29:27 UTC
From: John Seney <wd1v@amsat.org>
Message-ID: <wd1v-A4A6C2.06292505102002@netnews.attbi.com>
Source record: 40899

JS
Scope FAQ at http://www.qsl.net/wd1v

2837. Re: price for Collins 516F2 unit..?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 13:20:14 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <iGBn9.164315$TX5.6662596@news1.east.cox.net>
Source record: 40900
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

He can't find what its worth, so he probably will keep it.

BTW, there is a link somewhere on the Almost All Digital
Electronic's website that gives eBay auction price spreads
for various pieces of ham gear, that's where I would start
for some ideas of value.

Pete

"Gary Schafer" <gaschafer@attbi.com> wrote in message
news:3d9e517e.43843583@netnews.attbi.com...
> I can't figure out whether he should give it away, sell it at a loss,
> make a small profit or keep it in
> case someone really needs it.
>
>
> 73
> Gary K4FMX
>
>
> On Fri, 4 Oct 2002 18:59:14 -0500, "Larry Saletzki"
> <wa9vrh@ocslink.com> wrote:
>
> >Why is it that we must feel like we need to screw someone out of every
penny
> >that we can get for something?? Is that what this hobby and country have
> >gone to?? I have given away parts to various rigs because I didn't have
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> >invested. In fact there were times I gave someone a part to get their rig
> >going just to keep another boatanchor on the air even though I had $$
> >invested in it. I belive for the most part everyone is not a gold digger.
> >Keep asking an ignore the "freds" that want as much as they can squeeze
the
> >turnip for. 73 Larry WA9VRH
> >
> >"Alfred Carlson" <wa7uhr@gte.net> wrote in message
> >news:3D9E18A5.7559C41A@gte.net...
> >> Put it up on epay. I am sure some idiot will pay 300 or more dollars
for
> >it.
> >> de Fred...
> >>
> >> Skipp wrote:
> >>

> >> > I dug out my original Collins 516F2 power supply speaker. Great
> >condition,
> >> > used with my original kwm-2a which I sold circa 1995 with the PM-1
power
> >> > supply on the back. When parked, this unit worked great...
> >> >
> >> > So what is one worth now'a days..? I see some ads in various mags
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> >> > guys buying them direct, but I've no idea what to ask...
> >> >
> >> > your thoughts...?
> >> >
> >> > thanks
> >> > skipp
> >>
> >
> >
> >
> >
> >-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> >http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> >-----== Over 80,000 Newsgroups - 16 Different Servers! =-----
>

2838. Re: Threat to worldwide use of 70cm band

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 14:59:33 UTC
From: Dwight Stewart <stewart@sc.rr.com>
Message-ID: <B9C47690.B8E9%stewart@sc.rr.com>
Source record: 40902
Cross-posted to:
alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

"Richard Clark" wrote:
>
> Such is the personality type that is so willing
> to give away our rights in the name of freedom,
> security, and the american way. Given any success
> in that agenda, the Taliban has already won the
> war even if they lie buried in their caves
> moldering away.

You're preaching to the choir, Richard. I couldn't agree more.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

2839. Re: Threat to worldwide use of 70cm band

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 15:02:36 UTC
From: Dwight Stewart <stewart@sc.rr.com>
Message-ID: <B9C47747.B8EB%stewart@sc.rr.com>
Source record: 40901
Cross-posted to:
alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

"Fred Hambrecht" wrote:

> Sorry Dwight, it was supposed to read
> "Dwight, he (meaning Berry)
>
> Since my recent stroke, I sometimes get
> my words mixed up. I try to carefully
> read before hitting send. I screwed
> this one up.

Don't worry about it, Fred. I just wish I had such a good excuse for the many screw ups I've made. And thanks for the info about Berry. It helps to know who you're really talking to.

Dwight Stewart (W5NET)

http://www.qsl.net/w5net/

2840. Homebrewed TNC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 18:53:20 UTC
From: Benny Miller <bennymiller@core.com>
Message-ID: <3d9f3534$0$1424$2c3e98f8@news.voyager.net>
Source record: 40903

Hey all, I have 2 Macintosh modems one is a Sportster 28.8 and the other is a Teleport Bronze 33.6. I was wondering if anyone has ever modded a modem for use as a TNC and if they did, was it difficult. I want to set up a packet site and I do not want to spend the $100 or so for a TNC. (college really takes it toll-$$)
Thanks for any help.
73
KC8TRN

2841. Re: Homebrewed TNC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 19:12:14 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0510021513150001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40904

In article <3d9f3534$0$1424$2c3e98f8@news.voyager.net>, "Benny Miller"
<bennymiller@core.com> wrote:

> Hey all, I have 2 Macintosh modems one is a Sportster 28.8 and the other is
> a Teleport Bronze 33.6. I was wondering if anyone has ever modded a modem
> for use as a TNC and if they did, was it difficult. I want to set up a
> packet site and I do not want to spend the $100 or so for a TNC. (college
> really takes it toll-$$)
> Thanks for any help.
> 73
> KC8TRN

What's your major? If it's EE then the first thing you do is find out how
the TNC does it's thing. Draw a block diagram and then make this a senior
project. If you need analog design help, email me or send another posting
here. Believe me, you're going to have to do this kind of work sooner or
later if you're coming out here into the real world of engineering. If you
are on the other side of campus, I can't help you. ;-) (Just kidding.)

Steve WB4CZR
Plantation, FL

2842. Re: SMPS problems

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 19:24:42 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <0%Gn9.12358$V7.2672@fe05>
Source record: 40905

> The problem is it takes 8 or more primary turns to get the inductance
needed so
> the primary won't short which then results in a secondary with such a high
> inductance that it won't put out the needed current, about 1A.
>
> Brock, VA6BTS

It's gently trying to tell you that you have selected the wrong core for
this application, at this frequency.

What exactly are you trying to get to, input vs output?

2843. Re: Homebrewed TNC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 20:16:29 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <upui7d6k38th0c@corp.supernews.com>
Source record: 40906

You might salvage the power supply, case, and some of the switches and indicators, but that's about it. Although they sound pretty similar, a modem is fundamentally quite different from a TNC.

However, some programs like MixW allow you to do packet through your sound card, so this completely eliminates the need for a TNC. If the Mac modems indicate you intend to use a Mac for the packet work, though, you could be challenged finding software.

..

"Benny Miller" <bennymiller@core.com> wrote in message news:3d9f3534$0$1424$2c3e98f8@news.voyager.net...
> Hey all, I have 2 Macintosh modems one is a Sportster 28.8 and the other is
> a Teleport Bronze 33.6. I was wondering if anyone has ever modded a modem
> for use as a TNC and if they did, was it difficult. I want to set up a
> packet site and I do not want to spend the $100 or so for a TNC. (college
> really takes it toll-$$)
> Thanks for any help.
> 73
> KC8TRN
>
>

2844. Re: Homebrewed TNC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 21:46:10 UTC
From: Benny Miller <bennymiller@core.com>
Message-ID: <3d9f5db7$0$1428$2c3e98f8@news.voyager.net>
Source record: 40907

I am a CS & Network guy actually, I have WinAPRS and AGPWE running on a scanner, so i can't send. I just picked up a free Mac Performa and it came with a few Modems so I thought that it would be cool if there was an easy mod or something like that. I have a few spare HT's that i might toss the $$ and get a decent TNC. Oh well, Thanks for the input.
73 KC8TRN

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:upui7d6k38th0c@corp.supernews.com...
> You might salvage the power supply, case, and some of the switches and
> indicators, but that's about it. Although they sound pretty similar, a
> modem is fundamentally quite different from a TNC.
>
> However, some programs like MixW allow you to do packet through your sound
> card, so this completely eliminates the need for a TNC. If the Mac modems
> indicate you intend to use a Mac for the packet work, though, you could be
> challenged finding software.
>
> ..
>
> "Benny Miller" <bennymiller@core.com> wrote in message
> news:3d9f3534$0$1424$2c3e98f8@news.voyager.net...
> > Hey all, I have 2 Macintosh modems one is a Sportster 28.8 and the other
> is
> > a Teleport Bronze 33.6. I was wondering if anyone has ever modded a
modem
> > for use as a TNC and if they did, was it difficult. I want to set up a
> > packet site and I do not want to spend the $100 or so for a TNC.
(college
> > really takes it toll-$$)
> > Thanks for any help.
> > 73
> > KC8TRN
> >
> >
>
>

2845. Homebrew Tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 21:52:51 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailnospamorama.com>
Message-ID: <k6Jn9.25296$YK4.2624769@e3500-atl2.usenetserver.com>
Source record: 40908

Hi All,

Is it possible to use the tank compnents, coil, plate cap and load cap to make a tuner for 80-10 meters. I have been given 3 Henry Radio Tempo Ones, one recieves (Been stored for 4-5 yrs)(gotta fix the xmit) and the other two for parts. The tank components are intact the all units.

Thanks in advance.

--
73,
Chuck
KE4ETH

2846. Re: Homebrewed TNC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 22:25:26 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <annosm$r4s$0@206.97.58.204>
Source record: 40909

Check out the local ham fleas. Used TNC's can be found for $15 and up, not worth the effort to build your own!

73 de Jack

Benny Miller <bennymiller@core.com> wrote in message news:3d9f3534$0$1424$2c3e98f8@news.voyager.net...
> Hey all, I have 2 Macintosh modems one is a Sportster 28.8 and the other is
> a Teleport Bronze 33.6. I was wondering if anyone has ever modded a modem
> for use as a TNC and if they did, was it difficult. I want to set up a
> packet site and I do not want to spend the $100 or so for a TNC. (college
> really takes it toll-$$)
> Thanks for any help.
> 73
> KC8TRN
>
>

2847. Re: Homebrew Tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-05 23:25:28 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <annsctjkm1@slb6.atl.mindspring.net>
Source record: 40910

Sure can. Make a Pi net with what you got easy as pi. Or make a "L" tuner with what you got. Check out the radio handbook for details of the schematics. If the Inductance and Capacitance don't match...So what put it together and experiment.

I have one I built from WW2 Surplus parts in a old HB 813 RF deck. Works great.

Dan/W4NTI

"Chuck/KE4ETH" <chuck_hawks@hotmailnospamorama.com> wrote in message news:k6Jn9.25296$YK4.2624769@e3500-atl2.usenetserver.com...
> Hi All,
>
> Is it possible to use the tank compnents, coil, plate cap and load cap to
> make a tuner for 80-10 meters. I have been given 3 Henry Radio Tempo Ones,
> one recieves (Been stored for 4-5 yrs)(gotta fix the xmit) and the other two
> for parts. The tank components are intact the all units.
>
> Thanks in advance.
>
> --
> 73,
> Chuck
> KE4ETH
>
>
>
>

2848. Re: price for Collins 516F2 unit..?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 00:53:26 UTC
From: Wayne Faris <wfaris@inebraska.com>
Message-ID: <3D9F8985.54C21439@inebraska.com>
Source record: 40911
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

According to the following link, the average price on eBay runs around $336.
Definitely worth trying to sell.
http://www.aade.com/hampedia/collinsp.htm

Wayne L. Faris, KEï¿½BZ

Uncle Peter wrote:

> He can't find what its worth, so he probably will keep it.
>
> BTW, there is a link somewhere on the Almost All Digital
> Electronic's website that gives eBay auction price spreads
> for various pieces of ham gear, that's where I would start
> for some ideas of value.
>
> Pete
>
> "Gary Schafer" <gaschafer@attbi.com> wrote in message
> news:3d9e517e.43843583@netnews.attbi.com...
> > I can't figure out whether he should give it away, sell it at a loss,
> > make a small profit or keep it in
> > case someone really needs it.
> >
> >
> > 73
> > Gary K4FMX
> >
> >
> > On Fri, 4 Oct 2002 18:59:14 -0500, "Larry Saletzki"
> > <wa9vrh@ocslink.com> wrote:
> >
> > >Why is it that we must feel like we need to screw someone out of every
> penny
> > >that we can get for something?? Is that what this hobby and country have
> > >gone to?? I have given away parts to various rigs because I didn't have
> much
> > >invested. In fact there were times I gave someone a part to get their rig
> > >going just to keep another boatanchor on the air even though I had $$
> > >invested in it. I belive for the most part everyone is not a gold digger.
> > >Keep asking an ignore the "freds" that want as much as they can squeeze
> the
> > >turnip for. 73 Larry WA9VRH
> > >
> > >"Alfred Carlson" <wa7uhr@gte.net> wrote in message

> > >news:3D9E18A5.7559C41A@gte.net...
> > >> Put it up on epay. I am sure some idiot will pay 300 or more dollars
> for
> > >it.
> > >> de Fred...
> > >>
> > >> Skipp wrote:
> > >>
> > >> > I dug out my original Collins 516F2 power supply speaker. Great
> > >condition,
> > >> > used with my original kwm-2a which I sold circa 1995 with the PM-1
> power
> > >> > supply on the back. When parked, this unit worked great...
> > >> >
> > >> > So what is one worth now'a days..? I see some ads in various mags
> by
> > >> > guys buying them direct, but I've no idea what to ask...
> > >> >
> > >> > your thoughts...?
> > >> >
> > >> > thanks
> > >> > skipp
> > >>
> > >
> > >
> > >
> > >
> > >-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> > >http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> > >-----== Over 80,000 Newsgroups - 16 Different Servers! =-----
> >

2849. Re: Homebrew Tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 00:55:39 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ano1ma$6lm$1@knossos.btinternet.com>
Source record: 40912

Chuck wrote -
>
> Is it possible to use the tank compnents, coil, plate cap and load cap to
> make a tuner for 80-10 meters.

==========

Why not ? if the component values are in the right ball park. If the transmitter from which the tank circuit came from covered 80 meters then you should be able to build an antenna tuner to match 50-ohms to somewhere between 50 and a few hundred ohms on the same band. There are a variety of tuner circuits to choose from. Introduce a few switches. Wind a small, extra, self-supporting, 14 or 12 AWG coil if you get stuck.

But it may be the mechanical construction of the components are awkward. For example, if a T-network is envisaged, with two series capacitors, then neither side of both capacitors can be grounded. Insulating pillars will be needed. And what about the 'hot' spindles ?

If you choose a Pi-match then both capacitors have one side grounded. But you may find the max capacitor settings are too small.

You could also try a T-match with one capacitor grounded, the other floating, and the coil connected in series with the 50-ohm transmitter end of the tuner. This is quite a versatile arrangement.

It may be possible to tap into the coil. There is then another 'variable'.

Don't rule out link coupling. It still amazes me how all that power crosses over free space between two coils !

THE VERY FIRST THING TO DO IS GUESS-TIMATE THE RANGE OF IMEDANCES LOOKING INTO THE FEEDLINE WHICH HAVE TO BE MATCHED TO 50 OHMS. One of these modern antenna analysers is useful.

If you are interested in numbers and component values, download from website below programs L-TUNER, TRIODE1, TETRODE1, T-TUNER, PI_L_NET, PI_TANK.

These progs will familiarise you with L and C values needed for the different bands. But you may already be familiar in that direction just by looking at them.

If you want to know the inductance of a coil you already have available, enter its dimensions and number of turns in program SOLNOID2. Do you have a wooden metric school ruler? If you have a lot of coils lying around it's a good idea to label them with inductance values. I have a drawer-full.

As most components are variable it will be sufficient only to get tuner values in the right ballpark. If it will cover 80m then it will be sure to cover higher frequency bands also.

Use alligator clips, flexible hook-up wire, a wooden bench or a sheet of plastic, watch the SWR meter (TLI) and see what happens. You might get it right first time. Think about the size of the box last. I havn't use boxes for tuners for years.

Take your time and have fun !

==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========

2850. Re: Homebrewed TNC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 02:13:02 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <sWMn9.673$K4.465@fe03>
Source record: 40913

"Benny Miller" <bennymiller@core.com> wrote in message
news:3d9f3534$0$1424$2c3e98f8@news.voyager.net...
> Hey all, I have 2 Macintosh modems one is a Sportster 28.8 and the other
is
> a Teleport Bronze 33.6. I was wondering if anyone has ever modded a modem
> for use as a TNC and if they did, was it difficult. I want to set up a
> packet site and I do not want to spend the $100 or so for a TNC. (college
> really takes it toll-$$)

This is not a practical project.
Most chipsets these days aren't going to support Bell 202 which is the tone
set you need.
Also, you'll have to do 2 wire to 4 wire conversion.
There's more... You'll spend the price of a new TNC in hobby time at $2/hr.

My advice, get a used KPC-3. Nice stable box. The Pico-Packet is also
worthwhile.
Check Ebay, I've picked up nice KPC's for $50.

2851. Re: Homebrew Tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 02:39:57 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailnospamorama.com>
Message-ID: <BjNn9.29340$YK4.2728681@e3500-atl2.usenetserver.com>
Source record: 40914

Dan and Reg,

Thanks for the info. The radios are 80-10. There are insulated shafts for the cap. stator is grounded in the final cage. The radio has insulated shafts I am thinking a pi.

again, thanks

--
73,
Chuck
KE4ETH

"Chuck/KE4ETH" <chuck_hawks@hotmailnospamorama.com> wrote in message news:k6Jn9.25296$YK4.2624769@e3500-atl2.usenetserver.com...
> Hi All,
>
> Is it possible to use the tank compnents, coil, plate cap and load cap to
> make a tuner for 80-10 meters. I have been given 3 Henry Radio Tempo Ones,
> one recieves (Been stored for 4-5 yrs)(gotta fix the xmit) and the other
two
> for parts. The tank components are intact the all units.
>
> Thanks in advance.
>
> --
> 73,
> Chuck
> KE4ETH
>
>
>
>

2852. GU-84B HOMEBREW AMPLIFIER

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 06:11:15 UTC
From: ni4l@msn.com
Message-ID: <d4a0748e.0210052211.386e34fc@posting.google.com>
Source record: 40916

http://www.angelfire.com/nb/ni4l/gu84b.html
This is an ongoing project, thought it might be of some interest to some of you.

2853. X-band rf exposure question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 06:11:29 UTC
From: hexter@blazenet.net
Message-ID: <upvl0h1kdl6gc7@corp.supernews.com>
Source record: 40917

Here is the output details,

4000w output pulsed

.6 microsecond pulse width

1250 pps

I found that my feet were exposed to this r.f. source (9375 mhz) of the above mentioned details for about 1 hour, at a distance of about 2 feet from an un-terminated piece of WR-90 waveguide, with a UG-39 flange on the end. One of the other service technicians had removed the X-band dummy load from under my bench while I was on vacation. When I returned, I set up a marine radar unit for testing of the power supply voltage, and component overheating. By total accident, I looked under my bench for a little box of spare parts, and found my dummy load missing, and my radar unit aimed directly at my feet. I have no pain, and my feet were not 'cooking', but I am wondering about my exposure. Should I expect some redness, or pain in a few days? I think the average power output is so low, that I have even less than nothing to fear, but I wonder what limits I have exceeded? (if any)

thanks in advance.

Human feet provide really poor echo returns B.T.W.!

2854. Free transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 06:12:14 UTC
From: "R.A. &G.D Whiting" <gdwhiting@erols.com>
Message-ID: <ano9kmcht1@bob.news.rcn.net>
Source record: 40915

Free to a good home--- one 1580-0-1580V @ about 1 ampere transformer.
Washington DC area. Local pickup only. No shipping.

Al

2855. Re: X-band rf exposure question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 07:34:36 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <upvpsejnnqke29@corp.supernews.com>
Source record: 40918

A little simple arithmetic shows that the duty cycle of the radar is 7.5E-4, so the average power is only 3 watts. And your feet would absorb only a fraction of this. You'd get more heat from a heating pad, which explains why your feet didn't get hot. This kind of exposure to your foot won't have any more effect than simple heating, which stopped when the exposure ended. You shouldn't see any adverse symptoms.

Relatively low levels of exposure can be harmful to the eyes, which are easily damaged and don't have much in the way of blood vessels to carry off the heat. But to my knowledge no effect other than simple heating has ever been tied to non-ionizing radiation. (Yes, I know there's a lot of investigation regarding exposure of the brain to radiation from cell phones and the like. But as far as I know, there's no direct objective evidence yet of harm. I do agree, though, that caution is in order when dealing with the brain or extremely high field strengths.)

Roy Lewallen, W7EL

gudmundur wrote:
> Here is the output details,
>
> 4000w output pulsed
>
> .6 microsecond pulse width
>
> 1250 pps
>
> I found that my feet were exposed to this r.f. source (9375 mhz)
> of the above mentioned details for about 1 hour, at a distance of
> about 2 feet from an un-terminated piece of WR-90 waveguide, with
> a UG-39 flange on the end. One of the other service technicians had
> removed the X-band dummy load from under my bench while I was on
> vacation. When I returned, I set up a marine radar unit for testing
> of the power supply voltage, and component overheating. By total
> accident, I looked under my bench for a little box of spare parts,
> and found my dummy load missing, and my radar unit aimed directly
> at my feet. I have no pain, and my feet were not 'cooking', but I
> am wondering about my exposure. Should I expect some redness, or
> pain in a few days? I think the average power output is so low, that
> I have even less than nothing to fear, but I wonder what limits I
> have exceeded? (if any)
>
> thanks in advance.
>
> Human feet provide really poor echo returns B.T.W.!

>

2856. Re: Homebrewed TNC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 11:24:50 UTC
From: "G. Beat" <gregory.beat.nospam@attbi.com>
Message-ID: <64Vn9.58001$xI5.11590@sccrnsc02>
Source record: 40919

You can also build the simple KISS TNC that was featured in QST article last year - for about $ 50.

GB

"Benny Miller" <bennymiller@core.com> wrote in message news:3d9f3534$0$1424$2c3e98f8@news.voyager.net...
> Hey all, I have 2 Macintosh modems one is a Sportster 28.8 and the other is
> a Teleport Bronze 33.6. I was wondering if anyone has ever modded a modem
> for use as a TNC and if they did, was it difficult. I want to set up a
> packet site and I do not want to spend the $100 or so for a TNC. (college
> really takes it toll-$$)
> Thanks for any help.
> 73
> KC8TRN
>
>

2857. Alesis DSP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 11:50:38 UTC
From: leon_heller@hotmail.com
Message-ID: <46807c08.0210060350.367270e8@posting.google.com>
Source record: 40920

With one or two "partners in crime" I'm working on a DSP system for amateur radio applications using the very cheap 24-bit Alesis DSP, ADC and DAC chipset (about $15 in small quantities). The system will include am Atmel 2313 micro-controller to load the DSP from a host PC, and an EEPROM for standalone operation.

I've designed a prototype single-sided PCB for this system. The final PCB will be double-sided with PTH. Details of this system are here:

http://www.geocities.com/leon_heller/dsp.html

73, Leon

2858. Re: X-band rf exposure question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 12:52:54 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <anpbn5$p5a$1@paris.btinternet.com>
Source record: 40921

Way back in 1945, in the RAF, we had a radar maintenance workshop in a bamboo hut in the tropical jungle adjacent to the airstrip. On the bench in the hut was a complete airborne radar equipment including the rotating parabolic dish plus the test gear. Peak pulse power was 50 Kwatt, pulse width 1 micro-second, pulse repetition frequency 1 KHz. Magnetron frequency = 3000 MHz.

It was a favourite trick to stop the dish and stand in the narrow beam which was head-height. Then, when a native of those parts was sweeping the floor or making the tea, I would say the magic words and quickly put a large neon bulb in my mouth which would then light up brilliantly. The native would then drop the brush or teapot and make a bolt for the door.

The only sensation was a the slightest feeling of warmth in the cheeks and a little tickle in the upper and lower eyelashes.

In those days radar maintenance people thought the stuff was quite OK provided it was not directed at the testicles. This rumour was supposed to have been started by Goebels.

Later I visited Hiroshima and, apart from bad dreams, I didn't have any after effects from there either.

Reg.

2859. WTB H/V rectifier tubes 5r4gy new or nos

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 13:49:04 UTC
From: aa8wl <aa8wl@comcast.net>
Message-ID: <3DA03F50.19BC00CA@comcast.net>
Source record: 40922

Hi, name is Sam and I am looking for a couple H/V rectifier tubes
(5r4gy) for my Heathkit DX-100b . Let me know what you have and
details. TNX 73' de aa8wl
Keep em glowing (or trying to)!! HiHi
Sam burleigh
586-246-5184 voice mail

2860. Re: Ham flavored Linux ? :)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 14:39:14 UTC
From: George Zimmerlee <geozim@usol.com>
Message-ID: <3DA04B12.6A85@usol.com>
Source record: 40923

newsguy wrote:
> So far I am liking Debian, just
> looking for others ideas please.

It seems Debian has the best package of aps for hams.
Also they have a website with stable(1), testing(2),
and unstable(3) aps.

Debian would be the best choice except for three problems:

* You need to pay about $40 to get the latest version on
CD-ROM. Those from Linux Mall are a good 6 months out of
date. Also newer aps will not work with older C libraries,
and vice-versa. This means you have to run two versions,
with old C libs and with new C libs.

* Debian is overly, extremely, psychotically wierd about
licensing. You cannot find good aps at the website unless
they are GPL licensed or absolutely free and open. Paying
more money for a CD set that includes the non-free aps is
worth the money. This is certainly true for the non-free
KDE environment. Gnome really sucks. What a hard drive hog!

* Then there is the headache of Debian packages. Debian has
one program, Alien which allows .rpm packages to be installed.
I find that I have to resort to "dpkg" rather than "dselect"
to get some packages to install. You may have to rename
old packages with new package names to fool dselect into
thinking that all dependancies have been met.

As other respondents, I am against Red Hat for three reasons

(1) Red Hat has become much worse than Windows. Too big, only
installs on newer equipment, runs untested and unstable aps,
uses newer interfaces requiring a gaming computer. This means
you have to spend $2000 to run it. Linux was originally designed
to run from the command line. The really useful aps are still
command line based.

(2) Red Hat is worse than Microsoft. MS is guilty of antitrust.
Red Hat knowingly defrauded investors. Don't do business with
criminals.

(3) Red Hat is worse than Microsoft. Their certification is more
expensive, designed to steal from those who do not take the
Red Hat training regimen, and RH only wants to recruit old
time Unix experts. But Linux is not Unix.

2861. Re: X-band rf exposure question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 14:52:41 UTC
From: Wes Stewart <n7ws@nowhere.com>
Message-ID: <l3j0qugbv97ifk6kfp8v8o9c5r5r5ic9a3@4ax.com>
Source record: 40924

On Sun, 6 Oct 2002 12:52:54 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

[war story snipped]
|
|Later I visited Hiroshima and, apart from bad dreams, I didn't have any
|after effects from there either.

There it is folks. Now we know why he is as he is <g> I believe that
one of the effects is that you don't believe there was an effect.

2862. rotator command set(s)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 15:08:24 UTC
From: Gary & Angela Belcaster <gbelcas@charter.net>
Message-ID: <gbelcas-3E7AA7.10082406102002@corp.supernews.com>
Source record: 40925

Does anybody know where I might find this info on the net ?? Thanks in advance.

Gary

2863. Re: Fox Hole Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 15:22:27 UTC
From: George Zimmerlee <geozim@usol.com>
Message-ID: <3DA05533.6FFE@usol.com>
Source record: 40926

Mike Kulyk wrote:
> What razors and what pencils work best. And how much wire?
> Mike WB2GLW

The blue blades work because the bluing is selenium gunmetal blue, and selenium is a semiconductor, as is graphite (carbon).

Since blue blades are no longer available at the supermarket, you could just polish and blue your own detector plate, or maybe pull out that 460 Weatherby from the gun locker. Now there is a QRO receiver!

Note: Phosphate finish is not the same as bluing.

2864. Re: LF SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 15:31:11 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3DA0573F.1BAE3A46@clifto.com>
Source record: 40927

Tom Bruhns wrote:
> (Now can someone tell me where to find coax which is specified to be
> within 1% [0.5% would be better] of 50+j0 ohms from, say, 100MHz to
> 3GHz? Yes, that's a serious question...)

Look for a store that sells isotropic sources. :)

--
It is better to light just one little candle than to curse the darkness.
If everyone lit just one little candle, the EPA would outlaw candles.

2865. Re: Homebrew Tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 16:10:17 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <anpn90$p7a$1@slb3.atl.mindspring.net>
Source record: 40928

Pi would do fine. And keep the insulated shafts. RF likes little human fingers.

Also, the box you use should not be metal. And if it is keep the metal away from the coil in particular. It really don't need shielded at all. Plexiglass does a good job or just use a chasis and make it open to the world. Works fine.

Dan/W4NTI

"Chuck/KE4ETH" <chuck_hawks@hotmailnospamorama.com> wrote in message news:BjNn9.29340$YK4.2728681@e3500-atl2.usenetserver.com...
> Dan and Reg,
>
> Thanks for the info. The radios are 80-10. There are insulated shafts for
> the cap. stator is grounded in the final cage. The radio has insulated
> shafts I am thinking a pi.
>
> again, thanks
>
> --
> 73,
> Chuck
> KE4ETH
>
> "Chuck/KE4ETH" <chuck_hawks@hotmailnospamorama.com> wrote in message
> news:k6Jn9.25296$YK4.2624769@e3500-atl2.usenetserver.com...
> > Hi All,
> >
> > Is it possible to use the tank compnents, coil, plate cap and load cap
to
> > make a tuner for 80-10 meters. I have been given 3 Henry Radio Tempo
Ones,
> > one recieves (Been stored for 4-5 yrs)(gotta fix the xmit) and the other
> two
> > for parts. The tank components are intact the all units.
> >
> > Thanks in advance.
> >
> > --
> > 73,
> > Chuck
> > KE4ETH
> >
> >

> >
> >
>
>
>

2866. Re: WTB H/V rectifier tubes 5r4gy new or nos

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 16:11:48 UTC
From: Dan/W4NTI <w4nti@mindspringnospam.com>
Message-ID: <anpnbr$951$1@nntp9.atl.mindspring.net>
Source record: 40929

5R4's had a tendency to arc. Why not just replace them with a string of good diodes? Unless you just gotta have that 'original' look. HI.

Dan/W4NTI

"aa8wl" <aa8wl@comcast.net> wrote in message news:3DA03F50.19BC00CA@comcast.net...
> Hi, name is Sam and I am looking for a couple H/V rectifier tubes
> (5r4gy) for my Heathkit DX-100b . Let me know what you have and
> details. TNX 73' de aa8wl
> Keep em glowing (or trying to)!! HiHi
> Sam burleigh
> 586-246-5184 voice mail
>

2867. Re: X-band rf exposure question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 16:52:36 UTC
From: tdonaly@aol.com
Message-ID: <20021006125236.03501.00007801@mb-cr.aol.com>
Source record: 40930

Wes wrote,
>
>[war story snipped]
>|
>|Later I visited Hiroshima and, apart from bad dreams, I didn't have any
>|after effects from there either.
>
>There it is folks. Now we know why he is as he is <g> I believe that
>one of the effects is that you don't believe there was an effect.
>

Sort of like what happened to make Godzilla, I suppose. I used to have to work around very slightly radioactive materials on a regular basis and felt the only dangers were an enhanced risk of getting cancer, and of having defective kids. If I'd thought it would make me British I would have quit.

Tom Donaly, KA6RUH

2868. Re: Homebrew Tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 20:28:25 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailnospamorama.com>
Message-ID: <aa1o9.38497$YK4.3074044@e3500-atl2.usenetserver.com>
Source record: 40931

i wish open to the world woulf work, 'cept have little 6-year-od finger the
want to do like mommy and dady do. (He wants to get his license so he can
talk to mommy and daddy.)

--
73,
Chuck
KE4ETH

"Dan/W4NTI" <w4nti@mindspringnospam.com> wrote in message
news:anpn90$p7a$1@slb3.atl.mindspring.net...
> Pi would do fine. And keep the insulated shafts. RF likes little human
> fingers.
>
> Also, the box you use should not be metal. And if it is keep the metal
away
> from the coil in particular. It really don't need shielded at all.
> Plexiglass does a good job or just use a chasis and make it open to the
> world. Works fine.
>
> Dan/W4NTI
>
> "Chuck/KE4ETH" <chuck_hawks@hotmailnospamorama.com> wrote in message
> news:BjNn9.29340$YK4.2728681@e3500-atl2.usenetserver.com...
> > Dan and Reg,
> >
> > Thanks for the info. The radios are 80-10. There are insulated shafts
for
> > the cap. stator is grounded in the final cage. The radio has insulated
> > shafts I am thinking a pi.
> >
> > again, thanks
> >
> > --
> > 73,
> > Chuck
> > KE4ETH
> >
> > "Chuck/KE4ETH" <chuck_hawks@hotmailnospamorama.com> wrote in message
> > news:k6Jn9.25296$YK4.2624769@e3500-atl2.usenetserver.com...
> > > Hi All,
> > >
> > > Is it possible to use the tank compnents, coil, plate cap and load cap
> to
> > > make a tuner for 80-10 meters. I have been given 3 Henry Radio Tempo

> Ones,
> > > one recieves (Been stored for 4-5 yrs)(gotta fix the xmit) and the
other
> > two
> > > for parts. The tank components are intact the all units.
> > >
> > > Thanks in advance.
> > >
> > > --
> > > 73,
> > > Chuck
> > > KE4ETH
> > >
> > >
> > >
> > >
> >
> >
> >
>
>

2869. Re: Ham flavored Linux ? :)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 21:13:00 UTC
From: "atec77(nospam)" <"atec77(nospam)"@hotmail.com>
Message-ID: <3DA0A75C.EA0CA93B@hotmail.com>
Source record: 40932

in one word.
Mandrake

George Zimmerlee wrote:
>
> newsguy wrote:
> > So far I am liking Debian, just
> > looking for others ideas please.
>
> It seems Debian has the best package of aps for hams.
> Also they have a website with stable(1), testing(2),
> and unstable(3) aps.
>
> D

2870. Re: Ham flavored Linux ? :)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 22:06:09 UTC
From: bjorn890@aol.com4232534
Message-ID: <20021006180609.00848.00008278@mb-ms.aol.com>
Source record: 40933

Slackware.

There is plenty of DOS left in Windows, just make a boot disk!

2871. Re: LF SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 22:14:03 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0610021815050001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40934

In article <3DA0573F.1BAE3A46@clifto.com>, "Clifton T. Sharp Jr." <clifto@clifto.com> wrote:

> Tom Bruhns wrote:
> > (Now can someone tell me where to find coax which is specified to be
> > within 1% [0.5% would be better] of 50+j0 ohms from, say, 100MHz to
> > 3GHz? Yes, that's a serious question...)

Yes, it is called hard line, but why would you want something so silly in tolerance? It's freq response would be from DC to blue light, but once again, why?

The original question about LF VSWR, it is easy to build an RX bridge at these frequencies, so who cares about VSWR unless you're going to be moving all over the place with a 35 foot whip or something of that sort.

Happy Trails,

Steve WB4CZR

2872. Re: LF SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 22:17:39 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0610021818410001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40935

In article <3DA0573F.1BAE3A46@clifto.com>, "Clifton T. Sharp Jr."
<clifto@clifto.com> wrote:

> Look for a store that sells isotropic sources. :)

As sergeant Schultz would say "Jolly joker".

Steve WB4CZR

2873. Re: Ham flavored Linux ? :)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 22:20:58 UTC
From: Mats Peterson <matsp555@yahoo.com>
Message-ID: <anqd0a$gc8vq$1@ID-162516.news.dfncis.de>
Source record: 40936

Any distro.

bjorn890@aol.com4232534 (Bjorn890) writes:

>Slackware.
>---
>There is plenty of DOS left in Windows, just make a boot disk!

2874. Re: Homebrewed TNC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 22:21:08 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0610021822110001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40937

In article <64Vn9.58001$xI5.11590@sccrnsc02>, "G. Beat"
<gregory.beat.nospam@attbi.com> wrote:

> You can also build the simple KISS TNC that was featured in QST article last
> year - for about $ 50.
>
> GB
>
>
> "Benny Miller" <bennymiller@core.com> wrote in message
> news:3d9f3534$0$1424$2c3e98f8@news.voyager.net...
> > Hey all, I have 2 Macintosh modems one is a Sportster 28.8 and the other
> is
> > a Teleport Bronze 33.6. I was wondering if anyone has ever modded a modem
> > for use as a TNC and if they did, was it difficult. I want to set up a
> > packet site and I do not want to spend the $100 or so for a TNC. (college
> > really takes it toll-$$)
> > Thanks for any help.
> > 73

I hope the simple TNC wasn't using LM567's like so many pieces of "you
know what" construction projects. It would be a good way to discourage a
new builder.

Steve WB4CZR

2875. Re: Homebrewed TNC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 22:39:59 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <sR2o9.185177$F21.179023@fe02>
Source record: 40938

> I hope the simple TNC wasn't using LM567's like so many pieces of "you
> know what" construction projects. It would be a good way to discourage a
> new builder.
>
>
> Steve WB4CZR

No, MX-614. Ok design, not so good PCB layout.

2876. Re: X-band rf exposure question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-06 22:47:23 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <anqehq$c61$1@helle.btinternet.com>
Source record: 40939

"Wes Stewart" <n7ws@nowhere.com> wrote in message
news:l3j0qugbv97ifk6kfp8v8o9c5r5r5ic9a3@4ax.com...
> On Sun, 6 Oct 2002 12:52:54 +0000 (UTC), "Reg Edwards"
> <g4fgq.regp@btinternet.com> wrote:
>
> [war story snipped]
> |
> |Later I visited Hiroshima and, apart from bad dreams, I didn't have any
> |after effects from there either.
>
> There it is folks. Now we know why he is as he is <g> I believe that
> one of the effects is that you don't believe there was an effect.
>
==========

Please excuse my ignorance - what is <g> ?

2877. Re: X-band rf exposure question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 00:19:36 UTC
From: Wes Stewart <n7ws@nowhere.com>
Message-ID: <9kk1qu0kgv9703ed6vmo50ei17oa4jtl8t@4ax.com>
Source record: 40940

```
On Sun, 6 Oct 2002 22:47:23 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

|
|"Wes Stewart" <n7ws@nowhere.com> wrote in message
|news:l3j0qugbv97ifk6kfp8v8o9c5r5r5ic9a3@4ax.com...
|> On Sun, 6 Oct 2002 12:52:54 +0000 (UTC), "Reg Edwards"
|> <g4fgq.regp@btinternet.com> wrote:
|>
|> [war story snipped]
|> |
|> |Later I visited Hiroshima and, apart from bad dreams, I didn't have any
|> |after effects from there either.
|>
|> There it is folks. Now we know why he is as he is <g> I believe that
|> one of the effects is that you don't believe there was an effect.
|>
|===========================
|
|Please excuse my ignorance - what is <g> ?

Internet shortcut for grin or smile... indicating a joke. No offense
to be taken, etc...
|
```

2878. Re: Ham flavored Linux ? :)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 00:37:51 UTC
From: "Mark J. Dulcey" <mark@buttery.org>
Message-ID: <pan.2002.10.07.00.37.51.262166@buttery.org>
Source record: 40941

On Sun, 06 Oct 2002 10:39:14 +0000, George Zimmerlee wrote:

> * You need to pay about $40 to get the latest version on
> CD-ROM. Those from Linux Mall are a good 6 months out of
> date. Also newer aps will not work with older C libraries,
> and vice-versa. This means you have to run two versions,
> with old C libs and with new C libs.

If you have a fast internet connections, you can download the CD images and burn them yourself. CD sets of the current stable release (3.0), which is about three months old (July release), are also available from a number of sources for less than $40. For example, CheapBytes will sell you an 8 CD set for $17.99.

A problem with C++ libraries is about to hit the Linux world in a big way, now that distributions are switching over to GCC 3.2 (after staying with 2.95 or 2.96 for a long time). The ABI (application binary interface) for C++ changed with in GCC 3. This means that C++ applications built with GCC 2.x won't work with libraries built with GCC 3.x, and vice versa. And you can't just keep the old ones around, because the libraries have the SAME version number, just incompatible binaries.

What it means is that you have to replace ALL C++ binaries (including just about all KDE applications) when you upgrade to a new GCC 3.2-based distribution. This is no problem for apps that come with the distribution, since they will all be rebuilt, but it is a problem for things that you build yourself or download from other sources.

> * Debian is overly, extremely, psychotically weird about
> licensing. You cannot find good aps at the website unless
> they are GPL licensed or absolutely free and open. Paying
> more money for a CD set that includes the non-free aps is
> worth the money. This is certainly true for the non-free
> KDE environment. Gnome really sucks. What a hard drive hog!

True. But it no longer applies to KDE, which is now free software; both KDE itself and the Qt Free Edition are licensed under the GPL. Debian, however, only offers KDE 2.2 in the stable version, even though 3.0 has been out since May. (The "unstable" version does include KDE 3.)

SuSE is another good distribution for ham use; it includes just about every ham application you could possibly want. You can't download the CD images for free, but you can download the individual packages.

2879. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 01:22:58 UTC
From: Harvey Babb <WB5MCT@arrl.net>
Message-ID: <3DA0E1F2.5010702@arrl.net>
Source record: 40942

Andrew, you made a good point: even though the number of "new" HB'er >MAY< be decreasing (I'm not convinced), those of us who are left now have a MUCH greater likelyhood of being able to help each other and supply needed encouragement: this very newsgroup and others like it!

(The "active/inactive" ratio I was referring to was in the Ham communities in US cities. Big cities => Small percent do anything; Small Towns => May actually have more hams on the air than big cities.)

WHY!

Harvey
WB5MCT

Andrew VK3BFA wrote:

> ronayling@hotmail.com (Ron) wrote in message news:<3d9c1aec.9321782@news.freeserve.co.uk>...
>
>>Well the whole point of this argument is being lost, I agree with all
>>thats said here, smd's are fun, I still enjoy home brew as much as I
>>always did, so obviously does everyone contributing here, BUT when
>>we are gone it will be no more, simply as I keep saying there are very
>>few yougsters doing it!!!!
>>Not sure about the community bit, I remember as a child we knew
>>everyone in our street and what they did, these days I know my
>>neighbours two doors either way and across the road and thats it!
>>people don't seem to want to talk much these days, they say
>>"Hello" but don't let you into their lives, now what would be
>>interesting would be a survey of the ages of Amateur radio group
>>members and electronics clubs, the RSGB must have a good idea
>>about their membership, and thats probably the reason for all these
>>licence changes that seem to be upsetting quite a few, perhaps they
>>see themselves out of a job in a few years hi!!
>>
>>
>
> Harvey,what about the people you are yacking to in this discussion - I
> dont know my neighbours (I dont really want to, they dont have any
> test equipmet I can borrow) - this is our new community, the spread of
> technology has enabled us to do this - I probably would never have
> heard you on HF, and it would most likely have been "59 QSL via
> bureau" if we had! - dont be too down, its a changing world (as its
> always been) and we will change with it, new techniques, new modes of
> communications, new amateurs to ragchew with -what could be nicer than
> that!

>
> Andrew VK3BFA
>

2880. Re: Homebrewed TNC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 01:37:51 UTC
From: Harvey Babb <WB5MCT@arrl.net>
Message-ID: <3DA0E56F.2000408@arrl.net>
Source record: 40943

Benny, my first reflex was to tell you "No way, just forget it!" but on reflection.... it just MIGHT be possible. You're basically talking about a complete rewrite of the modem firmware. SOME of the 28.8 sportsters were flash programmable and so, if there's enough flash space and enough onboard RAM, you just MIGHT be able to make it work. Check the US Robotics site to see if your particular model can be upgraded to 56K operation. If so, it's a flash model. If so, figure out what DSP they used, get the programming info and software, learn the DSP language, disassemble the existing firmware (free download from USR) to find out how to talk to the flash, write the new code and loader and you're in business...
If you manage to get this to work, write your Doctoral thesis on it and you're a cinch to pass!

Harvey
WB5MCT

Benny Miller wrote:

> Hey all, I have 2 Macintosh modems one is a Sportster 28.8 and the other is
> a Teleport Bronze 33.6. I was wondering if anyone has ever modded a modem
> for use as a TNC and if they did, was it difficult. I want to set up a
> packet site and I do not want to spend the $100 or so for a TNC. (college
> really takes it toll-$$)
> Thanks for any help.
> 73
> KC8TRN
>
>
>

2881. Re: Homebrew in QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 02:02:06 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailnospamorama.com>
Message-ID: <BOeo9.46036$OM4.32510680@e3500-atl1.usenetserver.com>
Source record: 40848

Yea, in our small town, there are 4 hams, my wife and I are the most active.
Mostly to and from mobile to home, to and from work. Now compares to the
rest of the county, we are a minority. most only come out for skywarn.

--
73,
Chuck
KE4ETH

"Harvey Babb" <WB5MCT@arrl.net> wrote in message
news:3DA0E1F2.5010702@arrl.net...
> Andrew, you made a good point: even though the number of "new" HB'er
> >MAY< be decreasing (I'm not convinced), those of us who are left now
> have a MUCH greater likelyhood of being able to help each other and
> supply needed encouragement: this very newsgroup and others like it!
>
> (The "active/inactive" ratio I was referring to was in the Ham
> communities in US cities. Big cities => Small percent do anything; Small
> Towns => May actually have more hams on the air than big cities.)
>
> WHY!
>
> Harvey
> WB5MCT
>
>
> Andrew VK3BFA wrote:
>
> > ronayling@hotmail.com (Ron) wrote in message
news:<3d9c1aec.9321782@news.freeserve.co.uk>...
> >
> >>Well the whole point of this argument is being lost, I agree with all
> >>thats said here, smd's are fun, I still enjoy home brew as much as I
> >>always did, so obviously does everyone contributing here, BUT when
> >>we are gone it will be no more, simply as I keep saying there are very
> >>few yougsters doing it!!!!
> >>Not sure about the community bit, I remember as a child we knew
> >>everyone in our street and what they did, these days I know my
> >>neighbours two doors either way and across the road and thats it!
> >>people don't seem to want to talk much these days, they say
> >>"Hello" but don't let you into their lives, now what would be
> >>interesting would be a survey of the ages of Amateur radio group
> >>members and electronics clubs, the RSGB must have a good idea
> >>about their membership, and thats probably the reason for all these
> >>licence changes that seem to be upsetting quite a few, perhaps they

> >>see themselves out of a job in a few years hi!!
> >>
> >>
> >
> > Harvey,what about the people you are yacking to in this discussion - I
> > dont know my neighbours (I dont really want to, they dont have any
> > test equipmet I can borrow) - this is our new community, the spread of
> > technology has enabled us to do this - I probably would never have
> > heard you on HF, and it would most likely have been "59 QSL via
> > bureau" if we had! - dont be too down, its a changing world (as its
> > always been) and we will change with it, new techniques, new modes of
> > communications, new amateurs to ragchew with -what could be nicer than
> > that!
> >
> > Andrew VK3BFA
> >
>

2882. Re: Homebrewed TNC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 02:23:49 UTC
From: Bob McConnell <rmcconne.NOSPAM@lightlink.com>
Message-ID: <ij52qukesovh0hu5jb15osfkojmjq123pi@4ax.com>
Source record: 40944

On Sat, 5 Oct 2002 21:13:02 -0500, "Dave VanHorn" <dvanhorn@cedar.net>
wrote:

>
>"Benny Miller" <bennymiller@core.com> wrote in message
>news:3d9f3534$0$1424$2c3e98f8@news.voyager.net...
>> Hey all, I have 2 Macintosh modems one is a Sportster 28.8 and the other
>is
>> a Teleport Bronze 33.6. I was wondering if anyone has ever modded a modem
>> for use as a TNC and if they did, was it difficult. I want to set up a
>> packet site and I do not want to spend the $100 or so for a TNC. (college
>> really takes it toll-$$)
>
>This is not a practical project.
>Most chipsets these days aren't going to support Bell 202 which is the tone
>set you need.
>Also, you'll have to do 2 wire to 4 wire conversion.
>There's more... You'll spend the price of a new TNC in hobby time at $2/hr.
>
>My advice, get a used KPC-3. Nice stable box. The Pico-Packet is also
>worthwhile.
>Check Ebay, I've picked up nice KPC's for $50.
>

Well, you won't find any off the shelf modems, nor many off the shelf
modem chip sets that support 202. Most of them are designed for phone
lines and even those that claim to support Bell 103 and 212 don't do a
very good job of it. They're too focused on V.90 and 56K for the AOL
crowd. There are a few 202T (four wire, leased-line) modems still on
the market, but they run about US$700 apiece.

But there are some options for 202 style equipment. The
died-in-the-wool DIY fan can work something up with a tone generator
and phase-lock-loop decoder without too much effort. The credit card
industry has been making modems for their terminals like that for
years. Either drive it off your PC or add a dedicated microprocessor
with a few I/O ports, and you're in business. If you plan ahead, you
could even use the same equipment on HF, just provide switching for
multiple shift widths.

I know that there is at least one DSP manufacturer that has a free 202
sample driver in their SDK library. The last I checked, they weren't
going to support full duplex, but that's not a problem for packet use.
I don't know what they would charge students for development kits.

Of course there's always the sound card drivers, and if you can get your hands on some PC/104 cards, they could be made small without much problem. Plus you would have several megabytes of RAM left over for mailboxes, bulletin storage, etc. Or get an old 266MHz P-II for the node. They only run about US$60 now.

Think outside the box. TNC-2 may have been the last one produced commercially, but that doesn't mean it's the only, or even the best design.

Bob McConnell
N2SPP

2883. Re: Homebrewed TNC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 02:42:10 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <gz6o9.663$fr.180@fe04>
Source record: 40945

> But there are some options for 202 style equipment. The
> died-in-the-wool DIY fan can work something up with a tone generator
> and phase-lock-loop decoder without too much effort. The credit card
> industry has been making modems for their terminals like that for
> years.

Actually, I spent 9 years designing modems for credit card terminals, among other things.
We never went that way. NS and TI modem chips, AMD world chips, MX-Comm

> Of course there's always the sound card drivers, and if you can get
> your hands on some PC/104 cards, they could be made small without much
> problem. Plus you would have several megabytes of RAM left over for
> mailboxes, bulletin storage, etc. Or get an old 266MHz P-II for the
> node. They only run about US$60 now.

That's been done AGWPE.

2884. Re: A beginner say : Building a 20m transceiver...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 05:28:54 UTC
From: "M.S. Bob" <msbob@hotmail.com-edy>
Message-ID: <2p52qu8mgjgfed06d41r1tnefio8iso220@4ax.com>
Source record: 40946

On 3 Oct 2002 13:20:27 -0700, marsgal42@hotmail.com (Laura Halliday)
wrote:

>"Amir Kharbian" <blue@greenmem.net> wrote in message
news:<anf9im$dvhgm$1@ID-157035.news.dfncis.de>...
>> SBL-1 doesn't exit in my country, and I can't buy from other counter.
>> Then I must replace it with ... for use in schematics. :-(
>>
>> By the way, if anyone have a good Hi performance "20m SSB TRX" schematics
>> without
>> need special parts,send to me and happy me.
>
>May I suggest you try somebody other than the ARRL for
>designs?
>
>ARRL designs tend to assume parts that are available in
>the U.S.A. Even us Canadians, right next door, sometimes
>have parts procurement problems. If you stick with an
>ARRL design you are likely to experience lots more parts
>problems than just SBL-1.

One European source is Barend Hendriksen HF Elektronica BV, The
Netherlands if our original poster is in Europe.
<http://www.xs4all.nl/~barendh/Indexeng.htm>. (SBL1 8.85 Euros)
I imagine there are plenty of other sources if the poster is in fact
from Germany, but I am afraid I cannot offer any more help.

The converse is true as well, I have some neat books from the RSGB,
Practical Transmitters for Novices and _Practical Receivers for
Beginners_ which are at the level of building that I'm at (i.e.
newbie), but unfortunately finding equivalents and replacements for
BC107 transistors, ZN414Z / MK484, and the likes makes the projects
far less attractive.

Age enters the equation as well, designs from the 70s or early 80s can
be hard(er) to build, now that some parts have been replaced or simply
discontinued. Since I am very new to building, I don't have the
knowledge to substitute parts.

2885. Re: Homebrewed TNC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 11:40:32 UTC
From: maris_g2002@yahoo.co.uk
Message-ID: <34d9d59a.0210070340.fa465a1@posting.google.com>
Source record: 40847

"Dave VanHorn" <dvanhorn@cedar.net> wrote in message news:<gz6o9.663$fr.180@fe04>...
> > But there are some options for 202 style equipment. The
> > died-in-the-wool DIY fan can work something up with a tone generator
> > and phase-lock-loop decoder without too much effort. The credit card
> > industry has been making modems for their terminals like that for
> > years.
>
> Actually, I spent 9 years designing modems for credit card terminals, among
> other things.
> We never went that way. NS and TI modem chips, AMD world chips, MX-Comm
>
>
> > Of course there's always the sound card drivers, and if you can get
> > your hands on some PC/104 cards, they could be made small without much
> > problem. Plus you would have several megabytes of RAM left over for
> > mailboxes, bulletin storage, etc. Or get an old 266MHz P-II for the
> > node. They only run about US$60 now.
>
> That's been done AGWPE.

i think that people broadcasting from home should be legalsied because
more young people like listening to that rather than clyde 1 or even
worse radio 1. or i think that main radio station should employ
younger people to do their djin just think of the money they will make

2886. Re: "Old Signal Generator" -- Going today!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 13:18:13 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <pQfo9.172070$TX5.7210281@news1.east.cox.net>
Source record: 40849
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment

"ga_boneyard" <ga_boneyard@hotmail.com> wrote in message
news:VOfo9.172057$TX5.7210070@news1.east.cox.net...
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=719551002
>
>
> Tnx fer lookin'
>
>
> Note: non-use of the term "vintage"...8=)
>
>
> 73,
>
> KQ4BY
>
>

2887. Home Brew 1KW Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 13:51:38 UTC
From: Jim Balls <m0cke@btinternet.com>
Message-ID: <hkgo9.14079$J47.1189440@stones>
Source record: 40850

Hi all,

I'm looking for a design for a 1KW dummy load, I have fround some info on using 13 680 Ohm 5W resistors in oil for a 100W load.
I have found some 50w 680 Ohm resistors which are not wire wound but non inductive only thing is they need a heat sink to run at 50w otherwise they are rated at 5W, would the oil be a good enough heat sink or would I have to look at bolting them all to a heat sink then imersing it in oil?

I would only be loading about 400w into the load

An ideas would be a real help!

Kind Regards,

Jim M0CKE

2888. Re: X-band rf exposure question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 14:05:16 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <ans4as$7le$0@208.207.71.158>
Source record: 40851

Reg Edwards wrote:
>
> "Wes Stewart" <n7ws@nowhere.com> wrote in message
> news:l3j0qugbv97ifk6kfp8v8o9c5r5r5ic9a3@4ax.com...
> > On Sun, 6 Oct 2002 12:52:54 +0000 (UTC), "Reg Edwards"
> > <g4fgq.regp@btinternet.com> wrote:
> >
> > [war story snipped]
> > |
> > |Later I visited Hiroshima and, apart from bad dreams, I didn't have any
> > |after effects from there either.
> >
> > There it is folks. Now we know why he is as he is <g> I believe that
> > one of the effects is that you don't believe there was an effect.
> >
> ==========
>
> Please excuse my ignorance - what is <g> ?

<g> is a grin. <ggg> is a big wide grin.

2889. Re: Home Brew 1KW Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 17:44:42 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <n0vzCoIKgco9EA6r@ifwtech.co.uk>
Source record: 40855

Jim Balls wrote:
>Hi all,
>
>I'm looking for a design for a 1KW dummy load, I have fround some info on
>using 13 680 Ohm 5W resistors in oil for a 100W load.
>I have found some 50w 680 Ohm resistors which are not wire wound but non
>inductive only thing is they need a heat sink to run at 50w otherwise they
>are rated at 5W, would the oil be a good enough heat sink or would I have to
>look at bolting them all to a heat sink then imersing it in oil?

Simply immersing the bare resistors in the oil will not provide enough metal/oil contact area for heat transfer, so you'll need the heat sink. Since you're relying on free convection of the oil, it will still need to be a pretty big heat sink with the fins vertical in a big can.

The other problem is that you'll have some difficulty in ensuring equal division of current and power between all the resistors - 13 is a large prime number! It would be better to aim for a "cascaded binary tree" configuration, so that at each junction, the current divides equally just 2 ways. (Please don't ask me to draw this in ASCII!)

That would mean either 8 or 16 resistors, but if you're looking at the same UK catalogues as I am, there aren't any 820R TO220 resistors on offer...

So how about paralleling pairs of 680R and 1K resistors to make building blocks of 404R? Then wire eight of these blocks in a binary tree and you're very close to 50R. Obviously the power doesn't divide equally between all the resistors, but with 50W resistors you'd still have a total power rating of 672W.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

2890. Re: Home Brew 1KW Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 17:48:45 UTC
From: Me <me@here.there.everywhere>
Message-ID: <08i3quk686etmg7s6gssni0s6devee115q@4ax.com>
Source record: 40853

How high in frequency, Jim?

On Mon, 7 Oct 2002 14:51:38 +0100, "Jim Balls" <m0cke@btinternet.com>
wrote:

>Hi all,
>
>I'm looking for a design for a 1KW dummy load, I have fround some info on
>using 13 680 Ohm 5W resistors in oil for a 100W load.
>I have found some 50w 680 Ohm resistors which are not wire wound but non
>inductive only thing is they need a heat sink to run at 50w otherwise they
>are rated at 5W, would the oil be a good enough heat sink or would I have to
>look at bolting them all to a heat sink then imersing it in oil?
>
>I would only be loading about 400w into the load
>
>An ideas would be a real help!
>
>Kind Regards,
>
>Jim M0CKE
>

2891. eprom programmer fs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 17:57:49 UTC
From: 106312.1035@compuserve.com
Message-ID: <3da16d1e.908348@news.compuserve.com>
Source record: 40852

EPP-1 E(E)PROM programmer.

mains powered, covers all 25xx, 27xx, x28 eproms
with manual, circuit etc. RS232 input.

10 Pound.

BN.

2892. AM Broadcast second hand transmitter requested

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 18:12:36 UTC
From: ON5MJ <on5mjREMOVE@skynet.be>
Message-ID: <3da1ce9b$0$183$ba620e4c@news.skynet.be>
Source record: 40854

I have found on Google a company named Besco for buying a secand hand AM transmitter. Nevertheless none of their e-mail seems to work. Does someone over there know how to contact them or possibly does someone know another similar company ?

Thanks and regards.

73 de ON5MJ

2893. Re: project boxes from circuit board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 19:11:13 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <S8lo9.4$Tw1.3002@newsfep1-win.server.ntli.net>
Source record: 40856

"Andrew VK3BFA" <ablight@alphalink.com.au> wrote in message
news:1fc7b362.0210010508.64bc9fe1@posting.google.com...
> > > > don't waste good pcb for that for heaven's sake, use some brass shim
> > > > instead. sheesh!
>
> Depends on costing - I got squre metre pieces (nice fibreglass double
> sided) at the local trash and treasure for virtually nothing, so I use
> it for boxes. Brass shim costs a fortune by comparison!
======
Indeed ,scrap PCB ,even large sheets can be found at flea markets for very
little money . Great material for making enclosures even with etched front
panels.

Frank gm0csz.kn6wh@ntlworld.com

2894. Motor run capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 19:43:56 UTC
From: yeti@REMOVEcet.com
Message-ID: <3da1e3ad.2428124@news.cet.com>
Source record: 40857

Anybody know a good source for new or used motor run caps?

2895. Re: Motor run capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 20:19:39 UTC
From: builder <sp@m.not>
Message-ID: <3DA1EC71.124F2631@m.not>
Source record: 40858

If you strike out completely check some appliance repair places. I just recently removed a nice motor starting capacitor from the main motor of my 25 year old washer before it was picked up and replaced by a new washing machine.

I would assume appliance repair companies have a way to get them somewhere.

"yeti@REMOVEcet.com" wrote:

> Anybody know a good source for new or used motor run caps?

2896. Re: LF SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 20:35:10 UTC
From: k7itm@aol.com
Message-ID: <3200347.0210071235.7d23484f@posting.google.com>
Source record: 40859

motsteve@attbi.com (carltons) wrote in message
news:<motsteve-0610021815050001@c-66-176-144-254.se.client2.attbi.com>...
> In article <3DA0573F.1BAE3A46@clifto.com>, "Clifton T. Sharp Jr."
> <clifto@clifto.com> wrote:
>
> > Tom Bruhns wrote:
> > > (Now can someone tell me where to find coax which is specified to be
> > > within 1% [0.5% would be better] of 50+j0 ohms from, say, 100MHz to
> > > 3GHz? Yes, that's a serious question...)
>
>
>
> Yes, it is called hard line, but why would you want something so silly in
> tolerance? It's freq response would be from DC to blue light, but once
> again, why?

Thanks for the idea, Steve, but unfortunately it must also be
moderately flexible. It will be a component of a calibration system
for instrumentation, and having an accurate, repeatable impedance is a
big help in this particular case. It may be that we'll end up putting
in pads to match the ends to 50 ohms, and trim them for each
individual piece of coax. Yes, we know how to calibrate measurements
at the end of a somewhat arbitrary piece of line, but in this case,
there are difficulties with that. Actually, the 50-ohm requirement
doesn't put a constraint on the loss, and loss of up to 5dB or so at
3GHz in a 2-meter length would be acceptable. I'd expect to fit SMA
connectors on the ends.

We have found line like we need except spec'd to a couple of percent
impedance tolerance, but so far I haven't found anything much better.
Just thought someone here might have a pointer to something better.

Cheers,
Tom

2897. Re: Motor run capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 21:38:29 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <Ybno9.261$3g6.13069@newsfep2-win.server.ntli.net>
Source record: 40860

> Anybody know a good source for new or used motor run caps?
==========
Scrap refrigerators , washing machines , dishwashers.

Frank gm0csz.kn6wh@ntlworld.com

2898. Kenwood/Icom Power connector source

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 21:56:47 UTC
From: jeff <wd4nmq@earthlink.net>
Message-ID: <3DA203A1.1020005@earthlink.net>
Source record: 40861
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Anybody know a source for the 6-pin Molex type power connectors used on
Kenwood and Icom HF rigs? This would be for the power cord side.

Specically the Kenwood TS-140/440/940's.

--
Jeff, wd4nmq
wd4nmq@earthlink.net
http://home.earthlink.net/~wd4nmq
iLink client node #10438, iLink sysop link node #14746

2899. Re: price for Collins 516F2 unit..?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 22:08:42 UTC
From: SkippAsksForNoSpamPleaseIllReadYourrepliesHere <skipp@hotmail.com>
Message-ID: <ant0lasei1@woodrow.ucdavis.edu>
Source record: 40862
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

Thank you everyone for your replies, even those which seemed a little jadded. Yeah, I've seen the ebay hype and could easily find some auctions that have closed. But I like the opinions people give out here better.

It doesn't matter to me if I sell it today or never, just thought to ask. The ideal thing would be to buy another KWM-2a, but after seeing a station sell at the Livermore, CA. flea market (last sunday) for $800, I don't think I'll invest in another Collins HF Station.

So back to the closet for now, put it on top of my still in the box unbuilt Heathkit SB-1000 HF amplifier.

chow for now
skipp

http://sonic.ucdavis.edu

: In rec.radio.amateur.homebrew Wayne Faris <wfaris@inebraska.com> wrote:
: According to the following link, the average price on eBay runs around $336.
: Definitely worth trying to sell.
: http://www.aade.com/hampedia/collinsp.htm
: Wayne L. Faris, KExBZ

2900. Re: LF SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 22:09:11 UTC
From: Wes Stewart <n7ws@nowhere.com>
Message-ID: <8514qu0ku3vc12fs3m7b2h9ett7grt5e0o@4ax.com>
Source record: 40863

On 7 Oct 2002 13:35:10 -0700, k7itm@aol.com (Tom Bruhns) wrote:

[snip]

|We have found line like we need except spec'd to a couple of percent
|impedance tolerance, but so far I haven't found anything much better.
|Just thought someone here might have a pointer to something better.

It might be tough to find anything better. You might look at
Micro-Coax's UTiFlex hand-formable cable assemblies. Semflex in Mesa,
AZ makes everything in house and might be able to design to your
specs. RFCoax is another possibility.

Wes

2901. Re: Ham flavored Linux ? :)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 22:23:35 UTC
From: jeff <wd4nmq@earthlink.net>
Message-ID: <3DA209E8.5050607@earthlink.net>
Source record: 40864

I have been running Slackware for years. But then I haven't really done a distro install in years. I just update the kernel/apps whenever I feel a need to.

You should be able to download the CD images. If you don't have broadband, find a buddy. or make a buddy who does :-).

As far as Kde vs. Gnome, ditch them both. I have used fvwm-95 for years. It is smaller and faster then the two "big boys". I know, it doesn't have the "drag and drop" like stuff, but I have yet to really need that functionality. I just installed Red Hat for another ham (That's what he wanted) and gnome on an older 233 Mhz machine. My even older 150 Mhz machine with less memory and fvwm-95 did the windowing, creating, resizing, moving, etc, much FASTER then his Gnome system. I couldn't believe the difference.

And remember, kde/gnome apps WILL run under different window mangers like fvwm-95, just need the proper libraries, gtk , etc, the app will need installed.

Remember, Red Hat is setup to generate revenue from selling support. You can get Red Hat to be smaller on install. You select the "individual packages" option. Then you can pick and choose exactly what you want instead. On my buddy's system my first install doing it without that option resulted in over 1.5 gigabyte. Never had one anywhere near that on Slackware. Redoing it with the above option and picking and choosing brought it in around 900 Meg, about half. figured it I left out gnome window manager and used fvwm-95, it would have been about 300 megs less. But, he wanted Gnome.

Plus, RH does not install tenetd, sshd, ftpd by default. They consider that a security risk. Inorder to install them when you start, you HAVE to use the individual packge option.

I have a couple of linux ham apps, a Kenwood radio control program and an APRS app on my web site below. Plus I am about ready to release echoLinux, an ilink/echolink for linux, native to linux this week. I have been alpha testing with a few others and it works fine.

George Zimmerlee wrote:
> newsguy wrote:
>
>>So far I am liking Debian, just
>>looking for others ideas please.
>
>

> It seems Debian has the best package of aps for hams.
> Also they have a website with stable(1), testing(2),
> and unstable(3) aps.
>
> Debian would be the best choice except for three problems:
>
> * You need to pay about $40 to get the latest version on
> CD-ROM. Those from Linux Mall are a good 6 months out of
> date. Also newer aps will not work with older C libraries,
> and vice-versa. This means you have to run two versions,
> with old C libs and with new C libs.
>
> * Debian is overly, extremely, psychotically wierd about
> licensing. You cannot find good aps at the website unless
> they are GPL licensed or absolutely free and open. Paying
> more money for a CD set that includes the non-free aps is
> worth the money. This is certainly true for the non-free
> KDE environment. Gnome really sucks. What a hard drive hog!
>
> * Then there is the headache of Debian packages. Debian has
> one program, Alien which allows .rpm packages to be installed.
> I find that I have to resort to "dpkg" rather than "dselect"
> to get some packages to install. You may have to rename
> old packages with new package names to fool dselect into
> thinking that all dependancies have been met.
>
> As other respondents, I am against Red Hat for three reasons
>
> (1) Red Hat has become much worse than Windows. Too big, only
> installs on newer equipment, runs untested and unstable aps,
> uses newer interfaces requiring a gaming computer. This means
> you have to spend $2000 to run it. Linux was originally designed
> to run from the command line. The really useful aps are still
> command line based.
>
> (2) Red Hat is worse than Microsoft. MS is guilty of antitrust.
> Red Hat knowingly defrauded investors. Don't do business with
> criminals.
>
> (3) Red Hat is worse than Microsoft. Their certification is more
> expensive, designed to steal from those who do not take the
> Red Hat training regimen, and RH only wants to recruit old
> time Unix experts. But Linux is not Unix.

--
Jeff, wd4nmq
wd4nmq@earthlink.net
http://home.earthlink.net/~wd4nmq
iLink client node #10438, iLink sysop link node #14746

2902. F.A. not F.S.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 22:31:49 UTC
From: Bill & Suzie Whatley <spud286@attbi.com>
Message-ID: <pXno9.950$hb4.119@sccrnsc02>
Source record: 40865

FA not FS.

2903. Re: Local Oscillator Waveforms

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 22:48:24 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3DA21030.3AF448BB@alma.demon.co.uk>
Source record: 40866

Thanks to everyone for your suggestions and information.

I have been playing around for the past week or so with different oscillator types. The one suggested by Leon so far seems the best in that the output signal level is pretty constant over the tuning range of the variable capacitor, although the signal integrity at the source is "pants". I have now followed it with a 2 transistor (bootstrapped?) high impedance amplifier taking the signal from the main tuning coil (as suggested) via a very small capacitor (currently the inter row capacitance of the breadboard ;-). Having performed a fourier analysis in my head, signal integrity looks pretty good.

Bizzarely I am seeing some strange effects at a certain frequency, where the oscillator appears to be modulated by a regular "digital" signal. I live very(!) close to some mobile phone masts and I am wondering if I am picking up what is presumably a very strong signal??? No wonder none of my RF projects ever work!

The superhet is a very basic design, dual mosfet mixer, soon to be 3 transistor local oscillator, uses Denco tuning coils circa 1980, 2 transistor IF stage, TBA800 audio amplifier. I built it when I was 15. It seemed to work quite well (given that I had no test equipment to align it) with the single transistor LO/mixer, but performance dived when I made the improved circuit with the dual gate MOSFET.

Finally I am still trying to find out what signal level I need to inject into the MOSFET, Volts or milliVolts?

--Gary

2904. Re: Kenwood/Icom Power connector source

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 23:08:39 UTC
From: Alan Beagley <abeagley@optonline.net>
Message-ID: <3DA213F7.7030102@optonline.net>
Source record: 40867
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

http://www.rffun.com/catalog/parts/power.html

Not cheap.

-=-
Alan

jeff wrote:
> Anybody know a source for the 6-pin Molex type power connectors used on
> Kenwood and Icom HF rigs? This would be for the power cord side.
>
> Specically the Kenwood TS-140/440/940's.
>

2905. Re: Motor run capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-07 23:49:45 UTC
From: hexter@blazenet.net
Message-ID: <uq47cpptar152@corp.supernews.com>
Source record: 40868

In article <3da1e3ad.2428124@news.cet.com>, yeti@REMOVEcet.com says...
>
>Anybody know a good source for new or used motor run caps?
>
Assuming you are in america, try Tractor Supply Company. They
have motor caps for farm and industrial motors.

Look in the yellow pages under electric motors, and try Grainger also.

2906. Re: price for Collins 516F2 unit..?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-08 00:10:52 UTC
From: Alfred Carlson <wa7uhr@gte.net>
Message-ID: <3DA222A0.326849D6@gte.net>
Source record: 40869
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

Ha, I'll bet you could get a grand or better for that unbuilt SB-1000 amplifier. I think that you already know that. Why put the 516f-2 back into the closet when you are not going to invest in another Collins? Nothing jaded about my reply, seems as if you are a very good at fishing though. Chow for now. 73 de Fred.... Oh, PS, I have a very nice looking/working Hallicrafter SX-115. I wonder how much its worth? Any ideas??? Lets see, also an excellent KWM-2/with good 516f-2/664 electrovoice mic/w clamshell base. Hummmm, I wonder. So, how much for your 516F-2???????????

SkippAsksForNoSpamPleaseIllReadYourrepliesHere wrote:

> Thank you everyone for your replies, even those which seemed a little
> jadded. Yeah, I've seen the ebay hype and could easily find some auctions
> that have closed. But I like the opinions people give out here better.
>
> It doesn't matter to me if I sell it today or never, just thought to ask.
> The ideal thing would be to buy another KWM-2a, but after seeing a station
> sell at the Livermore, CA. flea market (last sunday) for $800, I don't
> think I'll invest in another Collins HF Station.
>
> So back to the closet for now, put it on top of my still in the box
> unbuilt Heathkit SB-1000 HF amplifier.
>
> chow for now
> skipp
>
> http://sonic.ucdavis.edu
>
> : In rec.radio.amateur.homebrew Wayne Faris <wfaris@inebraska.com> wrote:
> : According to the following link, the average price on eBay runs around $336.
> : Definitely worth trying to sell.
> : http://www.aade.com/hampedia/collinsp.htm
> : Wayne L. Faris, KExBZ

2907. Re: Kenwood/Icom Power connector source

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-08 00:12:16 UTC
From: MD <ve3tmt@rac.ca>
Message-ID: <Impo9.4231$zU5.545687@news20.bellglobal.com>
Source record: 40870
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

"jeff" <wd4nmq@earthlink.net> wrote in message
news:3DA203A1.1020005@earthlink.net...
> Anybody know a source for the 6-pin Molex type power connectors used on
> Kenwood and Icom HF rigs? This would be for the power cord side.
>
> Specically the Kenwood TS-140/440/940's.

www.powerwerx.com cheap!

2908. Re: Homebrewed TNC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-08 00:54:45 UTC
From: Bob McConnell <rmcconne.NOSPAM@lightlink.com>
Message-ID: <i5l4qu8v44o5vg8ukiqskagsqsf74rqvoj@4ax.com>
Source record: 40871

On Sun, 6 Oct 2002 21:42:10 -0500, "Dave VanHorn" <dvanhorn@cedar.net>
wrote:

>
>> But there are some options for 202 style equipment. The
>> died-in-the-wool DIY fan can work something up with a tone generator
>> and phase-lock-loop decoder without too much effort. The credit card
>> industry has been making modems for their terminals like that for
>> years.
>
>Actually, I spent 9 years designing modems for credit card terminals, among
>other things.
>We never went that way. NS and TI modem chips, AMD world chips, MX-Comm
>

We've been using terminals from Datatrol since the early '80s when we
quit using Burroughs equipment. Their 202 based terminals have always
used tone generators and PLL decoders. They were far more reliable and
durable than anything we ever tested with the modem chips. The last
leased line model was discontinued two years ago, but we still have a
couple thousand of them in use, some more than 12 years old.

Bob McConnell
N2SPP

2909. Re: Motor run capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-08 01:19:13 UTC
From: redmondj <redmondj@concentric.net>
Message-ID: <3DA234BF.8070003@concentric.net>
Source record: 40872

To reply, remove the X in the address
Also try McMaster Carr. The have an on line catalog and no minimums.

73, Alan
gudmundur wrote:

>In article <3da1e3ad.2428124@news.cet.com>, yeti@REMOVEcet.com says...
>
>>Anybody know a good source for new or used motor run caps?
>>
> Assuming you are in america, try Tractor Supply Company. They
>have motor caps for farm and industrial motors.
>
> Look in the yellow pages under electric motors, and try Grainger also.
>

2910. Re: Motor run capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-08 01:29:58 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <antcemdgd0@206.102.192.56>
Source record: 40873

I got one recently from a swimming pool/spa sales outlet.

73 de Jack

<yeti@REMOVEcet.com> wrote in message news:3da1e3ad.2428124@news.cet.com...
> Anybody know a good source for new or used motor run caps?
>

2911. Re: Home Brew 1KW Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-08 03:56:28 UTC
From: "Joe S." <joe@schlatter.org>
Message-ID: <antl4c01n54@enews1.newsguy.com>
Source record: 40874

What do you mean "oil?"

Motor oil? NO -- it'll burn.

Mineral oil? NO -- not enough heat transfer capability.

Transformer oil? YES -- but be certain it's PCB-free; if it's made in the
past 20 years it should be.

Why not just purchase an MFJ 1KW dummy load -- I think they still sell one.

--

Regards,
Joe S.

"Jim Balls" <m0cke@btinternet.com> wrote in message
news:hkgo9.14079$J47.1189440@stones...
> Hi all,
>
> I'm looking for a design for a 1KW dummy load, I have fround some info on
> using 13 680 Ohm 5W resistors in oil for a 100W load.
> I have found some 50w 680 Ohm resistors which are not wire wound but non
> inductive only thing is they need a heat sink to run at 50w otherwise they
> are rated at 5W, would the oil be a good enough heat sink or would I have
to
> look at bolting them all to a heat sink then imersing it in oil?
>
> I would only be loading about 400w into the load
>
> An ideas would be a real help!
>
> Kind Regards,
>
> Jim M0CKE
>
>

2912. Re: Home Brew 1KW Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-08 07:27:25 UTC
From: Me <me@here.there.everywhere>
Message-ID: <m225qu8r1gdcpu76p83dolkqcmnogj1mcm@4ax.com>
Source record: 40875

$60. Works to VHF. 10 Min full tilt.

On Mon, 7 Oct 2002 23:56:28 -0400, "Joe S." <joe@schlatter.org> wrote:

>What do you mean "oil?"
>
>Motor oil? NO -- it'll burn.
>
>Mineral oil? NO -- not enough heat transfer capability.
>
>Transformer oil? YES -- but be certain it's PCB-free; if it's made in the
>past 20 years it should be.
>
>Why not just purchase an MFJ 1KW dummy load -- I think they still sell one.

2913. Re: Home Brew 1KW Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-08 08:54:20 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3da29c99.5536536@news.freeserve.net>
Source record: 40876

On Mon, 7 Oct 2002 14:51:38 +0100, "Jim Balls" <m0cke@btinternet.com>
wrote:

>Hi all,
>
>I'm looking for a design for a 1KW dummy load, I have fround some info on
>using 13 680 Ohm 5W resistors in oil for a 100W load.
>I have found some 50w 680 Ohm resistors which are not wire wound but non
>inductive only thing is they need a heat sink to run at 50w otherwise they
>are rated at 5W, would the oil be a good enough heat sink or would I have to
>look at bolting them all to a heat sink then imersing it in oil?
>
>I would only be loading about 400w into the load
>
Jim, while I don't run that sort of power into my dummy load. I have
used 10 560r 1/4 watt resistors in a 8 ounce bean tin full of
sunflower oil as a heatsink. I've run 100w into it for a short time
without problems.

2914. Re: Kenwood/Icom Power connector source

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-08 14:17:41 UTC
From: n4bk@hiwaay.net
Message-ID: <3DA2E905.D2C93229@hiwaay.net>
Source record: 40877
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Tower Electronics www.pl259.com

MD wrote:

> "jeff" <wd4nmq@earthlink.net> wrote in message
> news:3DA203A1.1020005@earthlink.net...
> > Anybody know a source for the 6-pin Molex type power connectors used on
> > Kenwood and Icom HF rigs? This would be for the power cord side.
> >
> > Specically the Kenwood TS-140/440/940's.
>
> www.powerwerx.com cheap!

2915. Re: Home Brew 1KW Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-08 14:23:27 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <anupov$dn3$0@208.207.71.167>
Source record: 40878

"Joe S." wrote:
>
> What do you mean "oil?"
>
> Motor oil? NO -- it'll burn.
>
> Mineral oil? NO -- not enough heat transfer capability.

Actually mineral oil is often used as a second best substitute to transformer oil. I've used it in my Heath Cantenna for over 20 years with good service results. Even took it to work once and terminated a 3KW transmitter while we tuned on it for short periods when we needed a dummy load and none was available. Sure, it did boil after a while, and of course we were careful to transmit into it only for short terms, but it worked out OK.
But by all means if you can find transformer oil that you can get, do it.

And, subsequent to the big scare over PCB's, it was found that only after they're burned or charred do they become so toxic and dangerous. I don't think that changed their legal status, though.

Dick

2916. Re: Home Brew 1KW Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-08 17:31:49 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailnospamorama.com>
Message-ID: <vZEo9.54736$OM4.33916757@e3500-atl1.usenetserver.com>
Source record: 40879

Fellow ham in area swears by using tranmission fluid.

--
73,
Chuck
KE4ETH

"Dick Carroll" <dixie@townsqr.com> wrote in message
news:anupov$dn3$0@208.207.71.167...
>
>
> "Joe S." wrote:
> >
> > What do you mean "oil?"
> >
> > Motor oil? NO -- it'll burn.
> >
> > Mineral oil? NO -- not enough heat transfer capability.
>
>
>
> Actually mineral oil is often used as a second best substitute to
> transformer oil. I've used it in my Heath Cantenna for over 20 years
> with good service results. Even took it to work once and terminated a
> 3KW transmitter while we tuned on it for short periods when we needed a
> dummy load and none was available. Sure, it did boil after a while, and
> of course we were careful to transmit into it only for short terms, but
> it worked out OK.
> But by all means if you can find transformer oil that you can get, do
> it.
>
> And, subsequent to the big scare over PCB's, it was found that only
> after they're burned or charred do they become so toxic and dangerous.
> I don't think that changed their legal status, though.
>
> Dick

2917. PC power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-08 22:53:59 UTC
From: Benny Miller <bennymiller@core.com>
Message-ID: <3da3621e$0$1396$2c3e98f8@news.voyager.net>
Source record: 40880

Ok everyone, here's another question. I have a PS out of an old 386 computer. Is there a way that I can use this as a PS for my ham radio. I have searched the internet and have found a few articles but nothing that really helps. I have read different things about including a resistor in line with something. Basically, is this possible, I imagine that it is. One problem i see is that most radios run off of 13.8V while a PS puts out +12 & -12

Let me know what you think
Ben
KC8TRN

2918. Re: PC power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-08 23:07:32 UTC
From: Idontwantspam@net
Message-ID: <3da36402.3514723@news.bellatlantic.net>
Source record: 40881

On Tue, 8 Oct 2002 18:53:59 -0400, "Benny Miller"
<bennymiller@core.com> wrote:

>Ok everyone, here's another question. I have a PS out of an old 386
>computer. Is there a way that I can use this as a PS for my ham radio. I
>have searched the internet and have found a few articles but nothing that
>really helps. I have read different things about including a resistor in
>line with something. Basically, is this possible, I imagine that it is.
>One problem i see is that most radios run off of 13.8V while a PS puts out
>+12 & -12
>
There was an article in QST about 6 months ago on this very topic. I
believe it was mentioned on this group, as well.

As I recall, you want to put a stable load on the +5 output of the
computer PS, because the +12V is unregulated. You then tweak an
internal adjustment to bring the +12 up closer to +13.8. You don't
have to hit it exactly but higher than 12 is good.

There are amperage limits on the +12 circuit. Should be fine for an HT
or a lower power xmit mobile.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

2919. Re: Motor run capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-08 23:16:09 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <ZGJo9.177431$TX5.7543984@news1.east.cox.net>
Source record: 40882

HomeDepot might have them.

Pete

<yeti@REMOVEcet.com> wrote in message news:3da1e3ad.2428124@news.cet.com...
> Anybody know a good source for new or used motor run caps?
>

2920. Re: Home Brew 1KW Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 00:04:09 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <anvrpp$6mh$0@208.207.71.173>
Source record: 40883

Chuck/KE4ETH wrote:
>
> Fellow ham in area swears by using tranmission fluid.

Probably work out fine, transmission fluid is designed to conduct heat away from the transmission to be dissipated within the vehicle's radiator, and it should handle the job well.

Dick

2921. Re: PC power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 00:09:44 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uq6sv6flrehf00@corp.supernews.com>
Source record: 40884

There has been a lot written about this over the past few years, including the QST article Gary mentions. Search for "St. Louis" switcher (don't know why it got that moniker). Maybe check the IAQRP and NJQRP sites. I think it was popularized by either the Iowa club or perhaps the Flying Pigs. I'm sure NJQRP had something in one of their mags, and they tend to have a lot on their web site. There was also something in ARCI's QQ, but they tend to not publish journal articles on their site.

..

"Benny Miller" <bennymiller@core.com> wrote in message
news:3da3621e$0$1396$2c3e98f8@news.voyager.net...
> Ok everyone, here's another question. I have a PS out of an old 386
> computer. Is there a way that I can use this as a PS for my ham radio. I
> have searched the internet and have found a few articles but nothing that
> really helps. I have read different things about including a resistor in
> line with something. Basically, is this possible, I imagine that it is.
> One problem i see is that most radios run off of 13.8V while a PS puts
out
> +12 & -12
>
> Let me know what you think
> Ben
> KC8TRN
>
>

2922. Figuring out 'mechanical filter'

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 01:04:13 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3DA3808D.BEC4D522@visi.com>
Source record: 40885

Hi gang,
I have scaned a drawing of the inards of an unusual 455KHz IF
"mechanical filter" (at least that is what the parts list says it is),
out of an old Allied A2515 receiver. The can has 3 coils wound on the
bobbin of a cup core, a cap and a thing that *may* be a ceramic filter.
I >think< I know how this thing works but would invite your comments.
Post me off list and I will post you the scanned drawing.

Thanks!

Bob
wb0poq@visi.com

2923. Re: Threat to worldwide use of 70cm band

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 02:16:54 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3DA39192.692E@silverstar.com>
Source record: 40887
Cross-posted to: alt.ham-radio.hf,alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

For keeping ity amateur radio? Well we could tell them we are setting
up 10,000 beacons for propagation measurements worldwide.

2924. Re: Home Brew 1KW Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 02:49:52 UTC
From: "Mike G." <nospam@my.email.address>
Message-ID: <ba67qukr7kboq8upp52i29rohrl3mkcegt@4ax.com>
Source record: 40888

On 9 Oct 2002 00:04:09 GMT, Dick Carroll <dixie@townsqr.com> wrote:

>
>
>Chuck/KE4ETH wrote:
>>
>> Fellow ham in area swears by using tranmission fluid.
>
>
> Probably work out fine, transmission fluid is designed to conduct heat
>away from the transmission to be dissipated within the vehicle's
>radiator, and it should handle the job well.
>
>Dick

Great for shifting bands too!! ;-)

2925. Re: Motor run capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 03:08:32 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <9s67qusob07dbop0ub1nd1r3qo5cq1l7ac@4ax.com>
Source record: 40886

>In article <3da1e3ad.2428124@news.cet.com>, yeti@REMOVEcet.com says...
>>
>>Anybody know a good source for new or used motor run caps?

Any electric motor shop.

-

Jim Adney jadney@vwtype3.org
Madison, Wisconsin USA

2926. Re: Homebrewed TNC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 05:24:07 UTC
From: Dave VanHorn <dvanhorn@cedar.net>
Message-ID: <s7Po9.47524$cG.23030@fe04>
Source record: 40889

> We've been using terminals from Datatrol since the early '80s when we
> quit using Burroughs equipment. Their 202 based terminals have always
> used tone generators and PLL decoders. They were far more reliable and
> durable than anything we ever tested with the modem chips. The last
> leased line model was discontinued two years ago, but we still have a
> couple thousand of them in use, some more than 12 years old.
>
> Bob McConnell
> N2SPP

It's fairly easy to hose a modem chip design.
Not decoupling the supplies properly will do it easily, or having the
crystal a bit off freq.

2927. Re: Icom IC-T7H Output power question 2m 4Watts-6Watts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 05:42:37 UTC
From: Mike
Message-ID: <3da3c093.7930758@news1.us.net>
Source record: 40890

I have a T7H. Great radio. I do not know what my output wattage is but
I have little problem hitting our local repeaters. I bought a 9.6v
1100mah battery from Batteries America. $69. Almost double the mah
over the factory 600mah it came with.
www.batteriamerica.com
Good Luck
Mike Jacobs KD7PSN

On 3 Oct 2002 15:28:45 -0700, timfranz@starband.net (Tim Franz) wrote:

>Hello all,
>
>Let me start by saying I'm new, new to the group, new to amateur
>radios and I'm a Vol. Firefighter This is why I'm getting into
>radios. I recently bought a
>Icom T2H VHF radio and it transmits great! documentation say 6Watts
>and I
>belive it... I have had many other firefighters ask "What kind of
>radio is that thing" Now wanting more ability I bought a IC-T7H
>Transmitting on the same VHF band I get very poor transmit strength
>(I'm not on low power seting)
>I read the documentation and get confused 4 watts with this battery 5W
>with that one, then again 6W with a corded powersupply... Why would I
>want a handheld radio if I wanted to be tied to a power source.
>
>Has anyone seen anything on how I can get 6 Watts from this thing? is
>there a mod? Or can someone suggest something besides using my old
>radio?
>Battery life is not an issue if this is the reason fo the lower
>output.
>I only use the radio for a few minutes to an hour 2 to 3 times a week.
>
>Thanks for any help you can provide.
>Feel free to email me at timfranz@starband.net

2928. Re: PC power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 07:58:57 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <ao0nk2$ibkh6$1@ID-61331.news.dfncis.de>
Source record: 40891

I'm using a PC power supply from an old Compaq to power my rig
http://www.hanssummers.com/radio/polyphase/index.htm and find it excellent.

The rig uses +12V for most of the circuits and +5V for the frequency counter
and clock. One worry was switching noise from the PSU since they are switch
mode - to combat this possible problem I used a large toroid and a 10,000uF
capacitor on the +12V line, and I haven't noticed any noise problem. When I
tried a linear power supply
(http://www.hanssummers.com/electronics/equipment/psu/index.htm) the noise
was actually worse and then there was a 50Hz hum as well.

One thing to look out for: I have bought 4 new standard PC power supplies
for my giant LED display project
http://www.hanssummers.com/electronics/equipment/riskometer/index.htm for my
employer, and they do not seem to feature short circuit protection. If you
accidentally short them you get a spark and a loud pop. Opening the box
reveals the fuse completely fried. Replacing the fuse and powering up
results in a louder pop, a larger spark, no blowing of the fuse, and a large
green 2-leaded ceramic component somewhat resembling a fat ceramic capacitor
physically explodes. I am not impressed with the design at all, why they
include a fuse if it's that useless is a mystery. They've obviously cut the
component count to a bare minimum. So far I've blown 2 power supplies this
way.

The point of the story is that I have shorted my rig's PC power supply so
many times I can't count. It has automatic protection which cuts the power.
To reset it you press a reset button on wires from the case - breaking the
connection. It's great (well done Compaq). If you can get a decent power
supply like this you will be a happy homebrewer.

Hans Summers
http://www.HansSummers.Com

"Benny Miller" <bennymiller@core.com> wrote in message
news:3da3621e$0$1396$2c3e98f8@news.voyager.net...
> Ok everyone, here's another question. I have a PS out of an old 386
> computer. Is there a way that I can use this as a PS for my ham radio. I
> have searched the internet and have found a few articles but nothing that
> really helps. I have read different things about including a resistor in
> line with something. Basically, is this possible, I imagine that it is.
> One problem i see is that most radios run off of 13.8V while a PS puts
out
> +12 & -12
>
> Let me know what you think

> Ben
> KC8TRN
>
>

2929. Re: LF SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 08:22:45 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0910020423490001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40892

In article <3200347.0210071235.7d23484f@posting.google.com>, k7itm@aol.com (Tom Bruhns) wrote:

> motsteve@attbi.com (carltons) wrote in message news:<motsteve-0610021815050001@c-66-176-144-254.se.client2.attbi.com>...
> > In article <3DA0573F.1BAE3A46@clifto.com>, "Clifton T. Sharp Jr." <clifto@clifto.com> wrote:
> >
> > > Tom Bruhns wrote:
> > > > (Now can someone tell me where to find coax which is specified to be
> > > > within 1% [0.5% would be better] of 50+j0 ohms from, say, 100MHz to
> > > > 3GHz? Yes, that's a serious question...)
> > >
> > >
> > >
> > > Yes, it is called hard line, but why would you want something so silly in
> > > tolerance? It's freq response would be from DC to blue light, but once
> > > again, why?
> >
> Thanks for the idea, Steve, but unfortunately it must also be
> moderately flexible. It will be a component of a calibration system
> for instrumentation, and having an accurate, repeatable impedance is a
> big help in this particular case. It may be that we'll end up putting
> in pads to match the ends to 50 ohms, and trim them for each
> individual piece of coax. Yes, we know how to calibrate measurements
> at the end of a somewhat arbitrary piece of line, but in this case,
> there are difficulties with that. Actually, the 50-ohm requirement
> doesn't put a constraint on the loss, and loss of up to 5dB or so at
> 3GHz in a 2-meter length would be acceptable. I'd expect to fit SMA
> connectors on the ends.

If you can find out what Gore uses you can try that or use semi-rigid coax. I also find 400 and 600 series coaxes to be fairly flexible and extremely well characterized. Try Times Microwave or CommScope for details. They also have flexible cables characterized to 60 GHz or more. You need more flex? Go to flex circuit and build your transmission line using coplanar waveguide. See Agilent's web site for AppCad 3.0 which can help you design the flex. I would stick with the non groundplane waveguide because it would maintain the TEM mode of transmission and wouldn't require the grounding considerations of the grounded guide.

Steve

2930. Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 08:56:16 UTC
From: Dick <dick@langwang.demon.co.uk>
Message-ID: <QkI1liBw8+o9EwsV@langwang.demon.co.uk>
Source record: 40893

Please forgive the slightly off topic subject but I think this is probably the one ng that will have subscribers that:

a. Know what I'm talking about
&
b. Might be able to help.

The other day I decided to have a nostalgia trip and do some design work the old way using my long retired Pickett slide rule, this was a mistake as it became quickly apparent that I'd totally forgotten how to use the specialist scales !!!! Now I know it's possible to use the rule to do the electronic design calculations I wanted but could I b*****y work out how those scales operated.

Has anyone out there ever owned a Pickett N-16-ES Electronic(s) Slide Rule and, more importantly, can remember how to use it ? Even better, does anyone have a copy of the instruction booklet hidden away they could scan in for me.

I think my instruction book went adrift 30+ years ago, you know - about the time when you're so confident in using something that you tell yourself it's like riding a bike, something that you'll never forget ..... I know, been there, seen it, got the T-shirt !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!

There is a Pickett web site but this particular model doesn't seem to figure on it for some reason.
--
Dick
GM0MNL

2931. shit college

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 15:18:14 UTC
From: Chrishawk83@hotmail.com
Message-ID: <57980fd6.0210090718.456ab3ba@posting.google.com>
Source record: 40894

I'm stoned

2932. Re: Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 16:51:20 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <ao1mpvqgh1@slb6.atl.mindspring.net>
Source record: 40895

Dick:

You may just find everything you want and more at:

http://www.sphere.bc.ca/test/sruniverse.html

enjoy!

Best,

--Peter K1PO
Indialantic By-the-Sea, FL

"Dick" <dick@langwang.demon.co.uk> wrote in message
news:QkI1liBw8+o9EwsV@langwang.demon.co.uk...
> Please forgive the slightly off topic subject but I think this is
> probably the one ng that will have subscribers that:
>
> a. Know what I'm talking about
> &
> b. Might be able to help.
>
> The other day I decided to have a nostalgia trip and do some design work
> the old way using my long retired Pickett slide rule, this was a mistake
> as it became quickly apparent that I'd totally forgotten how to use the
> specialist scales !!!! Now I know it's possible to use the rule to do
> the electronic design calculations I wanted but could I b*****y work out
> how those scales operated.
>
> Has anyone out there ever owned a Pickett N-16-ES Electronic(s) Slide
> Rule and, more importantly, can remember how to use it ? Even better,
> does anyone have a copy of the instruction booklet hidden away they
> could scan in for me.
>
> I think my instruction book went adrift 30+ years ago, you know - about
> the time when you're so confident in using something that you tell
> yourself it's like riding a bike, something that you'll never forget
> ..... I know, been there, seen it, got the T-shirt
> !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
>
> There is a Pickett web site but this particular model doesn't seem to
> figure on it for some reason.
> --
> Dick
> GM0MNL

2933. Re: Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 17:26:17 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uq8pn66dchnj8c@corp.supernews.com>
Source record: 40896

Dick

My initial reaction was yes, I know what an N16-ES is, and I have one right here in the desk. Well, I remembered badly. I have an N3-ES, an N4-T, and an N300-ES, but no N16-ES.

Still, I felt sure I could remember how to use the log log scales once I looked at them. Wrong again, after decades, that part of the gray matter seems unreachable. The site Peter points to has a nice Pickett tutorial, but it stops short of the log-log scales.

If your question is about the CI or L scales, the tutorial helps. But if it's the LL1 thru LL4 scales, it doesn't. The others seem mostly obvious (although the CF/m seems a little baffling, too). Still, if you find a source, it would be great if you post your findings here so us other old guys can benefit!

..

"Dick" <dick@langwang.demon.co.uk> wrote in message
news:QkI1liBw8+o9EwsV@langwang.demon.co.uk...
> Please forgive the slightly off topic subject but I think this is
> probably the one ng that will have subscribers that:
>
> a. Know what I'm talking about
> &
> b. Might be able to help.
>
> The other day I decided to have a nostalgia trip and do some design work
> the old way using my long retired Pickett slide rule, this was a mistake
> as it became quickly apparent that I'd totally forgotten how to use the
> specialist scales !!!! Now I know it's possible to use the rule to do
> the electronic design calculations I wanted but could I b*****y work out
> how those scales operated.
>
> Has anyone out there ever owned a Pickett N-16-ES Electronic(s) Slide
> Rule and, more importantly, can remember how to use it ? Even better,
> does anyone have a copy of the instruction booklet hidden away they
> could scan in for me.
>
> I think my instruction book went adrift 30+ years ago, you know - about
> the time when you're so confident in using something that you tell
> yourself it's like riding a bike, something that you'll never forget
> ..... I know, been there, seen it, got the T-shirt
> !!!!!!!!!!!!!!!!!!!!!!!!!!!!!
>

> There is a Pickett web site but this particular model doesn't seem to
> figure on it for some reason.
> --
> Dick
> GM0MNL

2934. Direct conversion radio receiver module for DSP baseband processing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 17:40:57 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <ao1pqu$t77$1@newsg1.svr.pol.co.uk>
Source record: 40797
Cross-posted to: comp.dsp,rec.radio.amateur.homebrew

I've designed a little direct conversion radio receiver module (2" square)
ideal for use with DSP systems. It's easy to build on a home-made PCB.

It's intended as a component in a high-performance receiver, and was
designed for maximum flexibility, in that it only includes the mixer (an MCL
TUF-1), audio diplexer and low-noise AF pre-amplifier. Input filtering,
oscillator, AF filter etc. are all external.

It may be used in many receiver configurations: as a simple DC receiver,
binaural receiver, phasing receiver, etc. It's ideal for use with a DSP
system.

Full details, including several pictures, are here:

http://www.geocities.com/leon_heller/dc_rx.html

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller
(only three links) and
it's exactly 2" square, a nice round number. 8-) Like all my stuff, the PCB
is easy to make at home: all the tracks are on the bottom and there is a top
ground plane.

It's intended as a component in a high-performance receiver, and was
designed for maximum flexibility, in that it only includes the mixer (an MCL
TUF-1), audio diplexer and low-noise AF pre-amplifier. Input filtering,
oscillator, AF filter etc. are all external.

It may be used in many receiver configurations: as a simple DC receiver,
binaural receiver, phasing receiver, etc. It's ideal for use with a DSP
system.

Full details, including several pictures, are here:

http://www.geocities.com/leon_heller/dc_rx.html

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

--
Leon Heller, G1HSM

leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2935. Re: shit college

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 18:43:23 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ao1tca$m7f$1@paris.btinternet.com>
Source record: 40798

"MoNkey" wrote -
> I'm stoned.

==========

What with the sorry state the world is in I am inclined to join you. But I drained the bottle yesterday. Any small donations gratefully received.

2936. Re: Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 19:56:13 UTC
From: James Horn <jimhorn@svn.net>
Message-ID: <3da489dd@news.svn.net>
Source record: 40799

Wow - Log Log scales. On the Keuffel & Esser Deci-Lon and Post Versalog 1461 rules next to me.

They're used for finding arbitrary powers, roots, and exponentiation. So, if you wanted to out how much brighter an incandescent lamp appears at 130VAC instead of its rated 120VAC, and you knew that apparent brightness is proportional to the voltage to the pi power (an approximation), you would use the C and D scales to find 130/120 (or 1.083), find that on the LL1 (or Ln1) scale, put the C scale's index (1) above it, then look below the C scale's Pi value. Since you'll use the right C index, you've wrapped around from the LL1 to the LL2 scale and get about 1.286 - i.e. a 28.6% increase in brightness.

Fun old things, aren't they?

Jim Horn, WB9SYN/6

2937. Re: PC power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 20:11:49 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <jvmcnd9AYqIIDTmgXTWcqg@News.GigaNews.Com>
Source record: 40800

These power supplies require a minimum level of current drain, a few ma, to stay "regulated".

I have used the torroids from a number of blown supplies for switching supply projects.

"Benny Miller" <bennymiller@core.com> wrote in message news:3da3621e$0$1396$2c3e98f8@news.voyager.net...
> Ok everyone, here's another question. I have a PS out of an old 386
> computer. Is there a way that I can use this as a PS for my ham radio. I
> have searched the internet and have found a few articles but nothing that
> really helps. I have read different things about including a resistor in
> line with something. Basically, is this possible, I imagine that it is.
> One problem i see is that most radios run off of 13.8V while a PS puts
out
> +12 & -12
>
> Let me know what you think
> Ben
> KC8TRN
>
>

2938. Re: Direct conversion radio receiver module for DSP baseband processing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 21:08:18 UTC
From: ON5MJ <on5mjREMOVE@skynet.be>
Message-ID: <3da49ac4$0$191$ba620e4c@news.skynet.be>
Source record: 40801
Cross-posted to: comp.dsp,rec.radio.amateur.homebrew

Hi Leon,

Very nice indeed. One day I will use it. But can you tell me who is
producing this TUF-1 mixer.

Jacques de ON5MJ - 73

2939. Re: PC power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 22:08:35 UTC
From: Bob Stein <w6nbi@earthlink.net>
Message-ID: <3DA4A8DB.6000607@earthlink.net>
Source record: 40802

john walton wrote:
> These power supplies require a minimum level of current drain, a few ma, to
> stay "regulated".
>
> I have used the torroids from a number of blown supplies for switching
> supply projects.
>
> "Benny Miller" <bennymiller@core.com> wrote in message
> news:3da3621e$0$1396$2c3e98f8@news.voyager.net...
>
>>Ok everyone, here's another question. I have a PS out of an old 386
>>computer. Is there a way that I can use this as a PS for my ham radio. I
>>have searched the internet and have found a few articles but nothing that
>>really helps. I have read different things about including a resistor in
>>line with something. Basically, is this possible, I imagine that it is.
>>One problem i see is that most radios run off of 13.8V while a PS puts
>
> out
>
>>+12 & -12
>>
>>Let me know what you think
>>Ben
>>KC8TRN
>>
>>
>
>
>

There was an article in "QST" in the last six months which describes
how to do this.

Bob, W6NBI

2940. Re: shit college

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 22:47:46 UTC
From: Gary McAdams <g.m.mcadams@worldnet.att.net>
Message-ID: <mm2p9.12390$k_2.811720@bgtnsc05-news.ops.worldnet.att.net>
Source record: 40803

MoNkey <Chrishawk83@hotmail.com> wrote in message
news:57980fd6.0210090718.456ab3ba@posting.google.com...
> I'm stoned

And stupid... But, you knew THAT already.

2941. Re: Direct conversion radio receiver module for DSP baseband processing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-09 23:02:08 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <ao3h56$l4m$1@news5.svr.pol.co.uk>
Source record: 40810
Cross-posted to: comp.dsp,rec.radio.amateur.homebrew

"ON5MJ" <on5mjREMOVE@skynet.be> wrote in message
news:3da49ac4$0$191$ba620e4c@news.skynet.be...
> Hi Leon,
>
> Very nice indeed. One day I will use it. But can you tell me who is
> producing this TUF-1 mixer.

MCL, where the SBL-1 comes from: http://www.minicircuits.com/

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2942. help needed finding data on HD 63701VOP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-10 00:44:55 UTC
From: Peter PE1CUO <106157no.spam1250@no-compuserve-sp.am-com-spam>
Message-ID: <ao2ifvko1@nntp-m01.news.aol.com>
Source record: 40804

We are looking for a datasheet of the old IC HD 63701VOP
We searched already on a lot of places on the Internet, so far without luck
Who can help us finding it?

Peter

PE1CUO

2943. Re: help needed finding data on HD 63701VOP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-10 07:04:50 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1010020305530001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40805

In article <ao2ifvko1@nntp-m01.news.aol.com>, "Peter PE1CUO"
<106157no.spam1250@no-compuserve-sp.am-com-spam> wrote:

> We are looking for a datasheet of the old IC HD 63701VOP
> We searched already on a lot of places on the Internet, so far without luck
> Who can help us finding it?
>
> Peter
>
> PE1CUO

Any ideas as to the vendor or date code?

Steve WB4CZR

2944. Re: PC power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-10 08:12:45 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <ao3cpt$iu0m6$1@ID-61331.news.dfncis.de>
Source record: 40806

> These power supplies require a minimum level of current drain, a few ma,
to
> stay "regulated".
>

Yes, that's true. Every PC power supply I have used will cut out unless a certain minimum current drain is taken. According to the PSU datasheets the minimum current drain is sometimes as much as 4A. However in practice I have found this amount isn't needed to achieve good regulation and prevent cut-out. On my home PC I use a car headlamp bulb on the +5V supply and it works fine. Other times I have used a high wattage 10-ohm resistor and it works just as well.

Hans Summers
http://www.HansSummers.Com

2945. Re: help needed finding data on HD 63701VOP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-10 08:37:57 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3da53be0.6753239@news.freeserve.net>
Source record: 40807

On Thu, 10 Oct 2002 02:44:55 +0200, "Peter PE1CUO"
<106157no.spam1250@no-compuserve-sp.am-com-spam> wrote:

>We are looking for a datasheet of the old IC HD 63701VOP
>We searched already on a lot of places on the Internet, so far without luck
>Who can help us finding it?
>
Peter it would help if we were told things like..
its function, manufacturer, encapsulation etc..

at first sight it would appear to be a Hitachi device, possibly a
'special' embedded controller. but this is only guess work.

atb Mike W

2946. Re: PC power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-10 08:46:26 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1010020447300001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40808

In article <ao3cpt$iu0m6$1@ID-61331.news.dfncis.de>, "Hans Summers"
<Hans.Summers@Tudor.Com> wrote:

> > These power supplies require a minimum level of current drain, a few ma,
> to
> > stay "regulated".
> >
>
> Yes, that's true. Every PC power supply I have used will cut out unless a
> certain minimum current drain is taken. According to the PSU datasheets the
> minimum current drain is sometimes as much as 4A. However in practice I have
> found this amount isn't needed to achieve good regulation and prevent
> cut-out. On my home PC I use a car headlamp bulb on the +5V supply and it
> works fine. Other times I have used a high wattage 10-ohm resistor and it
> works just as well.
>
> ------------------
> Hans Summers
> http://www.HansSummers.Com

Considering the cost of these supplies, the startup problem shouldn't be
hard to live with, I would guess. If you had the equivalent linear
supply, it would weigh a lot, take up a lot of volume, and cost a
fortune. Of course, it would be self-starting (if properly designed) and
it's line output would be fairly clean with very little radiated energy
from the circuit board. It could also be that some supplies may not need
a minimum load depending on the vendor, etc, but are you going to want to
buy different ones and test them? My recommendation is to do what you
have to do for your application and live with some pain. Perhaps, and I'm
not certain of this, a temporary load at start up may get the supply to
work for your application. Once the regulation gets going, then you can
take the load off and still have the required voltages. All I can say is,
try it and find out. Use a timer circuit, relay or switching transistor,
low value, high power resistor like Hans recommends and see if it works.

Steve

2947. Re: help needed finding data on HD 63701VOP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-10 09:03:39 UTC
From: Peter PE1CUO <106157no.spam1250@no-compuserve-sp.am-com-spam>
Message-ID: <ao3fmv$4r3$1@nntp-m01.news.aol.com>
Source record: 40809

The IC contains:

(logo Hitachi) 8E1

HD 63701 VOP

we found a chip from the same family the HD63701 XOP it seems to be an 1.5
MC controller from Hitachi

http://www.google.nl/search?q=cache:gEUaQBhnLrMC:www.equinox-tech.com/chipdi
r/f/mcu.htm+%2263701%22+micro&hl=nl&ie=UTF-8

on the Hitachi website I could not find anything, properbly too old

with google we find a lot of equipment which was containing this family of
controllers and place to buy them in large qty, but so far no real
data/sheet application sheet or so etc. , so any help is appreciated

Best regards,

Peter, PE1CUO

carltons <motsteve@attbi.com> wrote in message
news:motsteve-10100203055300001@c-66-176-144-254.se.client2.attbi.com...
> In article <ao2ifvko1@nntp-m01.news.aol.com>, "Peter PE1CUO"
> <106157no.spam1250@no-compuserve-sp.am-com-spam> wrote:
>
> > We are looking for a datasheet of the old IC HD 63701VOP
> > We searched already on a lot of places on the Internet, so far without
luck
> > Who can help us finding it?
> >
> > Peter
> >
> > PE1CUO
>
>
> Any ideas as to the vendor or date code?
>
> Steve WB4CZR

2948. Re: Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-10 09:27:22 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <uqahvt6os6tdf1@corp.supernews.com>
Source record: 40812

I a. Know what you're talking about - I have an N-16-ES too. But b. Can't help. Found the manual for my trusty N-4-ES, although I think I could still do just fine without it. But I never used the N-16-ES much, and didn't come across the manual. You might have trouble finding anyone willing to scan the N-16 manual if it's as thick as the N-4 manual. Good luck!

Roy Lewallen, W7EL

Dick wrote:
> Please forgive the slightly off topic subject but I think this is
> probably the one ng that will have subscribers that:
>
> a. Know what I'm talking about
> &
> b. Might be able to help.
>
> The other day I decided to have a nostalgia trip and do some design work
> the old way using my long retired Pickett slide rule, this was a mistake
> as it became quickly apparent that I'd totally forgotten how to use the
> specialist scales !!!! Now I know it's possible to use the rule to do
> the electronic design calculations I wanted but could I b*****y work out
> how those scales operated.
>
> Has anyone out there ever owned a Pickett N-16-ES Electronic(s) Slide
> Rule and, more importantly, can remember how to use it ? Even better,
> does anyone have a copy of the instruction booklet hidden away they
> could scan in for me.
>
> I think my instruction book went adrift 30+ years ago, you know - about
> the time when you're so confident in using something that you tell
> yourself it's like riding a bike, something that you'll never forget
> ..... I know, been there, seen it, got the T-shirt
> !!!!!!!!!!!!!!!!!!!!!!!!!!!!!
>
> There is a Pickett web site but this particular model doesn't seem to
> figure on it for some reason.

2949. Re: help needed finding data on HD 63701VOP

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-10 09:30:32 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1010020531360001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40811

In article <ao3fmv$4r3$1@nntp-m01.news.aol.com>, "Peter PE1CUO"
<106157no.spam1250@no-compuserve-sp.am-com-spam> wrote:

> The IC contains:
>
> (logo Hitachi) 8E1
>
> HD 63701 VOP
>
> we found a chip from the same family the HD63701 XOP it seems to be an 1.5
> MC controller from Hitachi
>
> http://www.google.nl/search?q=cache:gEUaQBhnLrMC:www.equinox-tech.com/chipdi
> r/f/mcu.htm+%2263701%22+micro&hl=nl&ie=UTF-8
>
> on the Hitachi website I could not find anything, properbly too old
>
> with google we find a lot of equipment which was containing this family of
> controllers and place to buy them in large qty, but so far no real
> data/sheet application sheet or so etc. , so any help is appreciated
>
> Best regards,
>
> Peter, PE1CUO

If you're pretty sure that it's Hitachi, I would send an email to one of
their applications engineers and ask them. If they don't want to look,
then ask them to kindly hand the request off to one of their collegues who
is an amateur operator. They would probably help you.

BTW, these big companies are just that, big, so be sure to ask the right
division of the business. If the part is digital LSI, then go for that
division and so forth. For instance, I was very knowledgeable about
linear ic's, but if you asked me about DSP's I would very foolish.

Steve WB4CZR

2950. Re: Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-10 10:39:25 UTC
From: "Joe S." <joe@schlatter.org>
Message-ID: <ao3ldf029g2@enews4.newsguy.com>
Source record: 40813

After reading this thread, I went to ebay and searched for "slide rule" ---
ten pages of slide rules for auction!!! Some real beauties, too.

--

Regards,
Joe S.

"Dick" <dick@langwang.demon.co.uk> wrote in message
news:QkI1liBw8+o9EwsV@langwang.demon.co.uk...
> Please forgive the slightly off topic subject but I think this is
> probably the one ng that will have subscribers that:
>
> a. Know what I'm talking about
> &
> b. Might be able to help.
>
> The other day I decided to have a nostalgia trip and do some design work
> the old way using my long retired Pickett slide rule, this was a mistake
> as it became quickly apparent that I'd totally forgotten how to use the
> specialist scales !!!! Now I know it's possible to use the rule to do
> the electronic design calculations I wanted but could I b*****y work out
> how those scales operated.
>
> Has anyone out there ever owned a Pickett N-16-ES Electronic(s) Slide
> Rule and, more importantly, can remember how to use it ? Even better,
> does anyone have a copy of the instruction booklet hidden away they
> could scan in for me.
>
> I think my instruction book went adrift 30+ years ago, you know - about
> the time when you're so confident in using something that you tell
> yourself it's like riding a bike, something that you'll never forget
> ..... I know, been there, seen it, got the T-shirt
> !!!!!!!!!!!!!!!!!!!!!!!!!!!!!
>
> There is a Pickett web site but this particular model doesn't seem to
> figure on it for some reason.
> --
> Dick
> GM0MNL

2951. Re: PC power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-10 13:07:08 UTC
From: Lou <tech@dp.net>
Message-ID: <ao3uv1$4pl$1@news.dp.net>
Source record: 40814

Please forgive me for barging in to this with the ad below, but it does
follow suit!

In the last month or two, I've noticed a surge in interest locally and on
here, for using PC supplies for equipment.
Any one in need of some PC supplies? I have some that were removed from
"working but scrapped" systems from a 286 - up...CHEAP! Also have the line
cords to go with them. Lots of other stuff too!

Lou/TECH@DP.NET

"carltons" <motsteve@attbi.com> wrote in message
news:motsteve-1010020447300001@c-66-176-144-254.se.client2.attbi.com...
> In article <ao3cpt$iu0m6$1@ID-61331.news.dfncis.de>, "Hans Summers"
> <Hans.Summers@Tudor.Com> wrote:
>
> > > These power supplies require a minimum level of current drain, a few
ma,
> > to
> > > stay "regulated".
> > >
> >
> > Yes, that's true. Every PC power supply I have used will cut out unless
a
> > certain minimum current drain is taken. According to the PSU datasheets
the
> > minimum current drain is sometimes as much as 4A. However in practice I
have
> > found this amount isn't needed to achieve good regulation and prevent
> > cut-out. On my home PC I use a car headlamp bulb on the +5V supply and
it
> > works fine. Other times I have used a high wattage 10-ohm resistor and
it
> > works just as well.
> >
> > ------------------
> > Hans Summers
> > http://www.HansSummers.Com
>
>
> Considering the cost of these supplies, the startup problem shouldn't be
> hard to live with, I would guess. If you had the equivalent linear
> supply, it would weigh a lot, take up a lot of volume, and cost a
> fortune. Of course, it would be self-starting (if properly designed) and
> it's line output would be fairly clean with very little radiated energy

> from the circuit board. It could also be that some supplies may not need
> a minimum load depending on the vendor, etc, but are you going to want to
> buy different ones and test them? My recommendation is to do what you
> have to do for your application and live with some pain. Perhaps, and I'm
> not certain of this, a temporary load at start up may get the supply to
> work for your application. Once the regulation gets going, then you can
> take the load off and still have the required voltages. All I can say is,
> try it and find out. Use a timer circuit, relay or switching transistor,
> low value, high power resistor like Hans recommends and see if it works.
>
> Steve

2952. Mil. Tech Manuals (TM's)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-10 13:26:33 UTC
From: Joe Hargis <joehargis@worldnet.att.net>
Message-ID: <defp9.110$Fr1.5187@bgtnsc05-news.ops.worldnet.att.net>
Source record: 40815

Bid as you desire on one or any or all:

1-TM-600-2:Electronic Fundamentals Semiconductor Theory & Circuits
2-TM-655/TO-16-1-326:Fundamentals of Telegraphy(Teletyper)
3-TM-678:Fundamentals of Telephone
4-TM-679:fundamentals of Carrier & Repeater
5-TM-680:Teletypewriter Circuits & Equipment(Fundamentals)
6-TM-681:Electrical fundamentals (AC)
7-TM-839/TO31R2-2TRC28-1:Radio Transmitter:T-278/U & T-416/GR
8-TM-5076:Dynamotor-Power Supplies DY-93/G, DY-98/C, DY-100/U

Tnx Joe in MO

2953. Re: Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-10 15:44:13 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <ao478d$1pi$0@216.39.177.189>
Source record: 40816

In today's world it's hard to tell by looking if a person is an engineer.
In "the good old days" it was easy as you could spot him by his sly drool.

73 de Jack

Joe S. <joe@schlatter.org> wrote in message
news:ao3ldf029g2@enews4.newsguy.com...
> After reading this thread, I went to ebay and searched for "slide
rule" ---
> ten pages of slide rules for auction!!! Some real beauties, too.
>
> --
>
> ------
> Regards,
> Joe S.
>

2954. EZNEC Patch Antenna File Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-10 17:39:43 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <3oebqucirunjgge98cgogsmsqjn175tlla@4ax.com>
Source record: 40817

Has anybody been successful getting Eznec to simulate a patch antenna, and if so, would you mind sharing the antenna file with me to play with?

Thanks,

Jim

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

2955. Re: PC power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-10 18:16:55 UTC
From: North <non@telia.com>
Message-ID: <rujp9.1684$MV.74474@newsc.telia.net>
Source record: 40818

Look at this site:
http://www.webx.dk/oz2cpu/radios.htm

/North

"Lou" <tech@dp.net> skrev i meddelandet news:ao3uv1$4pl$1@news.dp.net...
> Please forgive me for barging in to this with the ad below, but it does
> follow suit!
>
> In the last month or two, I've noticed a surge in interest locally and on
> here, for using PC supplies for equipment.
> Any one in need of some PC supplies? I have some that were removed from
> "working but scrapped" systems from a 286 - up...CHEAP! Also have the line
> cords to go with them. Lots of other stuff too!
>
> Lou/TECH@DP.NET
>
>
> "carltons" <motsteve@attbi.com> wrote in message
> news:motsteve-10100204473000001@c-66-176-144-254.se.client2.attbi.com...
> > In article <ao3cpt$iu0m6$1@ID-61331.news.dfncis.de>, "Hans Summers"
> > <Hans.Summers@Tudor.Com> wrote:
> >
> > > > These power supplies require a minimum level of current drain, a few
> ma,
> > > > to
> > > > stay "regulated".
> > > >
> > >
> > > Yes, that's true. Every PC power supply I have used will cut out
unless
> a
> > > certain minimum current drain is taken. According to the PSU
datasheets
> the
> > > minimum current drain is sometimes as much as 4A. However in practice
I
> have
> > > found this amount isn't needed to achieve good regulation and prevent
> > > cut-out. On my home PC I use a car headlamp bulb on the +5V supply and
> it
> > > works fine. Other times I have used a high wattage 10-ohm resistor and
> it
> > > works just as well.
> > >

> > > ------------------
> > > Hans Summers
> > > http://www.HansSummers.Com
> >
> >
> > Considering the cost of these supplies, the startup problem shouldn't be
> > hard to live with, I would guess. If you had the equivalent linear
> > supply, it would weigh a lot, take up a lot of volume, and cost a
> > fortune. Of course, it would be self-starting (if properly designed)
and
> > it's line output would be fairly clean with very little radiated energy
> > from the circuit board. It could also be that some supplies may not
need
> > a minimum load depending on the vendor, etc, but are you going to want
to
> > buy different ones and test them? My recommendation is to do what you
> > have to do for your application and live with some pain. Perhaps, and
I'm
> > not certain of this, a temporary load at start up may get the supply to
> > work for your application. Once the regulation gets going, then you can
> > take the load off and still have the required voltages. All I can say
is,
> > try it and find out. Use a timer circuit, relay or switching
transistor,
> > low value, high power resistor like Hans recommends and see if it works.
> >
> > Steve
>
>

2956. Re: LF SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-10 19:21:23 UTC
From: k7itm@aol.com
Message-ID: <3200347.0210101121.78b6c97a@posting.google.com>
Source record: 40819

motsteve@attbi.com (carltons) wrote in message
news:<motsteve-0910020423490001@c-66-176-144-254.se.client2.attbi.com>...
...
> If you can find out what Gore uses you can try that or use semi-rigid
> coax. I also find 400 and 600 series coaxes to be fairly flexible and
> extremely well characterized. Try Times Microwave or CommScope for
> details. They also have flexible cables characterized to 60 GHz or more.
> You need more flex? Go to flex circuit and build your transmission line
> using coplanar waveguide. See Agilent's web site for AppCad 3.0 which can
> help you design the flex. I would stick with the non groundplane
> waveguide because it would maintain the TEM mode of transmission and
> wouldn't require the grounding considerations of the grounded guide.

Actually, the cables we use now are from Gore; they're pretty good
(and maybe better than Gore guarantees by enough...need to make some
measurements on that). Gore makes their own cable, AFAIK (and I have
that on pretty good authority...thanks, Barry!) I have the feeling
that Astrolab may be pretty good, too. I also have a recommendation
for EZ Form (EZ Flex)...we'll check that out too. (From the EZ Form
web site: "The cables exhibit highly favorable
electrical characteristics, particularly an impedance tolerance as low
as +/- 1/2ohm for a .141" diameter cable with nominal impedance of
50ohms." So there's hope, but that's a semirigid line, I believe.)

I think we have some better SW around here now for flex circuit
design, but fear that manufacturers would not be able to hold the
tolerance needed. It's a thought worth checking out, anyway.

Thanks, Steve, and all the others who have posted and written!

Cheers,
Tom

2957. Don't Build This at Home or Anywhere Else.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-10 19:47:37 UTC
From: martin@okstate.edu
Message-ID: <ao4lgp$62g$1@hydrogen.cis.okstate.edu>
Source record: 40820

I recently made a very interesting mistake in designing a digital logic circuit so I thought I would describe what I did and maybe save a few of the rest of you some trouble.

I have been experimenting with digital logic for several years and thought I had made most of the really bone-head errors in design, but this particular bad design totally sneaked up on me.

I wanted to make a variable clock generator to drive a switched capacitance filter. I did not have a digital comparator chip on hand, but I do have some CD4040 12-stage counters and some CD4048's which can be configured as 8-input and gates. These are slow, ancient chips, but they were okay for the speeds involved, here and the problem I created is more of a mental software problem than hardware related.

And gates set their output high as soon as all their inputs are high so I thought it would be possible to make a divide by N counter by simply connecting various combinations of counter outputs to the inputs of the and gate. The idea was that unused inputs would stay high. When the counter reached the desired count, the and gate would see 8 high inputs and the counter reset could be activated by the output of the and gate.

This actually does appear to work but there is a hidden major flaw that I didn't even think about until I had wire-wrapped the circuit and was testing it.

If you do this, you will always loose the least significant bit.
If the first bit was the LSB, it is as if it was always set.

A very short truth table says it all.

Let's say the first and second bits are connected which is a divide by 3 counter.

It will work as you would expect.

Starting with all 0's on the counter, A goes high, then A goes low and B goes high. Finally A and B go high and the and gate sees true.

If the A output of the counter is disconnected and left high, then the and gate sees true again as soon as the counter reached 3. This is so obvious when looking at it now, but I completely missed it when wiring up the whole circuit.

If one wants to build a comparator, the only way to do it is to use exclusive or gates for each bit and then one can Or all those outputs.

In my circuit, I have DIP switches connecting the 8 counter bits to the And gate inputs with pull-up resistors on all And gate inputs. Opening a switch leaves that particular input in a high state.

I knew I was in trouble when I flipped the 1's position switch and the frequency of the output did not change.

As soon as I double-checked that the circuit was as I meant it to be, it hit me why it wasn't working.

I think I should look for some programmable counters and do it right.:-)
--

Martin McCormick WB5AGZ Stillwater, OK
OSU Center for Computing and Information Services Network Operations Group

2958. Re: Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-10 19:58:06 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <ao4m47$8ih$1@nntp9.atl.mindspring.net>
Source record: 40821

Groan!

--Peter K1PO
Indialantic By-the-Sea, FL.

"Jack Taylor" <n7oo@theriver.com> wrote in message
news:ao478d$1pi$0@216.39.177.189...
> In today's world it's hard to tell by looking if a person is an engineer.
> In "the good old days" it was easy as you could spot him by his sly drool.
>
> 73 de Jack
>
> Joe S. <joe@schlatter.org> wrote in message
> news:ao3ldf029g2@enews4.newsguy.com...
> > After reading this thread, I went to ebay and searched for "slide
> rule" ---
> > ten pages of slide rules for auction!!! Some real beauties, too.
> >
> > --
> >
> > ------
> > Regards,
> > Joe S.
> >
>
>
>

2959. Re: Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-10 20:12:05 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <ao4muf$5c3$1@slb4.atl.mindspring.net>
Source record: 40822

Hey Joe:

Wow! How about them prices for slide rules nowadays!

Back a few decades [That was in nineteen umpty-umphhh.] when I bought my first slide rule, it was a Sun-Hemmi, ivory coated, engine engraved, bamboo log-log rule, it cost me almost a week's pay, $35.00. In those days I was earning $47.00 per week.

Today, in mint condition, that baby sells for about $350.00.

A few decades later [That was in nineteen umpty-umphhh plus plus.] I bought a new HP 35, reverse polish, electronic calculator for $350.00 and finally retired my trusty log-log Hemmi rule.

I can buy a good color TV now for that same price.

I kept that log-log rule in a box in the attic for decades. On rainy Sunday's I would often get that rule out and reminisce with it about all of the beautiful electronic/electrical systems that rule and I had designed and put into production together. I always considered it to be my lifelong professional friend!

Then... a few years ago, when we were moving between States, my dear wife Mary held a garage sale while I was out of town, and she sold that precious log-log rule for $0.50! I wondered at the time if that was grounds for divorce?

Such a despicable act is almost on a par with coming home and finding that your wife has had your favorite hunting dog put down cuz he peed on the carpet!

Best,

--Peter K1PO
Indialantic By-the-Sea, FL.

"Joe S." <joe@schlatter.org> wrote in message
news:ao3ldf029g2@enews4.newsguy.com...
> After reading this thread, I went to ebay and searched for "slide
rule" ---
> ten pages of slide rules for auction!!! Some real beauties, too.
>
> --
>
> ------
> Regards,
> Joe S.

>
>
> "Dick" <dick@langwang.demon.co.uk> wrote in message
> news:QkI1liBw8+o9EwsV@langwang.demon.co.uk...
> > Please forgive the slightly off topic subject but I think this is
> > probably the one ng that will have subscribers that:
> >
> > a. Know what I'm talking about
> > &
> > b. Might be able to help.
> >
> > The other day I decided to have a nostalgia trip and do some design work
> > the old way using my long retired Pickett slide rule, this was a mistake
> > as it became quickly apparent that I'd totally forgotten how to use the
> > specialist scales !!!! Now I know it's possible to use the rule to do
> > the electronic design calculations I wanted but could I b*****y work out
> > how those scales operated.
> >
> > Has anyone out there ever owned a Pickett N-16-ES Electronic(s) Slide
> > Rule and, more importantly, can remember how to use it ? Even better,
> > does anyone have a copy of the instruction booklet hidden away they
> > could scan in for me.
> >
> > I think my instruction book went adrift 30+ years ago, you know - about
> > the time when you're so confident in using something that you tell
> > yourself it's like riding a bike, something that you'll never forget
> > ..... I know, been there, seen it, got the T-shirt
> > !!!!!!!!!!!!!!!!!!!!!!!!!!!!!
> >
> > There is a Pickett web site but this particular model doesn't seem to
> > figure on it for some reason.
> > --
> > Dick
> > GM0MNL
>
>

2960. Re: Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-10 23:26:54 UTC
From: "Joe S." <joe@schlatter.org>
Message-ID: <ao52f001qus@enews4.newsguy.com>
Source record: 40823

I live in NE TN -- right on the VA - TN border -- the state line is 100 yards from my back door.

At Exit 45 on I-81 as it goes through SW VA is the town of Marion, VA.

Marion is the home of author Sherwood Anderson who edited the local newspaper and is buried in the local cemetery. It's also the home of Hungry Mother State Park, a very nice Virginia state park.

As with so many large towns/small cities, its downtown fell victim to WalMart (spit). A couple bought the old post office and have turned it into an antique center. He teaches math and physics at several local community colleges -- and he collects slide rules.

So -- if you are ever through southwest Virginia on Interstate 81, watch for the Marion exits -- three of them -- between exits 40 and 50 -- go into Marion and find the old PO antique shop on Main Street -- you can't miss it -- and browse his collection -- he even sells them

--

Regards,
Joe S.

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message news:ao4muf$5c3$1@slb4.atl.mindspring.net...
> Hey Joe:
>
> Wow! How about them prices for slide rules nowadays!
>
> Back a few decades [That was in nineteen umpty-umphhh.] when I bought my
> first slide rule, it was a Sun-Hemmi, ivory coated, engine engraved, bamboo
> log-log rule, it cost me almost a week's pay, $35.00. In those days I was
> earning $47.00 per week.
>
> Today, in mint condition, that baby sells for about $350.00.
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> A few decades later [That was in nineteen umpty-umphhh plus plus.] I bought
> a new HP 35, reverse polish, electronic calculator for $350.00 and finally
> retired my trusty log-log Hemmi rule.
>
> I can buy a good color TV now for that same price.
>

> I kept that log-log rule in a box in the attic for decades. On rainy
> Sunday's I would often get that rule out and reminisce with it about all
of
> the beautiful electronic/electrical systems that rule and I had designed
and
> put into production together. I always considered it to be my lifelong
> professional friend!
>
> Then... a few years ago, when we were moving between States, my dear wife
> Mary held a garage sale while I was out of town, and she sold that
precious
> log-log rule for $0.50! I wondered at the time if that was grounds for
> divorce?
>
> Such a despicable act is almost on a par with coming home and finding that
> your wife has had your favorite hunting dog put down cuz he peed on the
> carpet!
>
> Best,
>
> --Peter K1PO
> Indialantic By-the-Sea, FL.
>
> "Joe S." <joe@schlatter.org> wrote in message
> news:ao3ldf029g2@enews4.newsguy.com...
> > After reading this thread, I went to ebay and searched for "slide
> rule" ---
> > ten pages of slide rules for auction!!! Some real beauties, too.
> >
> > --
> >
> > ------
> > Regards,
> > Joe S.
> >
> >
> > "Dick" <dick@langwang.demon.co.uk> wrote in message
> > news:QkI1liBw8+o9EwsV@langwang.demon.co.uk...
> > > Please forgive the slightly off topic subject but I think this is
> > > probably the one ng that will have subscribers that:
> > >
> > > a. Know what I'm talking about
> > > &
> > > b. Might be able to help.
> > >
> > > The other day I decided to have a nostalgia trip and do some design
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> > > the old way using my long retired Pickett slide rule, this was a
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> > > as it became quickly apparent that I'd totally forgotten how to use

the
> > > specialist scales !!!! Now I know it's possible to use the rule to do
> > > the electronic design calculations I wanted but could I b*****y work
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> > > how those scales operated.
> > >
> > > Has anyone out there ever owned a Pickett N-16-ES Electronic(s) Slide
> > > Rule and, more importantly, can remember how to use it ? Even better,
> > > does anyone have a copy of the instruction booklet hidden away they
> > > could scan in for me.
> > >
> > > I think my instruction book went adrift 30+ years ago, you know -
about
> > > the time when you're so confident in using something that you tell
> > > yourself it's like riding a bike, something that you'll never forget
> > > ..... I know, been there, seen it, got the T-shirt
> > > !!!!!!!!!!!!!!!!!!!!!!!!!!!!!
> > >
> > > There is a Pickett web site but this particular model doesn't seem to
> > > figure on it for some reason.
> > > --
> > > Dick
> > > GM0MNL
> >
> >
>
>

2961. Re: Don't Build This at Home or Anywhere Else.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 00:30:43 UTC
From: Norm Mann <folder0735@hotmail.com>
Message-ID: <3da6188e$0$190@news.impulse.net>
Source record: 40824

"Martin McCormick" <martin@okstate.edu> wrote in message
news:ao4lgp$62g$1@hydrogen.cis.okstate.edu...

... snip ...
>
> In my circuit, I have DIP switches connecting the 8 counter bits to
> the And gate inputs with pull-up resistors on all And gate inputs.
Opening
> a switch leaves that particular input in a high state.
>
> I knew I was in trouble when I flipped the 1's position switch and
> the frequency of the output did not change.
>
... snip ...

Of course, you could have used pull-down resistors instead and it probably
would have worked. The inputs don't have to be pulled up, they just
shouldn't be left floating.

-CB

2962. Re: Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 03:41:35 UTC
From: Idontwantspam@net
Message-ID: <3da64745.54888034@news.bellatlantic.net>
Source record: 40825

On Thu, 10 Oct 2002 19:26:54 -0400, "Joe S." <joe@schlatter.org>
wrote:

>So -- if you are ever through southwest Virginia on Interstate 81, watch for
>the Marion exits -- three of them -- between exits 40 and 50 -- go into
>Marion and find the old PO antique shop on Main Street -- you can't miss
>it -- and browse his collection -- he even sells them
>
There is a story written by Isaac Asimov back in the 40s or 50s, oddly
predictive, called "A Feeling of Power".

It looks at a future where all calculations were done by computers and
calculators, but one man rediscovers how to do them, using pencil and
paper.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

2963. Tube power supply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 03:44:15 UTC
From: rhaub <rhaub@itc.com>
Message-ID: <3DA6490E.1C2C22EB@itc.com>
Source record: 40826

I've got a power supply that outputs about 300v. It specifies a 47uF 400v cap on the output. What I have is two 22uF caps rated for 200v. If I parallel them I get 44uF, close enough. But does the voltage rating add as well? How does cap voltage rating work?

Rick KC0GIX

2964. Re: Tube power supply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 03:52:46 UTC
From: hexter@blazenet.net
Message-ID: <uqcioepd6trtee@corp.supernews.com>
Source record: 40827

In article <3DA6490E.1C2C22EB@itc.com>, rhaub@itc.com says...
>
>I've got a power supply that outputs about 300v. It specifies a 47uF
>400v cap on the output. What I have is two 22uF caps rated for 200v. If
>I parallel them I get 44uF, close enough. But does the voltage rating
>add as well? How does cap voltage rating work?
>
>Rick KC0GIX

In parallel the voltage rating will be that of the lowest unit. In
your case it remains at 200. If you put them in series with a pair
of balancing resistors of perhaps 10k, you will be usable to 400v, but
will have only 11mfd of effective capacity.

2965. Re: Direct conversion radio receiver module for DSP baseband processing

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 04:15:24 UTC
From: Erich <erich@ridgenet.ent>
Message-ID: <MPG.180fee9213c09061989681@news.direcpc.com>
Source record: 40828
Cross-posted to: comp.dsp,rec.radio.amateur.homebrew

In article <3da49ac4$0$191$ba620e4c@news.skynet.be>,
on5mjREMOVE@skynet.be says...
> Hi Leon,
>
> Very nice indeed. One day I will use it. But can you tell me who is
> producing this TUF-1 mixer.
>
> Jacques de ON5MJ - 73
>
>
>
That mixer is produced by Mini-Circuits in New York.

Erich
KA6AMD

2966. power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 05:27:26 UTC
From: Gary & Angela Belcaster <gbelcas@charter.net>
Message-ID: <gbelcas-A7DB10.00272611102002@corp.supernews.com>
Source record: 40829

I'm tired of searching the net for a good deal on a used bench ps. Any one know of a decent kit out there which will supply +- 15v and 5v @ 1-2 amps or so. Tnx in advance.

gary

2967. Re: Tube power supply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 05:50:09 UTC
From: w9wi@linux1.localdomain
Message-ID: <slrnaqcpuv.cfp.w9wi@linux1.localdomain>
Source record: 40830

On Thu, 10 Oct 2002 22:44:15 -0500, rhaub <rhaub@itc.com> wrote:
>I've got a power supply that outputs about 300v. It specifies a 47uF
>400v cap on the output. What I have is two 22uF caps rated for 200v. If
>I parallel them I get 44uF, close enough. But does the voltage rating
>add as well? How does cap voltage rating work?

No, the voltage rating doesn't add. The voltage rating is that of the
lowest capacitor. (in your case both are the same so it stays at 200 volts)

You can put the caps in *series* instead. Add an equalizing resistor across
each capacitor - maybe 10K ohms or so. (be sure to do your math on the
power ratings! - there'll be what, 15mA of current flowing)

The problem with that is that capacitors in series may add in voltage
rating, but they *divide* in capacity. Two 22uF caps in series exhibit 11uF
of capacity. Your circuit may hum, depending on other constants.

I'm afraid you're probably going to have to buy a bigger capacitor.
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

2968. Re: power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 11:22:20 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <ao6p02fvc1@news8.svr.pol.co.uk>
Source record: 40836

"Gary & Angela Belcaster" <gbelcas@charter.net> wrote in message
news:gbelcas-A7DB10.00272611102002@corp.supernews.com...
> I'm tired of searching the net for a good deal on a used bench ps. Any
> one know of a decent kit out there which will supply +- 15v and 5v @ 1-2
> amps or so. Tnx in advance.

I don't think you will find one. Your best bet is to make your own. Buy a couple of suitable transformers for the 5V and the +/- 15V supplies, some rectifiers and capacitors and add your own regulators. You can get 5V regulators that will give 2A or more, and +ve and -ve 0.5A regulators for the +/- 15V. The circuit is quite trivial, making a nice case for it is probably the hard part.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2969. NEED SOME MICA CAPACITORS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 11:56:30 UTC
From: ni4l@msn.com
Message-ID: <d4a0748e.0210110356.14be799d@posting.google.com>
Source record: 40831
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.swap

Hello
I am in need of a couple of mica capacitors .001 @ 5000 volts or
one at .001 @ 10,000 volts
Anyone have any of these laying around?
Chris NI4L

2970. Re: NEED SOME MICA CAPACITORS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 12:18:10 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <T5GdnfMzWtwpWTugXTWcoQ@News.GigaNews.Com>
Source record: 40832
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.swap

Try Electronic Surplus in Cleveland. (216 land)

"NI4L" <ni4l@msn.com> wrote in message
news:d4a0748e.0210110356.14be799d@posting.google.com...
> Hello
> I am in need of a couple of mica capacitors .001 @ 5000 volts or
> one at .001 @ 10,000 volts
> Anyone have any of these laying around?
> Chris NI4L

2971. Re: NEED SOME MICA CAPACITORS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 14:06:24 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uqdmo9dej1mafb@corp.supernews.com>
Source record: 40833
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.swap

Micas of that value and voltage rating seem to be pretty scarce. However, RF Parts does have 10KV .001 "Plate coupling capacitors" for 2.45 and bypass caps of the same rating for 1.65.

Unfortunately they have a pretty hefty minimum order, $25 I think, and most of the stuff they have is pretty high priced, so it can be hard to find that much that's worth buying (at least for me). But, if you need a couple of 3-500Z's that'll make quick work of that minimum ...

..

"NI4L" <ni4l@msn.com> wrote in message
news:d4a0748e.0210110356.14be799d@posting.google.com...
> Hello
> I am in need of a couple of mica capacitors .001 @ 5000 volts or
> one at .001 @ 10,000 volts
> Anyone have any of these laying around?
> Chris NI4L

2972. Parts for Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 14:25:40 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <b_Ap9.65$S4.18389@news.iquest.net>
Source record: 40834
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

```
Junkbox Surplus Parts for Sale as of 10/10/2002
===============================================

Odd Items
============
9.8304 Mhz Crystals, 1/4 in tall - 20 for $5.00
27mH inductors with radial leads - 25 for $3.50

Caps - All new, old stock. No pulls.
====================================
All caps now 50/$3 or 100/$5
====================================
8pf NPO Ceramic - Loose
11pf NPO Ceramic - Loose
12pf NPO ceramics on tape
22pf Kemet Ceramic Caps, 200v, 10%
100pf Axial Mono Caps, 100v, 10%
150pf ceramics, 100v, 10%
470pf Ceramics on paper tape, rated 5% (NPO)
560pf Kemet Ceramic Caps, 200v, 10%
1000pf blue mono caps, 10% 100v
3300pf Kemet Ceramic Caps, 100v, 10%
.01 uF ceramic caps, 10% 100v brand new by Kyocera
and
.01 uF ceramic caps, 20% 50v, new old stock, not used
50/2.50 100/$4

Voltage Regulators
==================
L7805ACV voltage regulators TO220 case. 10/$5 or 15/$7
LM7812 voltage regulators. TO220 case. 5/$4
LM317T Adjust. Positive Voltage Regulator TO220. 10/$5.00 or 15/$7.00
100/$30
LM78L62ACZ Volt(6.2)regulators, TO92 format 5/$3.00 10/$5.00

Transistors - New Parts - No Pulls
==========
TP2222 plastic TO92 NPN (House brand 2N2222)50/$4 100/$7
2N3906's plastic TO92. PNP - 50/$4 100/$7
2N3904's plastic TO92. NPN - 50/$4 100/$7
2N3704's plastic TO92, NPN - 50/$4 100/$7
MRF517 - Motorola Part - Metal Can - 5 for $5

Op AMPS, Comparators
====================
```

LM386N-1 - Audio Amps 5 for $2.25

LM741CN - Single Op Amp, 8 Pin Dip, 6 for $2.00
http://www.hep.ph.ic.ac.uk/~hallg/Instrumentation/Data/LM741.pdf

BA10324 - LM324 equiv Quad Ground Sense Op Amp 14 pin, 4 for $2.00
http://www.flint.co.uk/product/pdfs/FR3LIN.PDF

Diodes
======
1N4148 - You always need these. 100 for $2.50 These are NEW.

Let me know if you're interested. All prices are post paid to the
USA, unless otherwise noted. I will ship to non USA addresses but we
need to discuss the shipping charges first.

--

==
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57
==

2973. Re: NEED SOME MICA CAPACITORS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 14:50:43 UTC
From: kludge@panix.com
Message-ID: <ao6og3$cu9$1@panix2.panix.com>
Source record: 40835
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.swap

In article <uqdmo9dej1mafb@corp.supernews.com>,
xpyttl <xpyttl_nospam@earthling.net> wrote:
>Micas of that value and voltage rating seem to be pretty scarce. However,
>RF Parts does have 10KV .001 "Plate coupling capacitors" for 2.45 and bypass
>caps of the same rating for 1.65.
>
>Unfortunately they have a pretty hefty minimum order, $25 I think, and most
>of the stuff they have is pretty high priced, so it can be hard to find that
>much that's worth buying (at least for me). But, if you need a couple of
>3-500Z's that'll make quick work of that minimum ...

Anybody got a source for small silver-mica caps in production quantities?
I'm looking for stuff in the 200V/820 pF sort of range, current production.
--scott

--
"C'est un Nagra. C'est suisse, et tres, tres precis."

2974. Re: NEED SOME MICA CAPACITORS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 15:30:47 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <ao71t7$n75$1@news8.svr.pol.co.uk>
Source record: 40840
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.swap

"Scott Dorsey" <kludge@panix.com> wrote in message
news:ao6og3$cu9$1@panix2.panix.com...
> In article <uqdmo9dej1mafb@corp.supernews.com>,
> xpyttl <xpyttl_nospam@earthling.net> wrote:
> >Micas of that value and voltage rating seem to be pretty scarce.
However,
> >RF Parts does have 10KV .001 "Plate coupling capacitors" for 2.45 and
bypass
> >caps of the same rating for 1.65.
> >
> >Unfortunately they have a pretty hefty minimum order, $25 I think, and
most
> >of the stuff they have is pretty high priced, so it can be hard to find
that
> >much that's worth buying (at least for me). But, if you need a couple of
> >3-500Z's that'll make quick work of that minimum ...
>
> Anybody got a source for small silver-mica caps in production quantities?
> I'm looking for stuff in the 200V/820 pF sort of range, current
production.

Rapid Electronics (in the UK) stocks production quantities. They are all
500V. Price for 820 pF is 1.23 UK pounds each, one off.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

2975. Re: Don't Build This at Home or Anywhere Else.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 16:06:58 UTC
From: martin@okstate.edu
Message-ID: <ao6sv2$71s$1@hydrogen.cis.okstate.edu>
Source record: 40837

In article <3da6188e$0$190@news.impulse.net>,
Norm Mann <folder0735@hotmail.com> wrote:
>Of course, you could have used pull-down resistors instead and it probably
>would have worked. The inputs don't have to be pulled up, they just
>shouldn't be left floating.

They shouldn't be left floating all right, but using a pull-down
array would create a new problem.

With an And gate, all inputs must be high for the output to change state
from 0 to 1. Think of 8 series-connected Christmas lights or single-pole
switches. All 8 have to be closed to make a circuit. With an input tied
low, the output would never get to go high because there would always be at
least one input low. You did make me catch my breath for a second,
however.

What I will do after I finish clearing all the previous circuit
away is to stuff a pair of exclusive-or chips on to my board. The ones I
have contain 4 XOR gates so two will give me 8. The XOR truth table is
satisfied when inputs A and B for each gate are unequal. The output is
always 0 or off if A and B are equal. One input of each gate will go to
one input on the counter. The other input of each gate will go to the DIP
switches which will be connected again to pull-ups so that every closed
switch is a 0 and any open switch is a 1. When the counter equals the DIP
switch setting, all 8 XOR gates will show 0 at once.

My 8 input And gate now needs to become an Or gate and everything
should work this time.
--

Martin McCormick WB5AGZ Stillwater, OK
OSU Center for Computing and Information Services Network Operations Group

2976. Re: power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 16:41:23 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <-6CcnWdnUb4PnzqgXTWcow@News.GigaNews.Com>
Source record: 40838

I have a nice power supply that should do that job. Make me an offer.

Bob

2977. Re: Tube power supply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 16:57:31 UTC
From: mjsilva697@earthlink.net
Message-ID: <27085883.0210110857.2fea160@posting.google.com>
Source record: 40839

rhaub <rhaub@itc.com> wrote in message news:<3DA6490E.1C2C22EB@itc.com>...
> I've got a power supply that outputs about 300v. It specifies a 47uF
> 400v cap on the output. What I have is two 22uF caps rated for 200v. If
> I parallel them I get 44uF, close enough. But does the voltage rating
> add as well? How does cap voltage rating work?
>
> Rick KC0GIX

Since others have answered your question I'll just mention something a
little odd that I've found with electrolytic capacitors. The axial
configuration seems to run about twice the price of the radial
configuration for the same-rated device. Being a cheap-o myself, I
therefore use radial filter caps in all my tube power supplies. I
like Mouser (http://www.mouser.com) as a supplier.

73,
Mike, KK6GM

2978. Re: NEED SOME MICA CAPACITORS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 19:42:12 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uqeacvrpec4le1@corp.supernews.com>
Source record: 40841
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.swap

"Scott Dorsey" <kludge@panix.com> wrote in message
news:ao6og3$cu9$1@panix2.panix.com...

> I'm looking for stuff in the 200V/820 pF sort of
> range, current production.

I don't know what you mean by production quantities. RF Parts prices in
100's, I suspect if you need 10,000's they would be drained pretty quick.

Interestingly, for 820 pF, their price on 300V is about twice the price of
500V. (of course, there's always that size thing!)

I don't know of any other reliable sources. Usually I try to stock up at
hamfests. Dan's usually has DSM's at good prices, but he has what he has at
the time, and certainly not 'production' quantities, although his prices
will be way better for what he has.

..

2979. Wavetek Sam I used as RF spectrum analyzer??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 19:55:58 UTC
From: AJ Sanderson <sjay@noospam.com>
Message-ID: <ao7ak3buv1@slb5.atl.mindspring.net>
Source record: 40842
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design,sci.electronics.equipment,sci.electronics.misc

I recently read a post where a gentlemen is using a Wavetek Sam I catv analyzer as a 4-400 Mhz spectrum analyzer at low cost. Is this possible and how does such a unit compare with regular commercial spectrum analyzers? I'd like to find out a little more about this unit... is it solid state, can it be used at 50 ohm impedance, accuracy specs, step attenuator, easily serviced, etc.... so I'd appreciate any such posts from someone using this unit as an RF analyzer.

Thanks,
AJ

2980. Re: Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 20:43:00 UTC
From: donrm@soco.agilent.com
Message-ID: <1034368980.566240@cswreg.cos.agilent.com>
Source record: 40843

Jack Taylor <n7oo@theriver.com> wrote:
> In today's world it's hard to tell by looking if a person is an engineer.
> In "the good old days" it was easy as you could spot him by his sly drool.

Naw - you recognized him by his slide rule (slop-rod) hanging from his
belt to his knee...

I always got a kick out of the sliderule jocks that said they could get
six significant figures out of one of those weird circular jobs.

Don Montgomery, K6LTS
donrm@soco.agilent.com
(wore out my K&E Log Log Duplex Decitrig in EE school just in time
for graduation.)

2981. Re: Tube power supply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-11 23:00:51 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <uqelrdcredm3fe@corp.supernews.com>
Source record: 40844

Basic electronics 101:
Series capacitors divide the capacitence, and multiply the voltage.
Paralell capacitors multilpy capacitence and voltage remains the same as any
one of the caps in the circuit. Simple as that.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"rhaub" <rhaub@itc.com> wrote in message news:3DA6490E.1C2C22EB@itc.com...
> I've got a power supply that outputs about 300v. It specifies a 47uF
> 400v cap on the output. What I have is two 22uF caps rated for 200v. If
> I parallel them I get 44uF, close enough. But does the voltage rating
> add as well? How does cap voltage rating work?
>
> Rick KC0GIX
>

2982. CORDLESS PHONE & ANSWERING MACHINE REPAIR-PARTS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-12 00:02:52 UTC
From: Buba <No-Reply-Yet@none.net>
Message-ID: <MEJp9.1234$1P1.102022@bgtnsc05-news.ops.worldnet.att.net>
Source record: 40845

http://cordless.00home.com/index.html

2983. Re: Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-12 00:08:55 UTC
From: "G. Beat" <gregory.beat.nospam@attbi.com>
Message-ID: <rKJp9.7313$NW3.1261@sccrnsc03>
Source record: 40846

Last time I visited James Van Allen (yes, still teaches the MS and PhD
physics seminar classes at 90 !)
in hias office - he was dispossing of some of his slide rule collection (big
55 gallon barrel).

I thought abou an eBay sale - but no onw would ever pay more for them (even
with an letter of authority signed by him)

w9gb

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:uqahvt6os6tdf1@corp.supernews.com...
> I a. Know what you're talking about - I have an N-16-ES too. But b.
> Can't help. Found the manual for my trusty N-4-ES, although I think I
> could still do just fine without it. But I never used the N-16-ES much,
> and didn't come across the manual. You might have trouble finding anyone
> willing to scan the N-16 manual if it's as thick as the N-4 manual. Good
> luck!
>
> Roy Lewallen, W7EL
>
> Dick wrote:
> > Please forgive the slightly off topic subject but I think this is
> > probably the one ng that will have subscribers that:
> >
> > a. Know what I'm talking about
> > &
> > b. Might be able to help.
> >
> > The other day I decided to have a nostalgia trip and do some design work
> > the old way using my long retired Pickett slide rule, this was a mistake
> > as it became quickly apparent that I'd totally forgotten how to use the
> > specialist scales !!!! Now I know it's possible to use the rule to do
> > the electronic design calculations I wanted but could I b*****y work out
> > how those scales operated.
> >
> > Has anyone out there ever owned a Pickett N-16-ES Electronic(s) Slide
> > Rule and, more importantly, can remember how to use it ? Even better,
> > does anyone have a copy of the instruction booklet hidden away they
> > could scan in for me.
> >
> > I think my instruction book went adrift 30+ years ago, you know - about
> > the time when you're so confident in using something that you tell
> > yourself it's like riding a bike, something that you'll never forget
> > ..... I know, been there, seen it, got the T-shirt

> > !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
> >
> > There is a Pickett web site but this particular model doesn't seem to
> > figure on it for some reason.
>

2984. Re: Tube power supply question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-12 01:11:54 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <3DA776DA.10E38C65@one.net>
Source record: 40697

I guess if you read that a certain way, it's sort of correct. But it's misleading.

Basic electronics:

Series capacitors: C = 1/(1/C1 + 1/C2) and add the voltages. You'll also need to add an equalizing resistor in parallel with each C (as another poster already noted). If the voltage ratings of the caps aren't the same, you'll need to adjust the resistance values accordingly (better not to use caps that aren't the same).

Parallel capacitors: add the capacitances, and voltage = the voltage of the lowest rated cap (as another poster already noted).

... Rich

"M.E." wrote:
>
> Basic electronics 101:
> Series capacitors divide the capacitence, and multiply the voltage.
> Paralell capacitors multilpy capacitence and voltage remains the same as any
> one of the caps in the circuit. Simple as that.
>
> --
> Respond to my "real" e-mail;
> kk5dr@ev1.net
> "rhaub" <rhaub@itc.com> wrote in message news:3DA6490E.1C2C22EB@itc.com...
> > I've got a power supply that outputs about 300v. It specifies a 47uF
> > 400v cap on the output. What I have is two 22uF caps rated for 200v. If
> > I parallel them I get 44uF, close enough. But does the voltage rating
> > add as well? How does cap voltage rating work?
> >
> > Rick KC0GIX
> >

2985. Re: NEED SOME MICA CAPACITORS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-12 01:38:09 UTC
From: rhaub <rhaub@itc.com>
Message-ID: <3DA77D00.815FE17E@itc.com>
Source record: 40698
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.swap

Digikey carries Dipped Silver MICA caps made by Cornell Dubilier GC/Waldom, the 500v/820pFs are listed for $1.33 in 100 qty. Page 660 in their latest catalogue. I believe if you call them you can get pricing for 1000 and 10,000 quantity.

This actually brings up an interesting point though. This is a pretty hefty price for a cap. What would be the closest equivalent to the S-M that doesn't run quite so high?

Rick KC0GIX

Scott Dorsey wrote:

> In article <uqdmo9dej1mafb@corp.supernews.com>,
> xpyttl <xpyttl_nospam@earthling.net> wrote:
> >Micas of that value and voltage rating seem to be pretty scarce. However,
> >RF Parts does have 10KV .001 "Plate coupling capacitors" for 2.45 and bypass
> >caps of the same rating for 1.65.
> >
> >Unfortunately they have a pretty hefty minimum order, $25 I think, and most
> >of the stuff they have is pretty high priced, so it can be hard to find that
> >much that's worth buying (at least for me). But, if you need a couple of
> >3-500Z's that'll make quick work of that minimum ...
>
> Anybody got a source for small silver-mica caps in production quantities?
> I'm looking for stuff in the 200V/820 pF sort of range, current production.
> --scott
>
> --
> "C'est un Nagra. C'est suisse, et tres, tres precis."

2986. Re: Don't Build This at Home or Anywhere Else.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-12 03:43:05 UTC
From: Norm Mann <folder0735@hotmail.com>
Message-ID: <3da79759$0$190@news.impulse.net>
Source record: 40699

"Martin McCormick" <martin@okstate.edu> wrote in message
news:ao6sv2$71s$1@hydrogen.cis.okstate.edu...
> In article <3da6188e$0$190@news.impulse.net>,
> Norm Mann <folder0735@hotmail.com> wrote:
> >Of course, you could have used pull-down resistors instead and it
probably
> >would have worked. The inputs don't have to be pulled up, they just
> >shouldn't be left floating.
>
> They shouldn't be left floating all right, but using a pull-down
> array would create a new problem.
>
> With an And gate, all inputs must be high for the output to change state
> from 0 to 1. Think of 8 series-connected Christmas lights or single-pole
> switches. All 8 have to be closed to make a circuit. With an input tied
> low, the output would never get to go high because there would always be
at
> least one input low. You did make me catch my breath for a second,
> however.

Sorry about that. It only belatedly occurred to me that this was the case,
but you caught it before I could correct it.

> What I will do after I finish clearing all the previous circuit
> away is to stuff a pair of exclusive-or chips on to my board. The ones I
> have contain 4 XOR gates so two will give me 8. The XOR truth table is
> satisfied when inputs A and B for each gate are unequal. The output is
> always 0 or off if A and B are equal. One input of each gate will go to
> one input on the counter. The other input of each gate will go to the DIP
> switches which will be connected again to pull-ups so that every closed
> switch is a 0 and any open switch is a 1. When the counter equals the DIP
> switch setting, all 8 XOR gates will show 0 at once.
>
> My 8 input And gate now needs to become an Or gate and everything
> should work this time.

Actually, that should be a NOR gate, if you wish to have the output high
when all the inputs are low (A=B). I reread your original post and saw that
you started this exercise because you didn't have any digital comparators,
so there's no sense bringing that up. Nor programmable counters either,
apparently. There are plenty of ways to skin this particular cat. It's
nice to see somebody experimenting and learning while getting hands-on
experience with hardware.

-CB

2987. Re: Wavetek Sam I used as RF spectrum analyzer??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-12 04:39:30 UTC
From: Jim Yanik <jyanikX@kua.net>
Message-ID: <Xns92A56E2DF142jyanikkuanet@204.117.192.21>
Source record: 40700
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design,sci.electronics.equipment

"AJ Sanderson" <sjay@noospam.com> wrote in
news:ao7ak3buv1@slb5.atl.mindspring.net:

> I recently read a post where a gentlemen is using a Wavetek Sam I catv
> analyzer as a 4-400 Mhz spectrum analyzer at low cost. Is this
> possible and how does such a unit compare with regular commercial
> spectrum analyzers? I'd like to find out a little more about this
> unit... is it solid state, can it be used at 50 ohm impedance,
> accuracy specs, step attenuator, easily serviced, etc.... so I'd
> appreciate any such posts from someone using this unit as an RF
> analyzer.
>
> Thanks,
> AJ
>
>
>

It's not going to be nearly as good as a spec analyzer. You can see spurs
and harmonic and non-harmonic distortion with a real SA,and better
accuracies. The SAM is basically a freq-tuned voltmeter.Made for 75 ohm
impedances,that's what cable is. You could use a 50-75 ohm pad,but accuracy
will suffer.
(I used to work for the company that Wavetek bought,that made the SAM
meters. Mid-State Electronics, ;-))

I'd buy one of those inexpensive SA's before I'd spend any money on a
SAM,if you want a RF analyzer.

--
Jim Yanik,NRA member
remove X to contact me

2988. Re: NEED SOME MICA CAPACITORS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-12 13:44:21 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uqg9q8rn2slr88@corp.supernews.com>
Source record: 40701
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.swap

I didn't realize DigiKey carried DSM's, they are my favorite supplier.
Those prices are similar to RF Parts price for 300V units, almost twice
their price for 500V. Interesting since it's pretty rare that anyone is
more pricey than RF Parts.

One caveat about DigiKey ... be sure to specify what you want for shipping.
Their default is 2nd day air, which is pretty expensive. Where I am at
least, 2nd day air takes 2 days, costs about $25. UPS Ground takes 2 days,
once in a rare while 3, costs $4.50. Rarely is it worth $20 to me to be
guaranteed 2 days instead of almost always getting it in 2 days!

..

"rhaub" <rhaub@itc.com> wrote in message news:3DA77D00.815FE17E@itc.com...
> Digikey carries Dipped Silver MICA caps made by Cornell Dubilier
GC/Waldom, the
> 500v/820pFs are listed for $1.33 in 100 qty. Page 660 in their latest
catalogue.
> I believe if you call them you can get pricing for 1000 and 10,000
quantity.
>
> This actually brings up an interesting point though. This is a pretty
hefty price
> for a cap. What would be the closest equivalent to the S-M that doesn't
run quite
> so high?
>
> Rick KC0GIX

2989. Re: Wavetek Sam I used as RF spectrum analyzer??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-12 15:16:43 UTC
From: Man Li <manli88@netvigator.com>
Message-ID: <ao9ecp$5ub4@imsp212.netvigator.com>
Source record: 40702
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design,sci.electronics.equipment,sci.electronics.misc

No you should not use it as spectrum analyzer unless you only need a very simple, low resolution and poor accuracy analyzer.
Bye.

Man

"AJ Sanderson" <sjay@noospam.com> ���g��l��s�D
:ao7ak3buv1@slb5.atl.mindspring.net...
> I recently read a post where a gentlemen is using a Wavetek Sam I catv
> analyzer as a 4-400 Mhz spectrum analyzer at low cost. Is this possible
and
> how does such a unit compare with regular commercial spectrum analyzers?
> I'd like to find out a little more about this unit... is it solid state,
can
> it be used at 50 ohm impedance, accuracy specs, step attenuator, easily
> serviced, etc.... so I'd appreciate any such posts from someone using this
> unit as an RF analyzer.
>
> Thanks,
> AJ
>
>

2990. Re: Wavetek Sam I used as RF spectrum analyzer??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-12 15:26:20 UTC
From: AJ Sanderson <sjay@noospam.com>
Message-ID: <ao9eue$55c$1@nntp9.atl.mindspring.net>
Source record: 40703
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design,sci.electronics.equipment,sci.electronics.misc

Ok, guys. What would be examples of good, used, lower cost rf analyzers that I could look for that wouldn't break the bank. Say 500 Mhz bandwidth (150 Mhz minimal acceptable).

AJ

"Man Li" <manli88@netvigator.com> wrote in message
news:ao9ecp$5ub4@imsp212.netvigator.com...
> No you should not use it as spectrum analyzer unless you only need a very
> simple, low resolution and poor accuracy analyzer.
> Bye.
>
> Man
>
> "AJ Sanderson" <sjay@noospam.com> ���g��l��s�D
> :ao7ak3buv1@slb5.atl.mindspring.net...
> > I recently read a post where a gentlemen is using a Wavetek Sam I catv
> > analyzer as a 4-400 Mhz spectrum analyzer at low cost. Is this possible
> and
> > how does such a unit compare with regular commercial spectrum analyzers?
> > I'd like to find out a little more about this unit... is it solid state,
> can
> > it be used at 50 ohm impedance, accuracy specs, step attenuator, easily
> > serviced, etc.... so I'd appreciate any such posts from someone using
this
> > unit as an RF analyzer.
> >
> > Thanks,
> > AJ
> >
> >
>
>

2991. Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-12 16:26:37 UTC
From: Markus Baertschi <markus@markus.org>
Message-ID: <MPG.18126b92f95c6e1b98968d@News.CIS.DFN.DE>
Source record: 40704

I recently got an almost new, but mechanically broken Lithium-Ion laptop battery-pack. It contains 6 3.6V 1.8AH battery cells. Two of those could make a perfect 7.2V 1.8AH battery pack for my FT-50r. To charge the pack I'll use a MAHA 777-plus universal charger.

Am I overlooking something ?

If no then I'll just have to find a broken battery pack te re-use the housing.

Markus

2992. Re: NEED SOME MICA CAPACITORS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-12 17:49:45 UTC
From: kludge@panix.com
Message-ID: <ao9nbpsaf1@panix2.panix.com>
Source record: 40705
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.swap

>Digikey carries Dipped Silver MICA caps made by Cornell Dubilier GC/Waldom, the
>500v/820pFs are listed for $1.33 in 100 qty. Page 660 in their latest catalogue.
>I believe if you call them you can get pricing for 1000 and 10,000 quantity.
>
>This actually brings up an interesting point though. This is a pretty hefty price
>for a cap. What would be the closest equivalent to the S-M that doesn't run quite
>so high?

Probably an NPO....
--scott

--
"C'est un Nagra. C'est suisse, et tres, tres precis."

2993. Calculating self-capacitance of an inductor?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-12 18:27:37 UTC
From: la8ak.xnd@online.no
Message-ID: <3da8666c.98328103@news.online.no>
Source record: 40706

It is a formula to calculate the self capacitance, wonder if somebody
can use it? Measurements of my frame antenna is

119kHz C=800pF Q=175
136kHz C=550pF Q=150
140kHz C=500pF Q=150
150kHz C=380pF Q=150
200kHz C=145pF Q=115
240kHz C= 50pF Q= 75

See article in Electronics World (Wireless World) nr 8/2002 about
frame antennas for receiption on 136kHz. I've made some sketches for
my version, they are available as small gif files if you send me an
email

73
Jan-Martin
LA8AK
http://www.laud.no/la6nca/la8ak/
--
remove ,xnd to reply

2994. Re: Calculating self-capacitance of an inductor?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-12 19:19:26 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <o4tgqu8sva3to0ln89e6lqcd6uvk1gv8oc@4ax.com>
Source record: 40707

On Sat, 12 Oct 2002 18:27:37 GMT, la8ak.xnd@online.no (J M Noeding)
wrote:

>It is a formula to calculate the self capacitance, wonder if somebody
>can use it? Measurements of my frame antenna is
>
>119kHz C=800pF Q=175
>136kHz C=550pF Q=150
>140kHz C=500pF Q=150
>150kHz C=380pF Q=150
>200kHz C=145pF Q=115
>240kHz C= 50pF Q= 75
>
>See article in Electronics World (Wireless World) nr 8/2002 about
>frame antennas for receiption on 136kHz. I've made some sketches for
>my version, they are available as small gif files if you send me an
>email
>
>73
>Jan-Martin
>LA8AK
>http://www.laud.no/la6nca/la8ak/

My calculation shows the self-capacitance = 708.8 pF.

My technique is to plot 1/F*F (1 over F squared) on the X axis,
resonating capacitance on the Y axis. Then do a linear regression fit
and you will get the y intercept when x=0 as a negative number. This
number is the self-capacitance.

The advantage of this technique is that it makes use of all of your
measurements, not just one or two measurements.

I've plotted your data and will e-mail the plot as a PDF file.

Jack K8ZOA

2995. Re: Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-12 21:13:58 UTC
From: "Paul R. Bennett" <rffox@gru.net>
Message-ID: <3DA89070.E5DA369D@gru.net>
Source record: 40708

Never owned one of those... but this is wonderful.
I have a home computer, but I never really think of it for doing mathmatics. I usually grab a pencil and paper. Then I went cleaning the place and found my two old Pickett slide rules. One was a simple trig and the other a log-log. This made math fun again. And they were fast. At least as fast as trying to call up the calculator in windows.
For the simpler things, it is rather like riding a bicycle... you don't forget. For me anyway. But then, when I was going to school there was no such thing as a pocket calculator and the slide rule was actually a college course.
Just coolness.

Paul Bennett
N4EGO
(Skywarn, Emergency Services Volunteer, boat anchor collector)
www.rffox.org

Dick wrote:

> Please forgive the slightly off topic subject but I think this is
> probably the one ng that will have subscribers that:
>
> a. Know what I'm talking about
> &
> b. Might be able to help.
>
> The other day I decided to have a nostalgia trip and do some design work
> the old way using my long retired Pickett slide rule, this was a mistake
> as it became quickly apparent that I'd totally forgotten how to use the
> specialist scales !!!! Now I know it's possible to use the rule to do
> the electronic design calculations I wanted but could I b*****y work out
> how those scales operated.
>
> Has anyone out there ever owned a Pickett N-16-ES Electronic(s) Slide
> Rule and, more importantly, can remember how to use it ? Even better,
> does anyone have a copy of the instruction booklet hidden away they
> could scan in for me.
>
> I think my instruction book went adrift 30+ years ago, you know - about
> the time when you're so confident in using something that you tell
> yourself it's like riding a bike, something that you'll never forget
> ..... I know, been there, seen it, got the T-shirt
> !!!!!!!!!!!!!!!!!!!!!!!!!!!!!
>
> There is a Pickett web site but this particular model doesn't seem to

> figure on it for some reason.
> --
> Dick
> GM0MNL

2996. I-SSTV

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-12 21:55:28 UTC
From: HB9TLK <me@privacy.net>
Message-ID: <3da89a49$0$23620$4d4ef98e@read.news.ch.uu.net>
Source record: 40709

using the mmsstv-dll i have assembled a code which links 2 mmsstv
gateways over the internet.

http://www.hb9tlk.com/isstv/

the program is not made for sending pictures directly from pc to pc,
but for receiving sttv over a radio and retransmitting sstv over
another radio at a distant location.

and, be careful with that "send" button !

2997. Re: Wavetek Sam I used as RF spectrum analyzer??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-12 22:17:21 UTC
From: Jim Yanik <jyanikX@kua.net>
Message-ID: <Xns92A5BA3CC60FBjyanikkuanet@204.117.192.21>
Source record: 40710
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design,sci.electronics.equipment,sci.electronics.misc

"AJ Sanderson" <sjay@noospam.com> wrote in
news:ao9eue$55c$1@nntp9.atl.mindspring.net:

> Ok, guys. What would be examples of good, used, lower cost rf
> analyzers that I could look for that wouldn't break the bank. Say 500
> Mhz bandwidth (150 Mhz minimal acceptable).
>
> AJ
>
>
> "Man Li" <manli88@netvigator.com> wrote in message
> news:ao9ecp$5ub4@imsp212.netvigator.com...
>> No you should not use it as spectrum analyzer unless you only need a
>> very simple, low resolution and poor accuracy analyzer.
>> Bye.
>>
>> Man
>>
>> "AJ Sanderson" <sjay@noospam.com> ���g��l��s�D
>> :ao7ak3buv1@slb5.atl.mindspring.net...
>> > I recently read a post where a gentlemen is using a Wavetek Sam I
>> > catv analyzer as a 4-400 Mhz spectrum analyzer at low cost. Is
>> > this possible
>> and
>> > how does such a unit compare with regular commercial spectrum
>> > analyzers? I'd like to find out a little more about this unit... is
>> > it solid state,
>> can
>> > it be used at 50 ohm impedance, accuracy specs, step attenuator,
>> > easily serviced, etc.... so I'd appreciate any such posts from
>> > someone using
> this
>> > unit as an RF analyzer.
>> >
>> > Thanks,
>> > AJ

Well,there's the TEK 1401 or 1401A,that was designed to connect to the 323
scope and had BW up to 500Mhz(can be used with other scopes,too).

Or there's a 7K mainframe(7603) and a 7L12 or 7L13 SA plug-in,which goes
10Khz-1.8Ghz.Or find a 2710,2712 portable SA,looks like a 2213 scope,goes

to IIRC,1 Khz-1.8Ghz.There's several HP analyzers available used,too,but I don't know model numbers for HP. You need to peruse a few used Test Equipment company catalogs. Google ought to turn up several.

There's also an inexpensive SA I've seen listing for about $1500 new,I believe it comes from Taiwan,and marketed under several companies name 'brands'.I saw them in hobby electronics mags like Nuts&Volts.

SA's are not cheap.

--
Jim Yanik,NRA member
remove X to contact me

2998. Repairing my Yaesu FT-847

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 01:08:40 UTC
From: Larry Bratcher <lbratche@swbell.net>
Message-ID: <sl3q9.5857$K_.990836806@newssvr30.news.prodigy.com>
Source record: 40711

I think I have screwed up big time! I was moving stuff around in the shack, had everything pulled out an was re-arranging things. In this process, I accidentally hooked my FT-847 up with reverse polarity! It popped and smoked and of course it is now dead! I took the cover off and looked for burns, but did not see anything obvious. The fuse is good but it does smell burnt inside. I'm not a repair person so I am in need of a reference for a good Yaesu repair person or would I be better off sending it back to Yaesu? Any thoughts on what I may have damaged.

Thanks

Larry

2999. Re: Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 01:24:04 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <aoahvp$7e7$1@slb3.atl.mindspring.net>
Source record: 40712

Paul:

Heh, heh... way back then we never had "Slide Rule Scientists", why now do
we have "Computer Scientists"?

"Computer Science is no more about computers than Astronomy is about
telescopes." -- E. Dijkstra [RIP]

--Peter K1PO
Indialantic By-the-Sea, FL.

"Paul R. Bennett" <rffox@gru.net> wrote in message
news:3DA89070.E5DA369D@gru.net...
> Never owned one of those... but this is wonderful.
> I have a home computer, but I never really think of it for doing
> mathmatics. I usually grab a pencil and paper. Then I went cleaning the
> place and found my two old Pickett slide rules. One was a simple trig and
> the other a log-log. This made math fun again. And they were fast. At
> least as fast as trying to call up the calculator in windows.
> For the simpler things, it is rather like riding a bicycle... you don't
> forget. For me anyway. But then, when I was going to school there was no
> such thing as a pocket calculator and the slide rule was actually a
college
> course.
> Just coolness.
>
> Paul Bennett
> N4EGO
> (Skywarn, Emergency Services Volunteer, boat anchor collector)
> www.rffox.org
>
> Dick wrote:
>
> > Please forgive the slightly off topic subject but I think this is
> > probably the one ng that will have subscribers that:
> >
> > a. Know what I'm talking about
> > &
> > b. Might be able to help.
> >
> > The other day I decided to have a nostalgia trip and do some design work
> > the old way using my long retired Pickett slide rule, this was a mistake
> > as it became quickly apparent that I'd totally forgotten how to use the
> > specialist scales !!!! Now I know it's possible to use the rule to do
> > the electronic design calculations I wanted but could I b*****y work out

> > how those scales operated.
> >
> > Has anyone out there ever owned a Pickett N-16-ES Electronic(s) Slide
> > Rule and, more importantly, can remember how to use it ? Even better,
> > does anyone have a copy of the instruction booklet hidden away they
> > could scan in for me.
> >
> > I think my instruction book went adrift 30+ years ago, you know - about
> > the time when you're so confident in using something that you tell
> > yourself it's like riding a bike, something that you'll never forget
> > ..... I know, been there, seen it, got the T-shirt
> > !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
> >
> > There is a Pickett web site but this particular model doesn't seem to
> > figure on it for some reason.
> > --
> > Dick
> > GM0MNL
>

3000. Re: Repairing my Yaesu FT-847

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 01:32:43 UTC
From: cirip <cirip@yahoo.com>
Message-ID: <%24q9.18773$vX.7591@news04.bloor.is.net.cable.rogers.com>
Source record: 40714

Hi Larry,

If you were lucky enogh, only a diode inside the PA might have burned.
Usually there's a high current diode inside the PA, its purpose being
exactly that of protecting the PA and maybe the rest of the tcvr against
accidental reverse polarity supply. Hope that's all.

Good luck,
Cirip

"Larry Bratcher" <lbratche@swbell.net> wrote in message
news:sI3q9.5857$K_.990836806@newssvr30.news.prodigy.com...
> I think I have screwed up big time! I was moving stuff around in the
shack,
> had everything pulled out an was re-arranging things. In this process, I
> accidentally hooked my FT-847 up with reverse polarity! It popped and
> smoked and of course it is now dead! I took the cover off and looked for
> burns, but did not see anything obvious. The fuse is good but it does
smell
> burnt inside. I'm not a repair person so I am in need of a reference for
a
> good Yaesu repair person or would I be better off sending it back to
Yaesu?
> Any thoughts on what I may have damaged.
>
> Thanks
>
> Larry
>
>

3001. Re: Calculating self-capacitance of an inductor?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 01:37:39 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1210022138430001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40713

In article <o4tgqu8sva3to0ln89e6lqcd6uvk1gv8oc@4ax.com>, Jack Smith
<jsmith@mnsinc.com> wrote:

> On Sat, 12 Oct 2002 18:27:37 GMT, la8ak.xnd@online.no (J M Noeding)
> wrote:
>
> >It is a formula to calculate the self capacitance, wonder if somebody
> >can use it? Measurements of my frame antenna is
> >
> >119kHz C=800pF Q=175
> >136kHz C=550pF Q=150
> >140kHz C=500pF Q=150
> >150kHz C=380pF Q=150
> >200kHz C=145pF Q=115
> >240kHz C= 50pF Q= 75
> >
> >See article in Electronics World (Wireless World) nr 8/2002 about
> >frame antennas for receiption on 136kHz. I've made some sketches for
> >my version, they are available as small gif files if you send me an
> >email
> >
> >73
> >Jan-Martin
> >LA8AK
> >http://www.laud.no/la6nca/la8ak/
>
>
> My calculation shows the self-capacitance = 708.8 pF.
>
> My technique is to plot 1/F*F (1 over F squared) on the X axis,
> resonating capacitance on the Y axis. Then do a linear regression fit
> and you will get the y intercept when x=0 as a negative number. This
> number is the self-capacitance.
>
> The advantage of this technique is that it makes use of all of your
> measurements, not just one or two measurements.
>
> I've plotted your data and will e-mail the plot as a PDF file.
>
>
> Jack K8ZOA

Why not measure your SRF and calculate the Cp? You could then verify it
against the other data if nothing else.

At these frequencies that should be a breeze.

Steve WB4CZR

3002. Re: Wavetek Sam I used as RF spectrum analyzer??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 08:16:46 UTC
From: mroberds@worldnet.att.net
Message-ID: <OZ9q9.40214$Xu2.28063@news2.central.cox.net>
Source record: 40715
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design,sci.electronics.equipment,sci.electronics.misc

In sci.electronics.equipment AJ Sanderson <sjay@noospam.com> wrote:
>Ok, guys. What would be examples of good, used, lower cost rf analyzers
>that I could look for that wouldn't break the bank. Say 500 Mhz bandwidth
>(150 Mhz minimal acceptable).

In the September and October 1989 issues of Radio-Electronics, there is an article by Fred Baumgartner on a build-it-yourself spectrum analyzer. The "hard part" is done by a Zenith TV tuner module that converts 50-600 Mhz to 63 MHz (Channel 3) output. This is followed by a TDA7000 FM receiver chip. There is a 555 to generate the swept tuning voltage for the tuner and another oscillator for sync. They were selling a complete kit of parts for $187 in 1989, which is around $280 today.

Matt Roberds

3003. Synchronous detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 08:30:29 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <Faaq9.8547$334.17292@news-server.bigpond.net.au>
Source record: 40716

Hi All

I'm trying to build a synchronous AM detector for use in a DX TV receiver.I need to use a discrete version rather than use one of the TDA-series IF and detector ICs intended for consumer TVs. If anybody can steer me towards some schematics I could as a starting point, I'd be grateful.

TIA

Steve Andrew

3004. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 08:55:59 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3da93503.3297594@news.cantech.net.au>
Source record: 40717

On Sat, 12 Oct 2002 18:26:37 +0200, Markus Baertschi
<markus@markus.org> wrote:

>
>I recently got an almost new, but mechanically broken Lithium-Ion laptop
>battery-pack. It contains 6 3.6V 1.8AH battery cells. Two of those could
>make a perfect 7.2V 1.8AH battery pack for my FT-50r. To charge the pack
>I'll use a MAHA 777-plus universal charger.
>
>Am I overlooking something ?

the protection module

>If no then I'll just have to find a broken battery pack te re-use the
>housing.
>
>Markus

3005. Re: Repairing my Yaesu FT-847

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 10:00:36 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <zDbq9.9485$345.446720@newsfep2-win.server.ntli.net>
Source record: 40739

> If you were lucky enogh, only a diode inside the PA might have burned.
> Usually there's a high current diode inside the PA, its purpose being
> exactly that of protecting the PA and maybe the rest of the tcvr against
> accidental reverse polarity supply. Hope that's all.
>
> Good luck,
> Cirip
==========
> > I think I have screwed up big time! I was moving stuff around in the
> shack,
> > had everything pulled out an was re-arranging things. In this process,
I
> > accidentally hooked my FT-847 up with reverse polarity! It popped and
> > smoked and of course it is now dead! I took the cover off and looked
for
> > burns, but did not see anything obvious. The fuse is good but it does
> smell
> > burnt inside. I'm not a repair person so I am in need of a reference
for
> a
> > good Yaesu repair person or would I be better off sending it back to
> Yaesu?
> > Any thoughts on what I may have damaged.
======
With the fuse reportedly still 'good' it seems there is NO reversed polarity protection diode inside the transceiver.

My advice would be to have an external hefty 40 Amperes diode (connected reverse polarity) across the transceiver's power input with a separate (rig rated) fuse on the supply side. Upon reverse polarity connection the diode will conduct and blow the fuse.

Alternatively , reverse polarity connection can be avoided by using Anderson PowerPole connectors ,available (I believe) for a current rating to up to 30 Amperes.
See also QST - Oct 2002 ,page 59.

Note : For low(er) power consuming devices , like a TNC I usually fit a diode in the supply line ,accepting the 0.7 voltage drop across the diode. This is also done in leads to portable measuring instruments requiring external DC power.

Frank gm0csz.kn6wh@ntlworld.com

3006. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 10:08:15 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <ADbq9.9486$345.446720@newsfep2-win.server.ntli.net>
Source record: 40740

> >I recently got an almost new, but mechanically broken Lithium-Ion laptop
> >battery-pack. It contains 6 3.6V 1.8AH battery cells. Two of those could
> >make a perfect 7.2V 1.8AH battery pack for my FT-50r. To charge the pack
> >I'll use a MAHA 777-plus universal charger.
> >
> >Am I overlooking something ?
>
> the protection module
=========
With 'the protection module ' ,do you mean just an internal fuse ,or
something more elaborate ?

Frank gm0csz.kn6wh@ntlworld.com

3007. Re: Synchronous detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 11:59:39 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1310020800420001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40718

In article <Faaq9.8547$334.17292@news-server.bigpond.net.au>, "Steve Andrew" <sjandrew@bigpond.net.au> wrote:

> Hi All
>
> I'm trying to build a synchronous AM detector for use in a DX TV receiver.I
> need to use a discrete version rather than use one of the TDA-series IF and
> detector ICs intended for consumer TVs. If anybody can steer me towards some
> schematics I could as a starting point, I'd be grateful.
>
> TIA
>
> Steve Andrew

Try the National Semiconductor web site for app notes on balanced mixers, etc. They will all be in the linear ic app's.

Steve
WB4CZR

3008. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 12:08:18 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1310020809210001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40719

In article <3da93503.3297594@news.cantech.net.au>,
budgie@nowhere.cantech.net.au (budgie) wrote:

> On Sat, 12 Oct 2002 18:26:37 +0200, Markus Baertschi
> <markus@markus.org> wrote:
>
> >
> >I recently got an almost new, but mechanically broken Lithium-Ion laptop
> >battery-pack. It contains 6 3.6V 1.8AH battery cells. Two of those could
> >make a perfect 7.2V 1.8AH battery pack for my FT-50r. To charge the pack
> >I'll use a MAHA 777-plus universal charger.
> >
> >Am I overlooking something ?
>
> the protection module
>
>
> >If no then I'll just have to find a broken battery pack te re-use the
> >housing.
> >
> >Markus

If you maintain the original package for the battery and use the same charger, you won't get good charging curves, but the protection circuit should still keep you from blowing up. Otherwise, use a constant current charger with a low charge rate. It'll take forever to charge fully, but it is better than nothing. For this type of app, I usually set my power supply for a voltage above the final one of the battery and set my current limit at C/20 where C is the capacity of the battery (e.g. 1200 mAH C=1200 mA). I usually also making up some charger contacts using paper clips and alligator jumpers to my supply.

Purists, please don't flame me. This is far from optimum, but this is not a quest for perfection. The poor guy needs something cheap not fantastic.

Steve WB4CZR

3009. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 13:33:19 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <zCeq9.206881$TX5.8622133@news1.east.cox.net>
Source record: 40721

First thing to check is the power supply voltages.

Should be a CD ROM version of the manual on eBay. Don't
know how good it is.

Pete

"Richard Hosking" <richardh@iinet.net.au> wrote in message
news:3da96dd1$0$3110@echo-01.iinet.net.au...
> It just suddenly stopped. No output
> Freq Indicator 000000000Hz. Metering and other functions appear OK
> Any ideas about what happens to these?
> I understand they are fairly complex.
> I dont have a manual - guess I will look on E Bay
>
> Richard
>
>

3010. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 14:10:43 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1310021011460001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40722

In article <zCeq9.206881$TX5.8622133@news1.east.cox.net>, " Uncle Peter"
<radioconnectionNO@cox.netSPAM> wrote:

> First thing to check is the power supply voltages.
>
> Should be a CD ROM version of the manual on eBay. Don't
> know how good it is.
>
> Pete
>
> "Richard Hosking" <richardh@iinet.net.au> wrote in message
> news:3da96dd1$0$3110@echo-01.iinet.net.au...
> > It just suddenly stopped. No output
> > Freq Indicator 000000000Hz. Metering and other functions appear OK
> > Any ideas about what happens to these?
> > I understand they are fairly complex.
> > I dont have a manual - guess I will look on E Bay
> >
> > Richard
> >
> >

Pete gives great advise. That is always the one thing that I check first. Also try the timebase if you have a scope. If you don't, then use a DC meter on the clock out and see if the voltage is midrail. A 5 vdc clock running at 50% duty cycle should give you an average of 2.5 v. Both methods involve testing with no documentation. If you still measure okay, don't stop there. These are preliminary readings.

I almost forgot! Look for "fog in the cockpit". Sometimes, you'll do something silly like put the thing in external time base (switch on the back of the unit) or hit the wrong resolution switch. I, for one, won't laugh at you if you come back on the forum and say something to this affect. I've done it a zillion times and I've been doing this stuff since 1962. I guess I'm human and my engineering degree doesn't qualify me otherwise. :-)

Happy Trails,

Steve (the old fart) WB4CZR
Plantation, FL

3011. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 14:20:22 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3DA98125.36757ACF@ix.netcom.com>
Source record: 40723

Uncle Peter wrote:

> First thing to check is the power supply voltages.
>

If it is not anything obvious in the power supplies, a fairly common fault used to be the power transformer pins making poor connection to the mother board, or even breaking off. Make sure the transformer is firmly fixed in place. There are tell tale LEDs on the power supply boards btw.

Due to the size of the foldouts, they are hard for me to scan, but ask if there is anything that I can help with.

With the book, easy, without it, a nightmare!
Good luck,
Dan

3012. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 14:50:38 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1310021051410001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40724

In article <3DA98125.36757ACF@ix.netcom.com>, Dan Rae <rae4@ix.netcom.com>
wrote:

> Uncle Peter wrote:
>
> > First thing to check is the power supply voltages.
> >
>
> If it is not anything obvious in the power supplies, a fairly common
> fault used to be the power transformer pins making poor connection to
> the mother board, or even breaking off. Make sure the transformer is
> firmly fixed in place. There are tell tale LEDs on the power supply
> boards btw.
>
> Due to the size of the foldouts, they are hard for me to scan, but ask
> if there is anything that I can help with.
>
> With the book, easy, without it, a nightmare!
> Good luck,
> Dan

Dan brings up a good point. It's been a long time since I opened an 8640,
but being a very clean RF gen it has loads of shields and lots of pages of
documentation to cover the loads of modules contained in the box.
Troubleshooting will be hard, but not insurmountable. Even after all
these years, it is probably one of the best rf sources around for doing
off channel measurements. It is definitely worth the effort to fix unless
you want to buy an 8642, which costs more than what I paid for my house.
:-)

Steve WB4CZR

3013. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 15:39:31 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <Owgq9.2013$f43.56562@newsfep2-gui>
Source record: 40727

"carltons" <motsteve@attbi.com> wrote in message
news:motsteve-1310020809210001@c-66-176-144-254.se.client2.attbi.com...
> In article <3da93503.3297594@news.cantech.net.au>,
> budgie@nowhere.cantech.net.au (budgie) wrote:
>
> > On Sat, 12 Oct 2002 18:26:37 +0200, Markus Baertschi
> > <markus@markus.org> wrote:
> >
> > >
> > >I recently got an almost new, but mechanically broken Lithium-Ion
laptop
> > >battery-pack. It contains 6 3.6V 1.8AH battery cells. Two of those
could
> > >make a perfect 7.2V 1.8AH battery pack for my FT-50r. To charge the
pack
> > >I'll use a MAHA 777-plus universal charger.
> > >
> > >Am I overlooking something ?
> >
> > the protection module
> >
> >
> > >If no then I'll just have to find a broken battery pack te re-use the
> > >housing.
> > >
> > >Markus
>
>
> If you maintain the original package for the battery and use the same
> charger, you won't get good charging curves, but the protection circuit
> should still keep you from blowing up. Otherwise, use a constant current
> charger with a low charge rate. It'll take forever to charge fully, but
> it is better than nothing. For this type of app, I usually set my power
> supply for a voltage above the final one of the battery and set my current
> limit at C/20 where C is the capacity of the battery (e.g. 1200 mAH C=1200
> mA). I usually also making up some charger contacts using paper clips and
> alligator jumpers to my supply.
>
> Purists, please don't flame me. This is far from optimum, but this is not
> a quest for perfection. The poor guy needs something cheap not fantastic.
=====
No flaming intended ,but we talk here about Li-ion not NiCad or NiMH
batteries .
Li-ion batteries need a different charging procedure and the MAHA -C777PLUS

charger does just that ,in addition to NiCads and NiMHs.

Frank gm0csz.kn6wh@ntlworld.com

3014. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 15:44:10 UTC
From: UnTale <i@i.com>
Message-ID: <exgq9.25414$%M1.657630@twister2.libero.it>
Source record: 40725

> I dont have a manual - guess I will look on E Bay
> Richard

try here:
http://www.logsa.army.mil/etms/find_etm.cfm
you'll find two file:
the first is service and user manual (11 Mbyte/ 409 pages)
the second is the part list (some Kbyte and 40 byte)
bye
--
73 de iz7ath, Talino

Homebrew, RF projects and digital tecniques on
http://www.qsl.net/iz7ath
IZ7ATH Talino +39 338 5029196

3015. Re: Repairing my Yaesu FT-847

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 15:47:46 UTC
From: "Gary P. Fiber" <foo@bar.invalid>
Message-ID: <0a5jquk9jj8kag9g1khusauucephg23ptp@4ax.com>
Source record: 40726

On Sun, 13 Oct 2002 01:32:43 GMT, "cirip" <cirip@yahoo.com> wrote:

>Hi Larry,
>
>If you were lucky enogh, only a diode inside the PA might have burned.
>Usually there's a high current diode inside the PA, its purpose being
>exactly that of protecting the PA and maybe the rest of the tcvr against
>accidental reverse polarity supply. Hope that's all.
>
>Good luck,
>Cirip
>
>"Larry Bratcher" <lbratche@swbell.net> wrote in message
>news:sI3q9.5857$K_.990836806@newssvr30.news.prodigy.com...
>> I think I have screwed up big time! I was moving stuff around in the
>shack,
>> had everything pulled out an was re-arranging things. In this process, I
>> accidentally hooked my FT-847 up with reverse polarity! It popped and
>> smoked and of course it is now dead! I took the cover off and looked for
>> burns, but did not see anything obvious. The fuse is good but it does
>smell
>> burnt inside. I'm not a repair person so I am in need of a reference for
>a
>> good Yaesu repair person or would I be better off sending it back to
>Yaesu?
>> Any thoughts on what I may have damaged.
>>
>> Thanks
>>
>> Larry
>>
>>
>
The diode is supposed to conduct and blow the fuse in the negative
lead when polarity is reversed, thus providing the protection. The
diode alone will not provide any protection. If both fuses are good he
will be lucky to not have any damage.

Gary K8IZ

3016. Chip

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 16:46:40 UTC
From: Bill Hennessy <hennessy@281.com>
Message-ID: <3da9a2c9$0$50571$9a6e19ea@news.newshosting.com>
Source record: 40728

I have looked all over the net for a AM radio on a chip. Thay don't make them anymore. I hear their are AM/FM radios on a chip. Can anyone tell me what thay are called? And, who carries them?

Bill, N5NOB

3017. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 17:21:07 UTC
From: Mike Monett <kdpwh9p001@sneakemail.com>
Message-ID: <3DA9AB83.2E59@sneakemail.com>
Source record: 40730

UnTale wrote:
>
> > I dont have a manual - guess I will look on E Bay
> > Richard
>
> try here:
> http://www.logsa.army.mil/etms/find_etm.cfm
> you'll find two file:
> the first is service and user manual (11 Mbyte/ 409 pages)
> the second is the part list (some Kbyte and 40 byte)
> bye
> --
> 73 de iz7ath, Talino
>
> Homebrew, RF projects and digital tecniques on
> http://www.qsl.net/iz7ath
> IZ7ATH Talino +39 338 5029196

Hi Talino,

Thanks for the url - I would love to get the service manual for the HP8640.

Unfortunately, the site requires browsers with 128bit encryption. I use Explorer 5.0 which has 128bit, but it doesn't pass their browser check.

Can you give the url for the HP8640? Maybe the site will allow me to download it directly.

If not, is there anyone with a wideband connection who is willing to email me this file? I would sure appreciate it!

73, Mike

3018. Re: Calculating self-capacitance of an inductor?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 17:30:18 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aocaja$43i$1@venus.btinternet.com>
Source record: 40729

For design of square frame antennas, VLF to HF, dimensions, width, number of turns, wire size, wire spacing, tuning capacitance needed for given frequency, self-capacitance, Q -

Download in a few seconds program RJELOOP3 from website below. Run immediately. User friendly.

========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================

3019. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 17:54:28 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1310021355320001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40731

In article <3DA9AB83.2E59@sneakemail.com>, Mike Monett
<kdpwh9p001@sneakemail.com> wrote:

> UnTale wrote:
> >
> > > I dont have a manual - guess I will look on E Bay
> > > Richard
> >
> > try here:
> > http://www.logsa.army.mil/etms/find_etm.cfm
> > you'll find two file:
> > the first is service and user manual (11 Mbyte/ 409 pages)
> > the second is the part list (some Kbyte and 40 byte)
> > bye
> > --
> > 73 de iz7ath, Talino
> >
> > Homebrew, RF projects and digital tecniques on
> > http://www.qsl.net/iz7ath
> > IZ7ATH Talino +39 338 5029196
>
> Hi Talino,
>
> Thanks for the url - I would love to get the service manual for the
> HP8640.
>
> Unfortunately, the site requires browsers with 128bit encryption. I use
> Explorer 5.0 which has 128bit, but it doesn't pass their browser check.
>
> Can you give the url for the HP8640? Maybe the site will allow me to
> download it directly.
>
> If not, is there anyone with a wideband connection who is willing to
> email me this file? I would sure appreciate it!
>
> 73, Mike

If I remember correctly, the 8640 manual was about 5 cm thick and was more
than just one manual. Try the obvious stuff first and worry about a
manual later, although it is nice to have.

Steve

3020. Re: Synchronous detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 18:08:03 UTC
From: la8ak.xnd@online.no
Message-ID: <3da9658d.163650581@news.online.no>
Source record: 40732

On Sun, 13 Oct 2002 11:59:39 GMT, motsteve@attbi.com (carltons) wrote:

>In article <Faaq9.8547$334.17292@news-server.bigpond.net.au>, "Steve
>Andrew" <sjandrew@bigpond.net.au> wrote:
>
>> Hi All
>>
>> I'm trying to build a synchronous AM detector for use in a DX TV receiver.I
>> need to use a discrete version rather than use one of the TDA-series IF and
>> detector ICs intended for consumer TVs. If anybody can steer me towards some
>> schematics I could as a starting point, I'd be grateful.
>>
>> TIA
>>
>> Steve Andrew
>
>
>Try the National Semiconductor web site for app notes on balanced mixers,
>etc. They will all be in the linear ic app's.
>
>Steve
>WB4CZR

I understood that he wished to do it with discrete components rather
than IC's for a reason or another. Remember the MC1330 a quasi
synchronous detector, tried it for AM, but no success, better was
TDA1576, TBA120/SN76660N and MC1351 (and NE/SA604/614) on 455kHz.
The true synchr. detector requires a PLL tuned VCO. Believe ARRL
handbook shows such circuit, but for 455kHz, but for TV the IF is
33.4-38.9MHz (32.9 in England) and 38.9 is the VISION carrier freq.

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

3021. Yaesu FT-901/902 frequency jumps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 18:08:03 UTC
From: la8ak.xnd@online.no
Message-ID: <3da9b4c1.183929757@news.online.no>
Source record: 40733

wonder if somebody has any experience why frequency jumps, seems to be a problem for FT-901 as well as FT-902. A suggestion is bad decoupling capacitors, but if somebody has particular experience in curing just this type of rig it woul save me lot of trouble

It is possible to use the memory and lock it to a steady frequency, so it might indicate the problem is found in the VFO

73
Jan-Martin
LA8AK

--
remove ,xnd to reply

3022. Re: Wavetek Sam I used as RF spectrum analyzer??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 20:11:44 UTC
From: Robert Mozeleski <moz@ncx.com>
Message-ID: <uqjo1gc4sutq32@corp.supernews.com>
Source record: 40734
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design,sci.electronics.equipment,sci.electronics.misc

I've got 2 Avantek CR/CT 2000 catv analyzers and sweep transmitters here for sale. 300mhz? All manuals included. 1 works fine,
other will work if you swap out a few boards.

"AJ Sanderson" <sjay@noospam.com> wrote in message news:ao9eue$55c$1@nntp9.atl.mindspring.net...
> Ok, guys. What would be examples of good, used, lower cost rf analyzers
> that I could look for that wouldn't break the bank. Say 500 Mhz bandwidth
> (150 Mhz minimal acceptable).
>
> AJ
>
>
> "Man Li" <manli88@netvigator.com> wrote in message
> news:ao9ecp$5ub4@imsp212.netvigator.com...
> > No you should not use it as spectrum analyzer unless you only need a very
> > simple, low resolution and poor accuracy analyzer.
> > Bye.
> >
> > Man
> >
> > "AJ Sanderson" <sjay@noospam.com> ���g��l��s�D
> > :ao7ak3buv1@slb5.atl.mindspring.net...
> > > I recently read a post where a gentlemen is using a Wavetek Sam I catv
> > > analyzer as a 4-400 Mhz spectrum analyzer at low cost. Is this possible
> > and
> > > how does such a unit compare with regular commercial spectrum analyzers?
> > > I'd like to find out a little more about this unit... is it solid state,
> > can
> > > it be used at 50 ohm impedance, accuracy specs, step attenuator, easily
> > > serviced, etc.... so I'd appreciate any such posts from someone using
> this
> > > unit as an RF analyzer.
> > >
> > > Thanks,
> > > AJ
> > >
> > >
> > >
> >
> >
>
>

3023. Re: Chip

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 21:18:16 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <Brlq9.4261$JJ4.88150@newsfep1-win.server.ntli.net>
Source record: 40735

> I have looked all over the net for a AM radio on a chip. They don't make
> them anymore. I hear their are AM/FM radios on a chip. Can anyone tell
me
> what thay are called? And, who carries them?
==========
A common AM radio on a chip is the MK484 . It is a 3 terminal device looking
like a plastic transistor
Here in the UK the G-QRP Club are selling the device for equiv. US$ 1.50 a
piece (including a circuit diagramme).

I am sure it is available in the USA ; suggest you check with Digi-Key or
Mouser.

Frank gm0csz.kn6wh@ntlworld.com

3024. Re: Synchronous detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 21:26:44 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <oylq9.10288$334.23024@news-server.bigpond.net.au>
Source record: 40736

J M Noeding <la8ak.xnd@online.no> wrote in message
news:3da9658d.163650581@news.online.no...
> On Sun, 13 Oct 2002 11:59:39 GMT, motsteve@attbi.com (carltons) wrote:
>
> >In article <Faaq9.8547$334.17292@news-server.bigpond.net.au>, "Steve
> >Andrew" <sjandrew@bigpond.net.au> wrote:
> >
> >> Hi All
> >>
> >> I'm trying to build a synchronous AM detector for use in a DX TV
receiver.I
> >> need to use a discrete version rather than use one of the TDA-series IF
and
> >> detector ICs intended for consumer TVs. If anybody can steer me towards
some
> >> schematics I could as a starting point, I'd be grateful.
> >>
> >> TIA
> >>
> >> Steve Andrew
> >
> >
> >Try the National Semiconductor web site for app notes on balanced mixers,
> >etc. They will all be in the linear ic app's.
> >
> >Steve
> >WB4CZR
>
> I understood that he wished to do it with discrete components rather
> than IC's for a reason or another. Remember the MC1330 a quasi
> synchronous detector, tried it for AM, but no success, better was
> TDA1576, TBA120/SN76660N and MC1351 (and NE/SA604/614) on 455kHz.
> The true synchr. detector requires a PLL tuned VCO. Believe ARRL
> handbook shows such circuit, but for 455kHz, but for TV the IF is
> 33.4-38.9MHz (32.9 in England) and 38.9 is the VISION carrier freq.
>
> 73
> Jan-Martin
> LA8AK
> --
My reason for using discretes is that I want to retain manual IF gain
control, rather than use AGC. The TDA (and other) series of ICs made for TV
all use synchronous detection but I have not yet found an IC where I can
bypass the in-built AGC and control IF manually. If anyone knows of one then

my problem is solved.
I've checked my various ARRL handbooks, (latest is 1992) but can find no reference to synchronous detection. My thoughts were running along the same lines, PLL, VFO running between 32 and 39mHz.

3025. Re: Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 21:28:51 UTC
From: "Paul R. Bennett" <rffox@gru.net>
Message-ID: <3DA9E56D.4C67D579@gru.net>
Source record: 40738

Chuckles
Because slide rules were a very simple, yet powerful tool. And, once you learned, were really simple. I work in a computer science department, with computer scientists. Don't get me started... We don't want to go there. And I am a gentleman and would prefer to pretend I did not know that kind of language as I would, no doubt, cut loose with.
And, with deepest respect to the gentleman who posted the link to the slide rule page... Thank You! Thank you very much!
And I have placed my old trig Pickett in my desk drawer, where I can get hold of it when I need it.
Well, I need to sit down and put together the lighting detector as was in a QST a bit back. I finally got the few parts I could not find in my collection of "Junque".
Paul.

"Peter O. Brackett" wrote:

> Paul:
>
> Heh, heh... way back then we never had "Slide Rule Scientists", why now do
> we have "Computer Scientists"?
>
> "Computer Science is no more about computers than Astronomy is about
> telescopes." -- E. Dijkstra [RIP]
>
> --Peter K1PO
> Indialantic By-the-Sea, FL.
>
> "Paul R. Bennett" <rffox@gru.net> wrote in message
> news:3DA89070.E5DA369D@gru.net...
> > Never owned one of those... but this is wonderful.
> > I have a home computer, but I never really think of it for doing
> > mathmatics. I usually grab a pencil and paper. Then I went cleaning the
> > place and found my two old Pickett slide rules. One was a simple trig and
> > the other a log-log. This made math fun again. And they were fast. At
> > least as fast as trying to call up the calculator in windows.
> > For the simpler things, it is rather like riding a bicycle... you don't
> > forget. For me anyway. But then, when I was going to school there was no
> > such thing as a pocket calculator and the slide rule was actually a
> college
> > course.
> > Just coolness.
> >
> > Paul Bennett
> > N4EGO

> > (Skywarn, Emergency Services Volunteer, boat anchor collector)
> > www.rffox.org
> >
> > Dick wrote:
> >
> > > Please forgive the slightly off topic subject but I think this is
> > > probably the one ng that will have subscribers that:
> > >
> > > a. Know what I'm talking about
> > > &
> > > b. Might be able to help.
> > >
> > > The other day I decided to have a nostalgia trip and do some design work
> > > the old way using my long retired Pickett slide rule, this was a mistake
> > > as it became quickly apparent that I'd totally forgotten how to use the
> > > specialist scales !!!! Now I know it's possible to use the rule to do
> > > the electronic design calculations I wanted but could I b*****y work out
> > > how those scales operated.
> > >
> > > Has anyone out there ever owned a Pickett N-16-ES Electronic(s) Slide
> > > Rule and, more importantly, can remember how to use it ? Even better,
> > > does anyone have a copy of the instruction booklet hidden away they
> > > could scan in for me.
> > >
> > > I think my instruction book went adrift 30+ years ago, you know - about
> > > the time when you're so confident in using something that you tell
> > > yourself it's like riding a bike, something that you'll never forget
> > > ..... I know, been there, seen it, got the T-shirt
> > > !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
> > >
> > > There is a Pickett web site but this particular model doesn't seem to
> > > figure on it for some reason.
> > > --
> > > Dick
> > > GM0MNL
> >

3026. Re: Synchronous detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 21:29:48 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <gBlq9.10293$334.23236@news-server.bigpond.net.au>
Source record: 40737

Steve Andrew <sjandrew@bigpond.net.au> wrote in message
news:oylq9.10288$334.23024@news-server.bigpond.net.au...
>
> J M Noeding <la8ak.xnd@online.no> wrote in message
> news:3da9658d.163650581@news.online.no...
> > On Sun, 13 Oct 2002 11:59:39 GMT, motsteve@attbi.com (carltons) wrote:
> >
> > >In article <Faaq9.8547$334.17292@news-server.bigpond.net.au>, "Steve
> > >Andrew" <sjandrew@bigpond.net.au> wrote:
> > >
> > >> Hi All
> > >>
> > >> I'm trying to build a synchronous AM detector for use in a DX TV
> receiver.I
> > >> need to use a discrete version rather than use one of the TDA-series
IF
> and
> > >> detector ICs intended for consumer TVs. If anybody can steer me
towards
> some
> > >> schematics I could as a starting point, I'd be grateful.
> > >>
> > >> TIA
> > >>
> > >> Steve Andrew
> > >
> > >
> > >Try the National Semiconductor web site for app notes on balanced
mixers,
> > >etc. They will all be in the linear ic app's.
> > >
> > >Steve
> > >WB4CZR
> >
> > I understood that he wished to do it with discrete components rather
> > than IC's for a reason or another. Remember the MC1330 a quasi
> > synchronous detector, tried it for AM, but no success, better was
> > TDA1576, TBA120/SN76660N and MC1351 (and NE/SA604/614) on 455kHz.
> > The true synchr. detector requires a PLL tuned VCO. Believe ARRL
> > handbook shows such circuit, but for 455kHz, but for TV the IF is
> > 33.4-38.9MHz (32.9 in England) and 38.9 is the VISION carrier freq.
> >
> > 73
> > Jan-Martin

> > LA8AK
> > --
> My reason for using discretes is that I want to retain manual IF gain
> control, rather than use AGC. The TDA (and other) series of ICs made for
TV
> all use synchronous detection but I have not yet found an IC where I can
> bypass the in-built AGC and control IF manually. If anyone knows of one
then
> my problem is solved.
> I've checked my various ARRL handbooks, (latest is 1992) but can find no
> reference to synchronous detection. My thoughts were running along the
same
> lines, PLL, VFO running between 32 and 39mHz.
>
Sorry - Forgot to mention my current IF setup is MC1330 gain controlable IF
amp followed by MC1350 amp/detector. Looking at the internal circuit for the
MC1350, it looks like a normal envelope detector.

3027. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 22:22:49 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3DA9F238.FBABF81B@nettally.com>
Source record: 40741

Check the reference oscillator. Also the INT/EXT switch should be set to
INT

Richard Hosking wrote:

> It just suddenly stopped. No output
> Freq Indicator 000000000Hz. Metering and other functions appear OK
> Any ideas about what happens to these?
> I understand they are fairly complex.
> I dont have a manual - guess I will look on E Bay
>
> Richard

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

3028. Re: Chip

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-13 22:53:48 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <0Qmq9.209947$TX5.8722561@news1.east.cox.net>
Source record: 40742

Bill

Probably a Motorola or National chip. I'd bet that you can
still the find AM receiver IC by using an equivalent NTE replacement.

Pete

"Bill Hennessy" <hennessy@281.com> wrote in message
news:3da9a2c9$0$50571$9a6e19ea@news.newshosting.com...
> I have looked all over the net for a AM radio on a chip. Thay don't make
> them anymore. I hear their are AM/FM radios on a chip. Can anyone tell
me
> what thay are called? And, who carries them?
>
> Bill, N5NOB
>
>

3029. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 00:11:07 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uqmnateent12ef@corp.supernews.com>
Source record: 40781

"Dick Carroll" <dixie@townsqr.com> wrote in message
news:aoen4ukcu0@208.206.142.90...

> Seems you're saying there's a definite explosion hazard involved with

Yes, that is correct. I'm surprised you were able to get LiIon cells.
Manufacturers generally don't want to sell the batteries without reviewing
the protection circuitry to avoid liability. These things are nasty, and
manufacturers recommend 2, preferably 3, independent, circuits to avoid
overcharging.

Explosion is perhaps a bit strong of a word. The battery burns with an
extremely hot flame which emits toxic gasses. Water will make it worse, and
CO2 or dry power extinguishers won't touch it (although they won't make it
worse like water). One manufacturer suggests that a CO2 extinguisher will
at least cool the surrounding area preventing the fire from spreading, but
without the appropriate gas mask, that's a sort of academic concern.

Don't confuse lithium ion cells with lithium primary cells which are
relatively tame.

..

3030. Re: Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 01:57:31 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <aod8a3$c0$1@slb6.atl.mindspring.net>
Source record: 40744

Paul:

Heh, heh... no offense meant.

Some of my best friends are computer scientists.

I've noted over the years that computer scientists just don't seem to know very much intimate detail about computers. It seems, judging from his famous quatiation about astronomy and telescopes, that one of the most famous computer scientists, E. Dijkstra has noted the same... I've often thought that it is too bad about that misnomer created to define the "computer scientist", which unfortunately leads one to believe that such folks are experts on computers, but then what else could we have called them! Algorithm scientists, programming scientists, data scientists, what?

Slide rules are computers, they are extremely efficient analog computers, and of course there were electronic analog computers in wide use long before the advent of the digital computer and modern computer science.

Since I was helping with the design, development and manufacture of analog and digital computers way back when there were hardly any computer scientists, my perceptions of that particular kind of "scientist" might be tainted a little by my personal experiences with the first few whom I encountered. Hence my sceptical nature regarding the intimate familiarity with computers of modern computer scientists.

BTW... From appearances alone... it seems to me to be so much easier to "admire" the clearly obvious ingenuity present in a handsome slide rule than a digital computer. You simply can't see the "ingenious bits" in a digital computer, all you see is a keyboard and a screen... it looks sort of like a teletype terminal.

Best,

--Peter K1PO
Indialantic By-the-Sea, FL.

"Paul R. Bennett" <rffox@gru.net> wrote in message news:3DA9E56D.4C67D579@gru.net...
> Chuckles
> Because slide rules were a very simple, yet powerful tool. And, once you
> learned, were really simple. I work in a computer science department, with
> computer scientists. Don't get me started... We don't want to go there. And I
> am a gentleman and would prefer to pretend I did not know that kind of language

> as I would, no doubt, cut loose with.
> And, with deepest respect to the gentleman who posted the link to the
slide rule
> page... Thank You! Thank you very much!
> And I have placed my old trig Pickett in my desk drawer, where I can get
hold of
> it when I need it.
> Well, I need to sit down and put together the lighting detector as was in
a QST
> a bit back. I finally got the few parts I could not find in my collection
of
> "Junque".
> Paul.
>
> "Peter O. Brackett" wrote:
>
> > Paul:
> >
> > Heh, heh... way back then we never had "Slide Rule Scientists", why now
do
> > we have "Computer Scientists"?
> >
> > "Computer Science is no more about computers than Astronomy is about
> > telescopes." -- E. Dijkstra [RIP]
> >
> > --Peter K1PO
> > Indialantic By-the-Sea, FL.
> >
> > "Paul R. Bennett" <rffox@gru.net> wrote in message
> > news:3DA89070.E5DA369D@gru.net...
> > > Never owned one of those... but this is wonderful.
> > > I have a home computer, but I never really think of it for doing
> > > mathmatics. I usually grab a pencil and paper. Then I went cleaning
the
> > > place and found my two old Pickett slide rules. One was a simple trig
and
> > > the other a log-log. This made math fun again. And they were fast.
At
> > > least as fast as trying to call up the calculator in windows.
> > > For the simpler things, it is rather like riding a bicycle... you
don't
> > > forget. For me anyway. But then, when I was going to school there
was no
> > > such thing as a pocket calculator and the slide rule was actually a
> > college
> > > course.
> > > Just coolness.
> > >
> > > Paul Bennett
> > > N4EGO

> > > (Skywarn, Emergency Services Volunteer, boat anchor collector)
> > > www.rffox.org
> > >
> > > Dick wrote:
> > >
> > > > Please forgive the slightly off topic subject but I think this is
> > > > probably the one ng that will have subscribers that:
> > > >
> > > > a. Know what I'm talking about
> > > > &
> > > > b. Might be able to help.
> > > >
> > > > The other day I decided to have a nostalgia trip and do some design
work
> > > > the old way using my long retired Pickett slide rule, this was a
mistake
> > > > as it became quickly apparent that I'd totally forgotten how to use
the
> > > > specialist scales !!!! Now I know it's possible to use the rule to
do
> > > > the electronic design calculations I wanted but could I b*****y work
out
> > > > how those scales operated.
> > > >
> > > > Has anyone out there ever owned a Pickett N-16-ES Electronic(s)
Slide
> > > > Rule and, more importantly, can remember how to use it ? Even
better,
> > > > does anyone have a copy of the instruction booklet hidden away they
> > > > could scan in for me.
> > > >
> > > > I think my instruction book went adrift 30+ years ago, you know -
about
> > > > the time when you're so confident in using something that you tell
> > > > yourself it's like riding a bike, something that you'll never forget
> > > > ..... I know, been there, seen it, got the T-shirt
> > > > !!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
> > > >
> > > > There is a Pickett web site but this particular model doesn't seem
to
> > > > figure on it for some reason.
> > > > --
> > > > Dick
> > > > GM0MNL
> > >
>

3031. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 02:23:22 UTC
From: gcd <gab36spam@bigpond.com>
Message-ID: <%Kpq9.52142$g9.151750@newsfeeds.bigpond.com>
Source record: 40745

Hi Richard,
re the LOGSA site, a few things before downloading a new IE (which probably couldnt hurt anyway)

1) This site uses a security certificate, and i'm not sure you can go direct to the ETMS page without going through the front door if you've never been to the site before.

2) If you are using a firewall, check it's settings to make sure the certificate can get through.

I've downloaded the 8640 manual from there, not the greatest, but readable.

Cheers
Greg
vk3xyz, vk3ved

"Richard Hosking" <richardh@iinet.net.au> wrote in message news:3daa0796$0$4432@echo-01.iinet.net.au...
> Dear all
>
> Thanks for all the helpful info
> In reponse to various posts
>
> The INT/EXT switch is INT :(
>
> The timebase out next to the INT/EXT switch shows a triangle wave about
> 1.75V P-P period 0.2 uS ie 5 MHz
>
> The display registers and the various indicators appear to have power so I
> presume the power transformer is OK
>
> I tried accessing the manual site that was suggested but I also got a
> browser error message - guess I wil have to download another version of IE.
>
> There is no signal discenible on on external receiver
>
> The counter wont work on external mode
>
> I would be grateful any further ideas.
> Thanks for your tolerance!
>
> Richard
>
>

> Richard Hosking <richardh@iinet.net.au> wrote in message
> news:3da96dd1$0$3110@echo-01.iinet.net.au...
> > It just suddenly stopped. No output
> > Freq Indicator 000000000Hz. Metering and other functions appear OK
> > Any ideas about what happens to these?
> > I understand they are fairly complex.
> > I dont have a manual - guess I will look on E Bay
> >
> > Richard
> >
> >
>
>

3032. My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 03:58:33 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3da96dd1$0$3110@echo-01.iinet.net.au>
Source record: 40720

It just suddenly stopped. No output
Freq Indicator 000000000Hz. Metering and other functions appear OK
Any ideas about what happens to these?
I understand they are fairly complex.
I dont have a manual - guess I will look on E Bay

Richard

3033. Re: Synchronous detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 04:30:24 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0210132030.416e1209@posting.google.com>
Source record: 40746

"Steve Andrew" <sjandrew@bigpond.net.au> wrote in message
news:<gBlq9.10293$334.23236@news-server.bigpond.net.au>...
> Steve Andrew <sjandrew@bigpond.net.au> wrote in message
> news:oylq9.10288$334.23024@news-server.bigpond.net.au...
> >
> > J M Noeding <la8ak.xnd@online.no> wrote in message
> > news:3da9658d.163650581@news.online.no...
> > > On Sun, 13 Oct 2002 11:59:39 GMT, motsteve@attbi.com (carltons) wrote:
> > >
> > > >In article <Faaq9.8547$334.17292@news-server.bigpond.net.au>, "Steve
> > > >Andrew" <sjandrew@bigpond.net.au> wrote:
> > > >
> > > >> Hi All
> > > >>
> > > >> I'm trying to build a synchronous AM detector for use in a DX TV
> receiver.I
> > > >> need to use a discrete version rather than use one of the TDA-series
> IF
> and
> > > >> detector ICs intended for consumer TVs. If anybody can steer me
> towards
> some
> > > >> schematics I could as a starting point, I'd be grateful.
> > > >>
> > > >> TIA
> > > >>
> > > >> Steve Andrew
> > > >
> > > >
> > > >Try the National Semiconductor web site for app notes on balanced
> mixers,
> > > >etc. They will all be in the linear ic app's.
> > > >
> > > >Steve
> > > >WB4CZR
> > >
> > > I understood that he wished to do it with discrete components rather
> > > than IC's for a reason or another. Remember the MC1330 a quasi
> > > synchronous detector, tried it for AM, but no success, better was
> > > TDA1576, TBA120/SN76660N and MC1351 (and NE/SA604/614) on 455kHz.
> > > The true synchr. detector requires a PLL tuned VCO. Believe ARRL
> > > handbook shows such circuit, but for 455kHz, but for TV the IF is
> > > 33.4-38.9MHz (32.9 in England) and 38.9 is the VISION carrier freq.
> > >

> > > 73
> > > Jan-Martin
> > > LA8AK
> > > --
> > My reason for using discretes is that I want to retain manual IF gain
> > control, rather than use AGC. The TDA (and other) series of ICs made for
> TV
> > all use synchronous detection but I have not yet found an IC where I can
> > bypass the in-built AGC and control IF manually. If anyone knows of one
> then
> > my problem is solved.
> > I've checked my various ARRL handbooks, (latest is 1992) but can find no
> > reference to synchronous detection. My thoughts were running along the
> same
> > lines, PLL, VFO running between 32 and 39mHz.
> >
> Sorry - Forgot to mention my current IF setup is MC1330 gain controlable IF
> amp followed by MC1350 amp/detector. Looking at the internal circuit for the
> MC1350, it looks like a normal envelope detector.

No, inside the MC1330 is a balanced modulator, with the input signal
going directly to one input, and going to the other after some limiting.
In effect, a constant amplitude signal at the carrier frequency is
mixing with the incoming signal, providing you with your baseband
signal.

If you have the datasheet, look at it's internal circuitry, and then
compare it with that of the MC1496 double balanced modulator.
Q8, Q9, Q10, Q15, Q16, and Q17 of the MC1330 are in the same form
as the basic DBM in the 1496.

The MC1330 has some extra transistors, for the input, limiting,
and output buffering, and it's configured specifically for this
purpose (and doing away with the many components that the 1496 requires)
but the scheme is no different than a circuit from 1970 in a Ham
Radio article (it might be in an application note somewhere) for
using the MC1496 as an AM detector. The author said that a limiter
wasn't even needed, because one set of inputs limited easily.

But as Jan-Martin says, this will give a "quasi-synchronous detector".

Your AGC problem seems to be due to looking at ICs that give a lot
of integration, ie not just a detector but an IF amplifier and AGC.
I think there were some older devices intended for tv use that
were less integrated, but I suspect they aren't being made any longer.

What you need is a PLL with an extra balanced modulator. Over thirty
years ago, Signetics had a line of analog PLLs intended for signal
processing use, and at least one of them had the extra balanced modulator
needed for AM synchronous detection. It was either the NE560 or NE561.
But they weren't up to the desired frequency.

So you'll have to dig up some sort of balanced modulator, an MC1496, an NE602, a diode ring mixer, or any of a number of other possibilities. And then a PLL that will work at the desired frequency. This sort of scheme has been described plenty of times in the literature. Look at TV ICs that have synchronous detection, such as the National LM1823 or the Motorola MC44301, for the basic idea.

I don't know if it's still available, but the NE564 is an analog PLL that I think works at the needed frequency.

Michael VE2BVW

3034. Re: Chip

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 05:48:50 UTC
From: rhaub <rhaub@itc.com>
Message-ID: <3DAA5AC2.2113ED2@itc.com>
Source record: 40747

Last I looked Ocean State carries them, try this

http://www.oselectronics.com/

Might be a bit spendy though. . . .

Rick KC0GIX

Bill Hennessy wrote:

> I have looked all over the net for a AM radio on a chip. Thay don't make
> them anymore. I hear their are AM/FM radios on a chip. Can anyone tell me
> what thay are called? And, who carries them?
>
> Bill, N5NOB

3035. Re: The Space/Time Paradox...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 06:15:08 UTC
From: newsdesk@aeonsciltd.net
Message-ID: <869eda69.0210132215.7ea0ff35@posting.google.com>
Source record: 40748

ogrowup@webtv.net (P.L. O'Connor) wrote in message
news:<6163-3D8CDA83-79@storefull-2236.public.lawson.webtv.net>...
> If I'd produced a paragraph like this in my one college physics class,
> the professor would have wanted to use me as a target in his upcoming
> laser experiments... :)
>
> "Eagles may soar but weasels aren't sucked into jets."

GREAT CAESAR'S GOAST

The mistque of the phenom is a dead give-a-way; it seems in order
to rationalize certain facets of the theory: QM.

http://www.aeonsciltd.net

3036. Re: Synchronous detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 06:37:47 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <nvlkqukl069l55fgmfk53l48vsm6eom36i@4ax.com>
Source record: 40749

On Sun, 13 Oct 2002 18:08:03 GMT, la8ak.xnd@online.no (J M Noeding) wrote:

>I understood that he wished to do it with discrete components rather
>than IC's for a reason or another. Remember the MC1330 a quasi
>synchronous detector, tried it for AM, but no success, better was
>TDA1576, TBA120/SN76660N and MC1351 (and NE/SA604/614) on 455kHz.
>The true synchr. detector requires a PLL tuned VCO. Believe ARRL
>handbook shows such circuit, but for 455kHz, but for TV the IF is
>33.4-38.9MHz (32.9 in England) and 38.9 is the VISION carrier freq.

The original article "A Synchronous Detector for AM Transmissions" by Jukka Vermasvuori OH2GF appeared in QST July 1993, pages 28-33 and it may have appeared in some later ARRL handbooks.

It has a VCO built around the NE602 feeding the quadrature input of the NE604 IF amplifier/FM detector through a 90 degree phase shifter. The 455 kHz IF signal is going through the NE604. From the NE604 audio output the loop error voltage is connected to the NE602 VCO and it is also used as the in-phase detection of AM signal coming from the IF amplifier in the same NE602.

In a synchronous detection, you need a phase detector, which is running in quadrature with the received carrier (in this case in the NE604) and an other detector running in phase with the received carrier the recover the signal (in this case in the NE602).

I have no idea if the NE604 will operate at 40 MHz, so you have to check that. In addition to changing the VCO frequency, you would also have to change the loop filter. You might also put some narrow band filtering in front of the NE604, but this should have a linear phase response, otherwise the in-phase detector would not be in phase any longer and the recovered signal may disappear completely if the phase shift in the filter is some odd multiple of 90 degrees.

It should be noted that at least in Europe on VHF Band I, the TV transmitters are not at the exact frequency but spaced by some submultiples of the horizontal sweep frequency (IIRC multiples of fh/12) to avoid interface problems, thus the PLL lock range should be at least as big as this. If the TV-tuner synthesiser step size is 62.5kHz, the lock range should be larger than this.

One other source of AM/FM ideas could be the application notes for the Signetics NE561/562/563 PLLs, but these have long been out of production. If you find such chips, you have to use the VCO range extension trick by connecting two resistors to ground from the VCO

capacitor and the upper frequency range will extend from 30 MHz to 60 MHz.

Paul OH3LWR

3037. Re: Synchronous detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 07:25:33 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <Njuq9.12904$334.29251@news-server.bigpond.net.au>
Source record: 40750

Michael Black <blackm00@cam.org> wrote in message
news:6447bcd3.0210132030.416e1209@posting.google.com...
> "Steve Andrew" <sjandrew@bigpond.net.au> wrote in message
news:<gBlq9.10293$334.23236@news-server.bigpond.net.au>...
> > Steve Andrew <sjandrew@bigpond.net.au> wrote in message
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> > > J M Noeding <la8ak.xnd@online.no> wrote in message
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wrote:
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> > > > >In article <Faaq9.8547$334.17292@news-server.bigpond.net.au>,
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> > > > >
> > > > >> Hi All
> > > > >>
> > > > >> I'm trying to build a synchronous AM detector for use in a DX TV
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> > and
> > > > >> detector ICs intended for consumer TVs. If anybody can steer me
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> > > > >> schematics I could as a starting point, I'd be grateful.
> > > > >>
> > > > >> TIA
> > > > >>
> > > > >> Steve Andrew
> > > > >
> > > > >
> > > > >Try the National Semiconductor web site for app notes on balanced
> > mixers,
> > > > >etc. They will all be in the linear ic app's.
> > > > >
> > > > >Steve
> > > > >WB4CZR
> > > >
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> > > > Jan-Martin
> > > > LA8AK
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> > amp followed by MC1350 amp/detector. Looking at the internal circuit for
the
> > MC1350, it looks like a normal envelope detector.
>
> No, inside the MC1330 is a balanced modulator, with the input signal
> going directly to one input, and going to the other after some limiting.
> In effect, a constant amplitude signal at the carrier frequency is
> mixing with the incoming signal, providing you with your baseband
> signal.
>
> If you have the datasheet, look at it's internal circuitry, and then
> compare it with that of the MC1496 double balanced modulator.
> Q8, Q9, Q10, Q15, Q16, and Q17 of the MC1330 are in the same form
> as the basic DBM in the 1496.
>
> The MC1330 has some extra transistors, for the input, limiting,
> and output buffering, and it's configured specifically for this
> purpose (and doing away with the many components that the 1496 requires)
> but the scheme is no different than a circuit from 1970 in a Ham
> Radio article (it might be in an application note somewhere) for
> using the MC1496 as an AM detector. The author said that a limiter
> wasn't even needed, because one set of inputs limited easily.
>

> But as Jan-Martin says, this will give a "quasi-synchronous detector".
>
> Your AGC problem seems to be due to looking at ICs that give a lot
> of integration, ie not just a detector but an IF amplifier and AGC.
> I think there were some older devices intended for tv use that
> were less integrated, but I suspect they aren't being made any longer.
>
> What you need is a PLL with an extra balanced modulator. Over thirty
> years ago, Signetics had a line of analog PLLs intended for signal
> processing use, and at least one of them had the extra balanced modulator
> needed for AM synchronous detection. It was either the NE560 or NE561.
> But they weren't up to the desired frequency.
>
> So you'll have to dig up some sort of balanced modulator, an MC1496, an
> NE602, a diode ring mixer, or any of a number of other possibilities.
> And then a PLL that will work at the desired frequency. This sort
> of scheme has been described plenty of times in the literature. Look
> at TV ICs that have synchronous detection, such as the National LM1823
> or the Motorola MC44301, for the basic idea.
>
> I don't know if it's still available, but the NE564 is an analog
> PLL that I think works at the needed frequency.
>
> Michael VE2BVW

Firstly - apologies for wasting everyone's time. I'd incorrectly stated that I was using an MC1330 voltage-controlled amp. My previous post should have read "..using an MC1350 voltage controlled amp followed by an MC1330 (A2P revision) detector". After reading Michael's post, I went back and checked the data book, to find I'd missed the fact that the MC1330 is indeed a quasi-synchronous detector. RTFM pays....;-> The main reason I want to use synchronous detection is the improvement in s/n ratio on weak signals when compared to a classic diode envelope detector. My understanding is that the MC1330 should be an imporovement on this. The question now is, is it worth going to the extra trouble to build a 'proper' synchronous detector using PLL, mixer etc ? Does anyone have any idea what the relative merits of the 3 systems are in terms of dB-s/n ratio on weak signals are ? - Thanks again for your patience.

Steve

3038. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 07:41:43 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3daa745f.4301573@news.cantech.net.au>
Source record: 40751

On Sun, 13 Oct 2002 11:08:15 +0100, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>> >I recently got an almost new, but mechanically broken Lithium-Ion laptop
>> >battery-pack. It contains 6 3.6V 1.8AH battery cells. Two of those could
>> >make a perfect 7.2V 1.8AH battery pack for my FT-50r. To charge the pack
>> >I'll use a MAHA 777-plus universal charger.
>> >
>> >Am I overlooking something ?
>>
>> the protection module
>=========
>With 'the protection module ' ,do you mean just an internal fuse ,or
>something more elaborate ?

They are far more elaborate than a "fuse".

Usually comprise under/over-voltage and excess charge/discharge
current sensing. Open ccts a series FET in the event of any of the
above conditions. Usually also activates on mismatched cell voltages.

Li-Ion cells require these measures for YOUR safety. Anyone who
operates them outside the 'envelope" is running the rsik of
catastrophic cell failure at the very least.

Prot modules are almost invariably configured for the number of cells
in the pack, so a 3-cell module cannot be used with a 2-cell cut-down
version of the same pack.

3039. Re: Microphone Preamplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 08:52:07 UTC
From: Ricardo Martins <ricardo.martins@pt.uu.net>
Message-ID: <3DAA85B7.C59FA42D@pt.uu.net>
Source record: 40756

Hello Deos,

See this one: http://www.ngunn.net/hamradio/ssm2166.pdf
It his basically the same schematic except it is not for members only...
Anyhow IMHO, an simple "mic" will do the job :)

73 de CT2GQV

Deos wrote:
>
> can any one help me out i want to make a desk top mike
> got any ideasor schematics? i found this but its only for members....
> http://www.arrl.org/members-only/tis/info/pdf/9803033.pdf
>
> thanks!
> --
> http://deosiereas.virtualave.net

--
Ricardo Martins

3040. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 10:29:25 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1410020630300001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40752

In article <3daa0796$0$4432@echo-01.iinet.net.au>, "Richard Hosking"
<richardh@iinet.net.au> wrote:

> Dear all
>
> Thanks for all the helpful info
> In reponse to various posts
>
> The INT/EXT switch is INT :(
>
> The timebase out next to the INT/EXT switch shows a triangle wave about
> 1.75V P-P period 0.2 uS ie 5 MHz
>

If you are using a wideband scope I would worry about the triangular wave. Put the scope in DC couple and use the ground input to set the 0v level. The clock should show a swing from ground to 5vdc and it should be square. If you are using a 10:1 probe, also go through the trouble of making sure that it is compensated properly. Use the calibrator output and set the timebase accordingly, and adjust the probe's trimmer until you can see a good square wave. Then you can measure the clock with some certainty. You can verify the scope also with the DC measurement of voltage using a DMM or even an analog meter, for that matter.

Steve WB4CZR

3041. Microphone Preamplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 11:32:21 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <aoe9khron1@nic.grnet.gr>
Source record: 40754

can any one help me out i want to make a desk top mike
got any ideasor schematics? i found this but its only for members....
http://www.arrl.org/members-only/tis/info/pdf/9803033.pdf

thanks!
--
http://deosiereas.virtualave.net

3042. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 12:19:08 UTC
From: Markus Baertschi <markus@markus.org>
Message-ID: <MPG.1814cdd8579d2987989690@News.CIS.DFN.DE>
Source record: 40755

Just some clarifications:
The original Laptop battery had 6 cells. They were connected in parallel
and serial to get from 3.6V/1.8Ah to 10.4V/3.6Ah. There was a quite
complex prtotection module in the pack. As my configuration is very
different I did not attempt to use it.

For now I've replaced the 8 NiCd cells in my NBP-41 (7.2V 600mAh) with
two cells (fits mechanically) and did charge it with my slow Yaesu wall
charger. This works fine so far, the pack did not get warm, even after
20 hours of charging. The Maha charger is on order and will take another
week to get here.

There is a fair amount of free space in the case and I could easily add
an protection module. Where can I find corresponding schematics ?

73 Markus

In article <MPG.18126b92f95c6e1b98968d@News.CIS.DFN.DE>,
markus@markus.org says...
>
> I recently got an almost new, but mechanically broken Lithium-Ion laptop
> battery-pack. It contains 6 3.6V 1.8AH battery cells. Two of those could
> make a perfect 7.2V 1.8AH battery pack for my FT-50r. To charge the pack
> I'll use a MAHA 777-plus universal charger.
>
> Am I overlooking something ?
>
> If no then I'll just have to find a broken battery pack te re-use the
> housing.
>
> Markus
>

--
Markus Baertschi Phone: ++41 (21) 807 1677
Bas du Ross&#65533; 14b Fax : ++41 (21) 807 1678
CH-1163, Etoy Email: markus@markus.org
Switzerland Homepage: www.markus.org

3043. FS: Old Radio Books

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 13:24:24 UTC
From: oldbooks78@aol.com
Message-ID: <20021014092424.20410.00002039@mb-ch.aol.com>
Source record: 40758

I currently have for sale the following old radio-related books. Postage is $2 for the first book and $1 for each additional item (Media Mail within the US, at cost elsewhere). The books are:

Graham, Frank D. "Audels Radioman's Guide, Modern Radio Practice" Theo. Audel & Co., 1932. Tan cloth covers over flexible boards. The book is about 250 pages in length (pages are numbered oddly, making a total count difficult). A nice early vintage radio book, illustrated throughout. Clean with no page tears or pen marks except for a gift inscription inside the front cover. Cloth covers show some spotting and light staining from age, but not bad at all. Available for $12.

ARRL "The ARRL Antenna Book, 13th Edition" American Radio Relay League, 1977. The 336 page softbound book is in about very good condition. Clean with no page tears or pen marks. The covers show a bit of wear from previous use, but not bad at all.A comprehensive treatment of radio antennas. Available for $7.

Jordan, Edward C.; Paul H. Nelson; William Carl Osterbrook; Fred H. Pumphrey; Lynne C. Smeby; and W.L. Everitt (editor) "Fundamentals of Radio" Prentice-Hall, 1944. The 400 page hardbound book is in good+ condition, clean with no page tears or pen marks except for a previous owners name inside the front cover. Gray cloth covers with some minor spotting on the front cover, otherwise nice. A nice early radio related text. Available for $10.

Siegel, Hy "All About CB Two-Way Radio" Radio Shack, 1976 Soft Cover. The 112 page softbound book is in very good condition, clean with no page tears or pen marks. Nicely illustrated. Available for $5.

US War Department "Technical Manual - Radio Fundamentals, TM 11-455" U.S. GPO, 1941. The 140 page softbound book is in fine condition, fresh and clean inside and out except for a previous owners name on the front cover. A nice WWII vintage radio manual. Available for $10.

Federal Telephone and Radio Corporation "Reference Data for Radio Engineers, Second Edition" Federal Telephone and Radio Corporation, 1947. The 322 page hardbound book is in good+ condition. Clean with no page tears or pen marks except for a previous owners name and address inside the front cover. "The present edition has been greatly enlarged and a subject index included. Chapters on transformers and room acoutics have been added. The material on radio propagatiion and radio noise has been revised. The data on cathode-ray tubes have been considerably expanded." Available for $8.

Everitt, William Littell "Communication Engineering" McGraw-Hill, 1937. The 727 page hardbound book is in about very good condition. Clean with no page tears or pen marks except for a previous owners name and address inside the front cover, and a few passages underlined in pencil. A nice early text on the

science of the radio. Available for $9.

Measurements Development Laboratory of the Sperry Gyroscope Company "Microwave Transmission Design Data" Sperry Gyroscope Company, 1944. Publication No. 23-80. The 215 page hardbound book is in very good condition, clean with no page tears or pen marks, and a strong binding. Originally issued during WWII as a "confidential" document. Chapter topics include General formulae for concentric lines; Attenuation in concentric lines; Reflections and impedance matching; General formulae for wave guides; Attenuation in wave guides; Reflections and impedance matching in wave guides; Wave guide tees and bends; Wave guides filled with dielectric material; Dielectric material: Cavity resonators; and Measurement techniques. A neat early book on ultra-high frequency radio waves. Available for $10.

If interested in any of the above, please email to "Oldbooks78@aol.com" to reserve. Thanks.

Dave

3044. Re: Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 14:51:46 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <aoelm2cca0@208.206.142.79>
Source record: 40759

"Peter O. Brackett" wrote:
>
> Paul:
>
> Heh, heh... no offense meant.
>
> Some of my best friends are computer scientists.
>
> I've noted over the years that computer scientists just don't seem to know
> very much intimate detail about computers. It seems, judging from his
> famous quatiation about astronomy and telescopes, that one of the most
> famous computer scientists, E. Dijkstra has noted the same... I've often
> thought that it is too bad about that misnomer created to define the
> "computer scientist", which unfortunately leads one to believe that such
> folks are experts on computers, but then what else could we have called
> them! Algorithm scientists, programming scientists, data scientists, what?
>
> Slide rules are computers, they are extremely efficient analog computers,
> and of course there were electronic analog computers in wide use long before
> the advent of the digital computer and modern computer science.
>
> Since I was helping with the design, development and manufacture of analog
> and digital computers way back when there were hardly any
> computer scientists, my perceptions of that particular kind of "scientist"
> might be tainted a little by my personal experiences with the first few whom
> I encountered. Hence my sceptical nature regarding the intimate familiarity
> with computers of modern computer scientists.
>

I'm reminded of a posting a few years ago in which the poster, a young lady, stated that she had a masters degree in Computer Science but had never seen inside a computer. She was wanting advice on how to proceed to gain some inside-the-box knowledge.

Then there was the more recent post by someone here, I think, about the young lady with a Masters in EE that had never had a soldering iron in hand and had no idea how to use one. She had never attended a lab class.

You gotta wonder just where all this is going.

Dick

3045. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 14:54:37 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3daa0796$0$4432@echo-01.iinet.net.au>
Source record: 40743

Dear all

Thanks for all the helpful info
In reponse to various posts

The INT/EXT switch is INT :(

The timebase out next to the INT/EXT switch shows a triangle wave about
1.75V P-P period 0.2 uS ie 5 MHz

The display registers and the various indicators appear to have power so I
presume the power transformer is OK

I tried accessing the manual site that was suggested but I also got a
browser error message - guess I wil have to download another version of IE.

There is no signal discenible on on external receiver

The counter wont work on external mode

I would be grateful any further ideas.
Thanks for your tolerance!

Richard

Richard Hosking <richardh@iinet.net.au> wrote in message
news:3da96dd1$0$3110@echo-01.iinet.net.au...
> It just suddenly stopped. No output
> Freq Indicator 000000000Hz. Metering and other functions appear OK
> Any ideas about what happens to these?
> I understand they are fairly complex.
> I dont have a manual - guess I will look on E Bay
>
> Richard
>
>

3046. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 15:16:46 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <aoen4ukcu0@208.206.142.90>
Source record: 40760

budgie wrote:
>
> >> >Am I overlooking something ?
> >>
> >> the protection module
> >=========
> >With 'the protection module ' ,do you mean just an internal fuse ,or
> >something more elaborate ?
>
> They are far more elaborate than a "fuse".
>
> Usually comprise under/over-voltage and excess charge/discharge
> current sensing. Open ccts a series FET in the event of any of the
> above conditions. Usually also activates on mismatched cell voltages.
>
> Li-Ion cells require these measures for YOUR safety. Anyone who
> operates them outside the 'envelope" is running the rsik of
> catastrophic cell failure at the very least.
>
> Prot modules are almost invariably configured for the number of cells
> in the pack, so a 3-cell module cannot be used with a 2-cell cut-down
> version of the same pack.

Seems you're saying there's a definite explosion hazard involved with Lithium Ion batteries. If so I'd like to know more, since I've begun to use them for some applications and was not aware of any hazard other than to the batteries themselves.

I recently bought a set of four 1800ma lithium AA cells with a matching charger for use with my digital camera. Later I picked up another set of four
rechargeable AA's that are marked 1600ma NiMH as a spare set. I've been charging them in the same charger that came with the lithium ion cells. I noticed they seem to get somewhat warmer while charging. Am I screwing up or is this a workable situation? If the NiMH cells shouldn't be charged in the LiION charger, can they be charged in an older NICAD charger?

Can you charge Li Ion batteries successfully using a low rate of charge with an adjustable power source with a charging current level meter, say at a 5 or 10% of the full current rating? Individual cells? How about the NiMH units? This works well with the older Nicads. Such info seems to be hard to find in any one place even on the WWW. A link or URL to such a site would be nice.

Your answer will be much appreciated, probably by several of us here.

73, Dick

3047. Plans for 2m transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 15:23:21 UTC
From: Matt Senecal <msenecal@logicon.com>
Message-ID: <aoenh9$1h7$1@newpoisson.nosc.mil>
Source record: 40783

Hi,

Does anyone have any plans for a 2m voice transmitter? I find myself unable to afford a professionally-produced transmitter, so I though I'd take a crack at building one myself.

---Matt
KG6NLE

3048. Re: Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 15:30:57 UTC
From: Idontwantspam@net
Message-ID: <3daae209.6069557@news.bellatlantic.net>
Source record: 40761

On 14 Oct 2002 14:51:46 GMT, Dick Carroll <dixie@townsqr.com> wrote:

> I'm reminded of a posting a few years ago in which the poster, a young
>lady, stated that she had a masters degree in Computer Science but had
>never seen inside a computer. She was wanting advice on how to proceed
>to gain some inside-the-box knowledge.
>
> Then there was the more recent post by someone here, I think, about the
>young lady with a Masters in EE that had never had a soldering iron in
>hand and had no idea how to use one. She had never attended a lab class.
>
> You gotta wonder just where all this is going.
>
Well, it is poor training to never learn the hands-on, but out in
large companies, it is often the case that engineers never do any
hands-on work, and in some situations, are prohibited from doing any
by company policy or union rules.

There is an expression for those electronics engineers who have never
done any actual soldering; "doesn't know which end of a soldering iron
to hold".

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3049. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 16:13:14 UTC
From: Mike Monett <Die@Spam.Bots>
Message-ID: <3DAAED1A.1C1@Spam.Bots>
Source record: 40763

Richard Hosking wrote:
>
> It just suddenly stopped. No output
> Freq Indicator 000000000Hz. Metering and other functions appear OK
> Any ideas about what happens to these?
> I understand they are fairly complex.
> I dont have a manual - guess I will look on E Bay
>
> Richard

Hi Richard,

You didn't mention if it was the 8640A or 8640B. If it is the B version,
and you are still looking for the manual, I just downloaded it from here

http://www.slack.com/david/pdf/HP8640B.pdf (11.2 meg)

It covers the following serial number prefixes:

1324A, 1229A, 1244A, 1245A, 1246A, 1249A, 1251A, 1303A, 1310A, 1313A,
1316A, 1322A, 1323A,
1327A, 1332A, 1333A, 1339A, 1342A, 1345A, 1350A, 1401A, 1404A, 1404A,
1405A, 1406A, 1416A,
1419A, 1423A, 1429A, 1431A, 1435A, 1438A, 1440A, 1442A, 1501A, 1506A,
1513A, 1515A, 1519A,
1520A, 1524A, 1526A, 1530A, 1532A, 1534A, 1535A, 1538A, 1542A, 1543A,
1544A, 1545A, and
1552A.

73, Mike

3050. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 16:17:28 UTC
From: Richard Heindel <rheindel@neo.rr.com>
Message-ID: <s6Cq9.84164$Cz.9660341@twister.neo.rr.com>
Source record: 40762

Hi Markus,

There should have been a "module" in the original laptop battery pack, take that out and use it.

I didn't the same thing as you several years ago, took a pack apart and wire 4 in series for my FT-530. For charging I just connect the pack across my station battery over night and let it take what it wants. It may not be "safe" or "smart" but it works and never a problem.

73 Richard

"Markus Baertschi" <markus@markus.org> wrote in message news:MPG.1814cdd8579d2987989690@News.CIS.DFN.DE...

There is a fair amount of free space in the case and I could easily add an protection module. Where can I find corresponding schematics ?

73 Markus

3051. Re: Chip

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 16:26:29 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <VeCq9.21513$ue4.1423752@bgtnsc04-news.ops.worldnet.att.net>
Source record: 40764

The Phillips TDA1072 and the TDA1572 are both current products. The 1572 is used as the I.F. subsystem in both the AOR7030 series of receivers and the Linn Kudos FM/AM tuner. All functions, including detector and AGC are on board. The difference between the two is that the 1572 has a buffered 50 Ohm I.F. output.

Pete KE9OA

3052. Re: Synchronous detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 16:35:37 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3DAAF259.DD9B36AF@mfi.net>
Source record: 40766

```
Michael Black wrote:
>
> "Steve Andrew" <sjandrew@bigpond.net.au> wrote in message
news:<gBlq9.10293$334.23236@news-server.bigpond.net.au>...
> > Steve Andrew <sjandrew@bigpond.net.au> wrote in message
> > news:oylq9.10288$334.23024@news-server.bigpond.net.au...
> > >
> > > J M Noeding <la8ak.xnd@online.no> wrote in message
> > > news:3da9658d.163650581@news.online.no...
> > > > On Sun, 13 Oct 2002 11:59:39 GMT, motsteve@attbi.com (carltons) wrote:
> > > >
> > > > >In article <Faaq9.8547$334.17292@news-server.bigpond.net.au>, "Steve
> > > > >Andrew" <sjandrew@bigpond.net.au> wrote:
> > > > >
> > > > >> Hi All
> > > > >>
> > > > >> I'm trying to build a synchronous AM detector for use in a DX TV
> > receiver.I
> > > > >> need to use a discrete version rather than use one of the TDA-series
> > IF
> > and
> > > > >> detector ICs intended for consumer TVs. If anybody can steer me
> > towards
> > some
> > > > >> schematics I could as a starting point, I'd be grateful.
> > > > >>
> > > > >> TIA
> > > > >>
> > > > >> Steve Andrew
> > > > >>
> > > > >
> > > > >Try the National Semiconductor web site for app notes on balanced
> > mixers,
> > > > >etc. They will all be in the linear ic app's.
> > > > >
> > > > >Steve
> > > > >WB4CZR
> > > >
> > > > I understood that he wished to do it with discrete components rather
> > > > than IC's for a reason or another. Remember the MC1330 a quasi
> > > > synchronous detector, tried it for AM, but no success, better was
> > > > TDA1576, TBA120/SN76660N and MC1351 (and NE/SA604/614) on 455kHz.
> > > > The true synchr. detector requires a PLL tuned VCO. Believe ARRL
> > > > handbook shows such circuit, but for 455kHz, but for TV the IF is
```

> > > > 33.4-38.9MHz (32.9 in England) and 38.9 is the VISION carrier freq.
> > > >
> > > > 73
> > > > Jan-Martin
> > > > LA8AK
> > > > --
> > > My reason for using discretes is that I want to retain manual IF gain
> > > control, rather than use AGC. The TDA (and other) series of ICs made for
> > TV
> > > all use synchronous detection but I have not yet found an IC where I can
> > > bypass the in-built AGC and control IF manually. If anyone knows of one
> > then
> > > my problem is solved.
> > > I've checked my various ARRL handbooks, (latest is 1992) but can find no
> > > reference to synchronous detection. My thoughts were running along the
> > same
> > > lines, PLL, VFO running between 32 and 39mHz.
> > >
> > Sorry - Forgot to mention my current IF setup is MC1330 gain controlable IF
> > amp followed by MC1350 amp/detector. Looking at the internal circuit for the
> > MC1350, it looks like a normal envelope detector.
>
> No, inside the MC1330 is a balanced modulator, with the input signal
> going directly to one input, and going to the other after some limiting.
> In effect, a constant amplitude signal at the carrier frequency is
> mixing with the incoming signal, providing you with your baseband
> signal.
>
> If you have the datasheet, look at it's internal circuitry, and then
> compare it with that of the MC1496 double balanced modulator.
> Q8, Q9, Q10, Q15, Q16, and Q17 of the MC1330 are in the same form
> as the basic DBM in the 1496.
>
> The MC1330 has some extra transistors, for the input, limiting,
> and output buffering, and it's configured specifically for this
> purpose (and doing away with the many components that the 1496 requires)
> but the scheme is no different than a circuit from 1970 in a Ham
> Radio article (it might be in an application note somewhere) for
> using the MC1496 as an AM detector. The author said that a limiter
> wasn't even needed, because one set of inputs limited easily.
>
> But as Jan-Martin says, this will give a "quasi-synchronous detector".
>
> Your AGC problem seems to be due to looking at ICs that give a lot
> of integration, ie not just a detector but an IF amplifier and AGC.
> I think there were some older devices intended for tv use that
> were less integrated, but I suspect they aren't being made any longer.
>
> What you need is a PLL with an extra balanced modulator. Over thirty
> years ago, Signetics had a line of analog PLLs intended for signal

> processing use, and at least one of them had the extra balanced modulator
> needed for AM synchronous detection. It was either the NE560 or NE561.
> But they weren't up to the desired frequency.
>
> So you'll have to dig up some sort of balanced modulator, an MC1496, an
> NE602, a diode ring mixer, or any of a number of other possibilities.
> And then a PLL that will work at the desired frequency. This sort
> of scheme has been described plenty of times in the literature. Look
> at TV ICs that have synchronous detection, such as the National LM1823
> or the Motorola MC44301, for the basic idea.
>
> I don't know if it's still available, but the NE564 is an analog
> PLL that I think works at the needed frequency.
>
> Michael VE2BVW

check out the Analog Devices AD 834
http://products.analog.com/products/info.asp?product=AD834
--

Michael A. Terrell
Central Florida

3053. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 16:37:44 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <XIpvmFBYLvq9EA9m@ifwtech.co.uk>
Source record: 40765

While the experts are gathered, has anyone experienced a small frequency dither/flicker with the 8640A? I haven't looked into it yet, but just wondered if it is a Known Problem.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3054. Re: Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 16:45:17 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3DAAF49D.97FED22B@mfi.net>
Source record: 40767

"Gary S." wrote:
>
> On 14 Oct 2002 14:51:46 GMT, Dick Carroll <dixie@townsqr.com> wrote:
>
> > I'm reminded of a posting a few years ago in which the poster, a young
> >lady, stated that she had a masters degree in Computer Science but had
> >never seen inside a computer. She was wanting advice on how to proceed
> >to gain some inside-the-box knowledge.
> >
> > Then there was the more recent post by someone here, I think, about the
> >young lady with a Masters in EE that had never had a soldering iron in
> >hand and had no idea how to use one. She had never attended a lab class.
> >
> > You gotta wonder just where all this is going.
> >
> Well, it is poor training to never learn the hands-on, but out in
> large companies, it is often the case that engineers never do any
> hands-on work, and in some situations, are prohibited from doing any
> by company policy or union rules.
>
> There is an expression for those electronics engineers who have never
> done any actual soldering; "doesn't know which end of a soldering iron
> to hold".
>
> Happy trails,
> Gary (net.yogi.bear)
> --
> at the 51st percentile of ursine intelligence
>
> Gary D. Schwartz, Needham, MA, USA
> Please reply to: garyDOTschwartzATpoboxDOTcom

After repairing some boards that a couple engineers screwed up, I
wished they didn't even know what solder was. Others are ok, but a few
think their piece of wallpaper means they know EVERYTHING.
--

Michael A. Terrell
Central Florida

3055. Re: Repairing my Yaesu FT-847

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 17:18:44 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <aoettv$a34$1@nic.grnet.gr>
Source record: 40768

I vote for this solution

--
http://deosiereas.virtualave.net
"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message
news:zDbq9.9485$345.446720@newsfep2-win.server.ntli.net...
> > If you were lucky enogh, only a diode inside the PA might have burned.
> > Usually there's a high current diode inside the PA, its purpose being
> > exactly that of protecting the PA and maybe the rest of the tcvr against
> > accidental reverse polarity supply. Hope that's all.
> >
> > Good luck,
> > Cirip
> ===============
> > > I think I have screwed up big time! I was moving stuff around in the
> > shack,
> > > had everything pulled out an was re-arranging things. In this
process,
> I
> > > accidentally hooked my FT-847 up with reverse polarity! It popped and
> > > smoked and of course it is now dead! I took the cover off and looked
> for
> > > burns, but did not see anything obvious. The fuse is good but it does
> > smell
> > > burnt inside. I'm not a repair person so I am in need of a reference
> for
> > a
> > > good Yaesu repair person or would I be better off sending it back to
> > Yaesu?
> > > Any thoughts on what I may have damaged.
> ======
> With the fuse reportedly still 'good' it seems there is NO reversed
polarity
> protection diode inside the transceiver.
>
> My advice would be to have an external hefty 40 Amperes diode (connected
> reverse polarity) across the transceiver's power input with a separate
(rig
> rated) fuse on the supply side. Upon reverse polarity connection the diode
> will conduct and blow the fuse.
>
> Alternatively , reverse polarity connection can be avoided by using
Anderson
> PowerPole connectors ,available (I believe) for a current rating to up to

30
> Amperes.
> See also QST - Oct 2002 ,page 59.
>
> Note : For low(er) power consuming devices , like a TNC I usually fit a
> diode in the supply line ,accepting the 0.7 voltage drop across the diode.
> This is also done in leads to portable measuring instruments requiring
> external DC power.
>
> Frank gm0csz.kn6wh@ntlworld.com
>
>
>

3056. 50's Schematic Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 17:49:55 UTC
From: Al <afjay*@earthlink.net>
Message-ID: <afjay*-73552C.13495614102002@news.bellatlantic.net>
Source record: 40769

When I was 15, in the mid 50's, I built a shortwave converter. I still have it and it still works. But I don't have the schematic. Can anyone help me find it? I think the plans may have come from either the ARRL Handbook or else from Radio/TV/Electroics (if that is the name).

Details:

It uses two 6J6s and a third tube I can't make out.
One selenium rectifier.
One band set capacitor and one spreader capacitor
One antenna tuning capacitor.
It is a hetrodyne that converts the HF bands to the AM band.
It has 5 sets of coils to set the bands.

Thanks in advance.

Al

--

Remove * from the address to reply.

3057. Re: Synchronous detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 17:52:28 UTC
From: la8ak.xnd@online.no
Message-ID: <3da9fbc9.202117057@news.online.no>
Source record: 40770

On Sun, 13 Oct 2002 21:29:48 GMT, "Steve Andrew"
<sjandrew@bigpond.net.au> wrote:

>> > Remember the MC1330 a quasi
>> > synchronous detector, tried it for AM, but no success, better was
>> > TDA1576, TBA120/SN76660N and MC1351 (and NE/SA604/614) on 455kHz.
>> > The true synchr. detector requires a PLL tuned VCO. Believe ARRL
>> > handbook shows such circuit, but for 455kHz, but for TV the IF is
>> > 33.4-38.9MHz (32.9 in England) and 38.9 is the VISION carrier freq.
>>
>Sorry - Forgot to mention my current IF setup is MC1330 gain controlable IF
???
try to look at it once more, it is just a demodulator, but suppose it
is not very good

>amp followed by MC1350 amp/detector. Looking at the internal circuit for the
>MC1350, it looks like a normal envelope detector.
>
????
I mentioned MC1351 - it is quite different from MC1349 and 1350, a
problem with TDA1576, TBA120, SN76660N, MC1351 and SA604, NE614 is
that none would operate properly on 30-40MHz, so you might have to try
SBL-1 or MC1496P

LA8AK

--
remove ,xnd to reply

3058. Re: Pickett Electronic(s) Slide Rule Model N-16-ES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 18:54:28 UTC
From: Idontwantspam@net
Message-ID: <3dab1256.18433906@news.bellatlantic.net>
Source record: 40771

On Mon, 14 Oct 2002 12:45:17 -0400, "Michael A. Terrell"
<terrell@mfi.net> wrote:

>"Gary S." wrote:
>>
>> There is an expression for those electronics engineers who have never
>> done any actual soldering; "doesn't know which end of a soldering iron
>> to hold".
>>
> After repairing some boards that a couple engineers screwed up, I
>wished they didn't even know what solder was. Others are ok, but a few
>think their piece of wallpaper means they know EVERYTHING.
>--
BTDT.

More people should pay attention to their actual skill set rather than
their ego.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3059. Re: Synchronous detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 19:11:31 UTC
From: averyfineman@aol.com
Message-ID: <20021014151131.15182.00000861@mb-mn.aol.com>
Source record: 40772

In article <Njuq9.12904$334.29251@news-server.bigpond.net.au>, "Steve Andrew" <sjandrew@bigpond.net.au> writes:

>Firstly - apologies for wasting everyone's time. I'd incorrectly stated that >I was using an MC1330 voltage-controlled amp. My previous post should have >read "..using an MC1350 voltage controlled amp followed by an MC1330 (A2P >revision) detector". After reading Michael's post, I went back and checked >the data book, to find I'd missed the fact that the MC1330 is indeed a >quasi-synchronous detector. RTFM pays....;-> The main reason I want to use >synchronous detection is the improvement in s/n ratio on weak signals when >compared to a classic diode envelope detector. My understanding is that the >MC1330 should be an imporovement on this. The question now is, is it worth >going to the extra trouble to build a 'proper' synchronous detector using >PLL, mixer etc ? Does anyone have any idea what the relative merits of the 3 >systems are in terms of dB-s/n ratio on weak signals are ? - Thanks again >for your patience.

Both the MC1330 video detector and MC1350 (plastic DIP version of MC1590 differential RF amplifier with AGC) were intended for TV receivers when designed back in the early 1970s. The MC1330 has an internal balanced modulator and an externally-tuned limiting amplifier that drives the balanced modulator. A key to proper use of the MC1330 is getting the impedance of the external tuned circuit within the proper range so that the internal limiter-modulator-driver operates properly. In trying to use the 1330 below 30 MHz or so, most try to "tune" it with tube-type impedance LC circuits and the result is less than good. See old detailed Motorola spec sheets for information if they are to be had (personal copy of Motorola App Note long gone)

I used the MC1330 in an 8-channel R&D airborne application at RCA Corporation in 1974, detecting RF pulses of 1 uSec width at carrier frequencies of 55 to 63 MHz. Use was dictated then by physical space available and sensitivity. Dynamic range of 35 db easily achieved with good input-envelope to output-video fidelity, a necessity for post-processing of video.

A conventional diode AM detector does not, cannot provide fidelity of modulation at low levels due to diode characteristics operating below the knee of diode forward conduction. See any simple DC forward current v. forward voltage plot. Above the knee a diode detector behaves like a power supply rectifier, output following the peaks in RF envelope inputs so high-level AM fidelity is good. At low signal levels a germanium diode might be better than silicon because the knee of I versus V has a lower voltage.

A "synchronous detector" is exactly the same as a "product detector" with a locked-to-carrier "BFO." Both do demodulation through mixing the AM-ed RF components (carrier resupplied through a locked oscillator or through a tuned limiter)...with the modulation audio output a result of RF mixing. Fidelity is excellent at all levels since the output is not dependent on any "peak-riding" effect of a single diode detector. Demodulated output is really the relationship of the signal's RF components very close to what they originally were.

An advantage of the synchronous detector in HF reception is the internal carrier resupply constancy overcoming some of the HF selective fading effects of the carrier. That results in a better-sounding AM signal (particularly with SW BC) on paths with fading of up to 30 to even 40 db. AM sideband components fade, of course, and those are apparent, but carrier fading is more apparent with conventional diode detectors due to the low-level semi-logarithmic output response.

A disadvantage with synchronous detectors is a "capture effect" of close-in signals unlocking the carrier resupply frequency from the desired. The capture effect is similar to that in FM where strong near-frequency signals take over the receiver's limiter action. A way out of that is to use bandpass filtering ahead of the carrier resupply subcircuit. My RCA application had SAW filters ahead of the MC1330 detectors, about as close to an ideal "brick wall" filtering as possible.

Any synchronous detector should be able to receive SSB or DSB AM with the carrier resupply having its frequency lock disabled (allowed to free-run stably). That puts it into equality with nearly all conventional SSB detection methods...recovered modulation follows the original AM RF components with good fidelity, even at low levels.

SW BC receivers tout the "synchronous demodulator" as a buzzword to sell products. HF SSB receivers have had "asynchronous demodulators" for years with good success...known under very old (misapplied) names of "product detectors" and "BFOs," names that did not get picked up or last long by other, non-ham HF radio users :-)

A good "product detector" is just a MIXER, a switch of sorts, being switched at a high level by the BFO or carrier resupply oscillator at the back end of the IF strip. Its output is the algebraic difference of the RF/IF components, the sidebands against the resupplied carrier. Demodulation linearity is that of the mixer itself...usually excellent with a strong local oscillator (the "BFO" or carrier resupply oscillator). This remains true even with old single-diode detectors using a BFO since the BFO literally turns that diode on and off. Try that on any CW receiver, tuning in an AM signal zero-beating with the carrier.

As to receiver sensitivity improvements, I would suggest going first to the front end and improving that. Nearly all modern HF receivers are now very close to the Shannon Law limit. For demodulation fidelity,

that would be in the detector or demodulator at the end of the IF.

Locking the carrier resupply source (BFO, limiter, PLL, etc.) to the incoming carrier is a separate task and more complicated than it appears. The carrier, or reduced carrier with suppresed-carrier SSB, is subject to large changes in signal amplitude. It might also have very strong adjacent-frequency signals of many kinds. Those must be simulated on bench testing to find out effectiveness of the carrier resupply subcircuit. Not easy and not all App Notes mention the problem much...but it is a ripe area for experimentation.

The easy way out is to just use present-day SSB demodulation techniques, using the most linear mixer subcircuit for good demod fidelity. The carrier resupply source need only be stable (crystal oscillators good for that, heh heh) and the tuning LO needs to be stable. "Carrier lock" would then be up to the knob-twister.

Note: It IS possible to build a carrier resupply subcircuit that CAN lock onto just the sideband products of DSB AM in a total absence of received carrier. Unfortunately, the analysis of such a problem is a whole new kettle of worms, going deep into modulation theory. I don't think it could be done with SSB no-carrier signals, but haven't looked into that. DSB AM detection with no carrier resupply lock is an interesting area and has been tried several times, producing a weird sort of "stereo" effect with each ear listening on different sides of the carrier. The brain and its own hearing circuitry can then join into the full reception loop. :-)

Leonard H. Anderson
retired (from regular work) engineer person

3060. Re: Synchronous detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 21:01:46 UTC
From: la8ak.xnd@online.no
Message-ID: <3dab0c89.271950811@news.online.no>
Source record: 40773

On Mon, 14 Oct 2002 07:25:33 GMT, "Steve Andrew"
<sjandrew@bigpond.net.au> wrote:

>
> The main reason I want to use
>synchronous detection is the improvement in s/n ratio on weak signals when
>compared to a classic diode envelope detector. My understanding is that the
>MC1330 should be an imporovement on this.

Believe the problem with MC1330 is that it hasn't much limiter, and
you probably won't find many devices operating on 40MHz. Another
device we used for SATTV demodulators on 70MHz is MC1357P, but
probably older device than MC1330. Believe it is another manufacturer.
Have seen an application where only the limiter stage of MC1357 was
used, it is hard to find a good and inexpensive limter on higher
frequencies, MC1356P is another suggestion, it has simple limiter
stages - no darlington-connected limiters, but Motorola doesn't tell
any information about upper frequency limit. Modern devices are
designed for low current consumption and as such low frequency limit.

If youreally decide to make a proper synchronous demodulator limiting
is a nuissance

>The question now is, is it worth
>going to the extra trouble to build a 'proper' synchronous detector using
>PLL, mixer etc ?

remember from AM broadcast that the threshold becomes lower

>Does anyone have any idea what the relative merits of the 3
>systems are in terms of dB-s/n ratio on weak signals are ?

have no figures

NE564 also worked for FM on 70MHz, but will it work for VSB-AM?

73
LA8AK
--
remove ,xnd to reply

3061. Re: Calculating self-capacitance of an inductor?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 21:01:46 UTC
From: la8ak.xnd@online.no
Message-ID: <3dab15b7.274301709@news.online.no>
Source record: 40774

On Sun, 13 Oct 2002 01:37:39 GMT, motsteve@attbi.com (carltons) wrote:

>
>Why not measure your SRF and calculate the Cp? You could then verify it
>against the other data if nothing else.
>
>At these frequencies that should be a breeze.
>
>Steve WB4CZR

what is SRF ?

It was quite easy to calculate the capacitance, just to remember the
math ..., as LA7MI points out
capacitance on 120kHz is 4 times the capacitance on 240kHz, and the
calculation is
(50 + x) * 4 = (800 + x)
3x = 600
x = 200pF

73
LA8AK
--
remove ,xnd to reply

3062. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 22:00:57 UTC
From: John O'Flaherty <oflahert@isp01.net>
Message-ID: <lifmqu8r4h4ff5909qmijto8qekbinv3dg@4ax.com>
Source record: 40775

On 14 Oct 2002 15:16:46 GMT, Dick Carroll <dixie@townsqr.com> wrote:

>
>
>budgie wrote:
>>
>> >> >Am I overlooking something ?
>> >>
>> >> the protection module
>> >=========
>> >With 'the protection module ' ,do you mean just an internal fuse ,or
>> >something more elaborate ?
>>
>> They are far more elaborate than a "fuse".
>>
>> Usually comprise under/over-voltage and excess charge/discharge
>> current sensing. Open ccts a series FET in the event of any of the
>> above conditions. Usually also activates on mismatched cell voltages.
>>
>> Li-Ion cells require these measures for YOUR safety. Anyone who
>> operates them outside the 'envelope" is running the rsik of
>> catastrophic cell failure at the very least.
>>
>> Prot modules are almost invariably configured for the number of cells
>> in the pack, so a 3-cell module cannot be used with a 2-cell cut-down
>> version of the same pack.
>
>
>
> Seems you're saying there's a definite explosion hazard involved with
>Lithium Ion batteries. If so I'd like to know more, since I've begun to
>use them for some applications and was not aware of any hazard other
>than to the batteries themselves.
>
> I recently bought a set of four 1800ma lithium AA cells with a matching
>charger for use with my digital camera. Later I picked up another set of
>four
>rechargeable AA's that are marked 1600ma NiMH as a spare set. I've been
>charging them in the same charger that came with the lithium ion cells.
>I noticed they seem to get somewhat warmer while charging. Am I screwing
>up or is this a workable situation? If the NiMH cells shouldn't be
>charged in the LiION charger, can they be charged in an older NICAD
>charger?
>

> Can you charge Li Ion batteries successfully using a low rate of charge
>with an adjustable power source with a charging current level meter, say
>at a 5 or 10% of the full current rating? Individual cells? How about
>the NiMH units? This works well with the older Nicads. Such info seems
>to be hard to find in any one place even on the WWW. A link or URL to
>such a site would be nice.
>
> Your answer will be much appreciated, probably by several of us here.

Where did you buy the 1800 mah li-ion cells? I'd like to get some for
my laptop power module, as the old ones don't last very long any more.

--
john

3063. Re: Microphone Preamplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 22:03:14 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <uqmfjbkprc1t2f@corp.supernews.com>
Source record: 40776

www.qsl.net/kk5dr/micamp.html

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Deos" <lineoffiretoday@yahoo.com> wrote in message
news:aoe9khron1@nic.grnet.gr...
>
> can any one help me out i want to make a desk top mike
> got any ideasor schematics? i found this but its only for members....
> http://www.arrl.org/members-only/tis/info/pdf/9803033.pdf
>
> thanks!
> --
> http://deosiereas.virtualave.net
>
>

3064. Re: Calculating self-capacitance of an inductor?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 22:27:16 UTC
From: la8ak.xnd@online.no
Message-ID: <3dab3822.283113709@news.online.no>
Source record: 40777

On Sun, 13 Oct 2002 17:30:18 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>For design of square frame antennas, VLF to HF, dimensions, width, number of
>turns, wire size, wire spacing, tuning capacitance needed for given
>frequency, self-capacitance, Q -
>
>Download in a few seconds program RJELOOP3 from website below. Run
>immediately. User friendly.
>---
>========================
>Regards from Reg G4FGQ
>Free Radio Design Software
>Go to http://www.g4fgq.com
>========================
>
>
splendid, but the term "winding pitch" doesn't really makes sense when
you try to crosswind it, I later learnt that type 38 from Electronics
World august 2002 was better, so perhaps it wasn't so good idea to use
cross winding, mine has stray capacitance of 200pF while the described
antenna has 70pF, and lower stray capacitance gives higher Q.

An example using the program is shown below (works for win98):

L Length of one side of square frame, mm 1000
N Number of turns of wire on the frame 30
D Diameter of wire, milli-metres .... 1.8 .
R Ratio of (winding pitch)/(wire diameter) .. 2.00
F Frequency, kilo-hertz 136

Inductance .... 1973.9 micro-henrys
Inductive reactance .... 1687 ohms
HF loss resistance of wire . 4.32 ohms
Radiation loss resistance .. 0.00 milli-ohms
Self-resonant frequency .... 1.1 mega-hertz, approximately

Total capacitance required . 694 pico-farads for resonance
deduct stray capacitance 10 .. ..
Setting of tuning capacitor. 684 .. ..
Approximate coil Q 391
Receiving sensitivity ...... 66 decibels below 1/4-wave
vertical

Width of winding .... 106.2 milli-metres
Total length of wire .... 120.00 metres

Impedance seen across loop . 658.7 K-ohms, when tuned to
resonance
Impedance seen by Receiver . 0.7 K-ohms, via 1-turn
coupling loop

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

3065. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 22:48:49 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3DAB49D1.BA044430@ix.netcom.com>
Source record: 40778

Richard Hosking wrote:

> Having opened the beast up - the LED on the -5.2V/Fan supply board is not on
> There are a few components which have got hot - one is a 0.91 ohm (?series
> regulator) resistor which reads correctly
> and a 4.7 ohm 1/4W which reads 15 ohms. Replacing this makes no difference.

It's a fairly standard 723 regulator Richard, with the big pass transistor on the back panel. The 4.7 feeds the fan circuitry. There is a big 0.68 Ohm current limiting R down near the bottom of the card, between the pass emitter and ground. I don't see any 0.91 Ohms. Edge connector 12 to C of the pass transistor, 13 to B and 11 to E. Q3 1884-0012 is a crowbar. There is a 2 amp fuse on the board, directly below TP2.

3066. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 22:52:37 UTC
From: Sylvan Butler <Znospam+noZs_0210@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnaqmile.7uf.Znospam+noZs_0210@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 40624

On 14 Oct 2002 15:16:46 GMT, Dick Carroll <dixie@townsqr.com> wrote:
> Seems you're saying there's a definite explosion hazard involved with
> Lithium Ion batteries. If so I'd like to know more, since I've begun to

Yes.

> use them for some applications and was not aware of any hazard other
> than to the batteries themselves.

Many of the first gadgets using LiIon batteries caught fire and
burned and so the mfg's did recalls. This is because LiIon batts
tend to fail catastrophically when abused.

> I recently bought a set of four 1800ma lithium AA cells with a matching
> charger for use with my digital camera. Later I picked up another set of

Rechargable Lithium batts in a AA voltage and form factor??? Where ???

The lithium cells with a 1.5v cell voltage as advertised by
Energizer (e2), etc. are not rechargable.

Rechargable lithium-ion cells have a 3.6v cell voltage.

> rechargeable AA's that are marked 1600ma NiMH as a spare set. I've been

> charged in the LiION charger, can they be charged in an older NICAD
> charger?

If the older charger supplies no more than 160ma then you can charge
the NiMH with it for 14 hours or less (if they start getting quite
warm, they are fully charged).

If the charger supplies more current, you risk the health of your
NiMH cells.

The NiMH end-of-charge detection is more difficult, and most NiCad
fast chargers do not do a good job with NiMH.

sdb
--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Senator Fritz Hollings-S2048, Palladium, and TCPA, NOW!
http://www.freedom-to-tinker.com/archives/cat_fritzs_hit_list.html
Or else like Fritz, fight piracy -- regulate potty chairs!

3067. Re: Don't Build This at Home or Anywhere Else.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 22:54:36 UTC
From: Sylvan Butler <Znospam+noZs_0210@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnaqmipc.7uf.Znospam+noZs_0210@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 40623

On Thu, 10 Oct 2002 17:30:43 -0700, Norm Mann <folder0735@hotmail.com> wrote:
> "Martin McCormick" <martin@okstate.edu> wrote in message
> news:ao4lgp$62g$1@hydrogen.cis.okstate.edu...
>
> ... snip ...
>>
>> In my circuit, I have DIP switches connecting the 8 counter bits to
>> the And gate inputs with pull-up resistors on all And gate inputs.
> Opening
>> a switch leaves that particular input in a high state.
>>
>> I knew I was in trouble when I flipped the 1's position switch and
>> the frequency of the output did not change.
>>
> ... snip ...
>
> Of course, you could have used pull-down resistors instead and it probably
> would have worked. The inputs don't have to be pulled up, they just
> shouldn't be left floating.

Or better, put a pullup on the inputs, and use the switch to ground
the input. Switch closed==0, switch open==1.

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Senator Fritz Hollings-S2048, Palladium, and TCPA, NOW!
http://www.freedom-to-tinker.com/archives/cat_fritzs_hit_list.html
Or else like Fritz, fight piracy -- regulate potty chairs!

3068. Re: Wavetek Sam I used as RF spectrum analyzer??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-14 23:13:00 UTC
From: foxyie@inwind.it
Message-ID: <0clq9.127759$O8.3032613@twister.tampabay.rr.com>
Source record: 40779
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design,sci.electronics.equipment,sci.electronics.misc

"AJ Sanderson" <sjay@noospam.com> wrote in message
news:ao7ak3buv1@slb5.atl.mindspring.net...
> I recently read a post where a gentlemen is using a Wavetek Sam I catv
> analyzer as a 4-400 Mhz spectrum analyzer at low cost. Is this possible
and
> how does such a unit compare with regular commercial spectrum analyzers?
> I'd like to find out a little more about this unit... is it solid state,
can
> it be used at 50 ohm impedance, accuracy specs, step attenuator, easily
> serviced, etc.... so I'd appreciate any such posts from someone using this
> unit as an RF analyzer.
>
> Thanks,
> AJ
>
>
>

3069. Re: Calculating self-capacitance of an inductor?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 00:05:08 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <0rmmqu83ni71npd2rbgs2bio1ppu4pc0hb@4ax.com>
Source record: 40780

On Mon, 14 Oct 2002 21:01:46 GMT, la8ak.xnd@online.no (J M Noeding)
wrote:

>On Sun, 13 Oct 2002 01:37:39 GMT, motsteve@attbi.com (carltons) wrote:
>
>
>>
>>Why not measure your SRF and calculate the Cp? You could then verify it
>>against the other data if nothing else.
>>
>>At these frequencies that should be a breeze.
>>
>>Steve WB4CZR
>
>what is SRF ?
>
>It was quite easy to calculate the capacitance, just to remember the
>math ..., as LA7MI points out
>capacitance on 120kHz is 4 times the capacitance on 240kHz, and the
>calculation is
>(50 + x) * 4 = (800 + x)
>3x = 600
>x = 200pF
>
>73
>LA8AK

When plotting and using the regression analysis plot 1/(2*pi*F)^2, not
1/F^2. Sorry about the error.

When I redid the calculation got 208.6 pF +/- 23 pF.

Jack

3070. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 00:26:25 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <aofnbh$c3a$0@208.207.71.150>
Source record: 40782

John O'Flaherty wrote:
>
> Where did you buy the 1800 mah li-ion cells? I'd like to get some for
> my laptop power module, as the old ones don't last very long any more.
>
>

At Staples Office Supply. Four 1800ma AA's with their charger was
$29.95.
They're quite good .

Dick

3071. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 01:49:26 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <aofs76$r9n$0@208.207.71.150>
Source record: 40784

Thanks for your response. It made me go take a very close look at
exactly what I have, on which device, and exactly what each is. I've got
a new cellphone and a fairly new camcorder, both of which use lithium
ion rechargeable packs. I also have a fairly new laptop computer that
came with a lithium ion battery pack. I would have wagered that the four
individual cells that came with the charger that I got when I purchased
the digital camera were also marked 'Li ion', but I see they are NiMH,
as are the other lower-current backup set. I was wrong. I *don't* have
any individual lithium ion cells, they're all NiMH.
Looks like that's a good thing. Thanks again. And my apologies for the
mistake. Darn, that print on those cells is small! <g>

Dick

xpyttl wrote:
>
> "Dick Carroll" <dixie@townsqr.com> wrote in message
> news:aoen4ukcu0@208.206.142.90...
>
> > Seems you're saying there's a definite explosion hazard involved with
>
> Yes, that is correct. I'm surprised you were able to get LiIon cells.
> Manufacturers generally don't want to sell the batteries without reviewing
> the protection circuitry to avoid liability. These things are nasty, and
> manufacturers recommend 2, preferably 3, independent, circuits to avoid
> overcharging.
>
> Explosion is perhaps a bit strong of a word. The battery burns with an
> extremely hot flame which emits toxic gasses. Water will make it worse, and
> CO2 or dry power extinguishers won't touch it (although they won't make it
> worse like water). One manufacturer suggests that a CO2 extinguisher will
> at least cool the surrounding area preventing the fire from spreading, but
> without the appropriate gas mask, that's a sort of academic concern.
>
> Don't confuse lithium ion cells with lithium primary cells which are
> relatively tame.
>
> ..

3072. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 01:51:27 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <aofsav$r9n$1@208.207.71.150>
Source record: 40785

Dick Carroll wrote:
>
> John O'Flaherty wrote:
> >
> > Where did you buy the 1800 mah li-ion cells? I'd like to get some for
> > my laptop power module, as the old ones don't last very long any more.
> >
> >
>
> At Staples Office Supply. Four 1800ma AA's with their charger was
> $29.95.
> They're quite good .
>
> Dick

Note that they are NiMH, nickel metal hydride, cells rather than
lithium ion.
I misread the labels on them. z

Dick

3073. Re: Plans for 2m transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 01:59:46 UTC
From: john graesser <graesser@tca.net>
Message-ID: <uqmtf7qlobf6cd@corp.supernews.com>
Source record: 40786

Did you want this to be all-mode? FM only? There was a design back a couple
of years ago in QST for a digitally controlled one.

Do you want your radio totally analog, or do you want a cpu controlling
things?
thanks, John.
KC5DWD

"Matt Senecal" <msenecal@logicon.com> wrote in message
news:aoenh9$1h7$1@newpoisson.nosc.mil...
> Hi,
>
> Does anyone have any plans for a 2m voice transmitter? I find myself
unable
> to afford a professionally-produced transmitter, so I though I'd take a
> crack at building one myself.
>
> ---Matt
> KG6NLE
>
>

3074. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 02:17:07 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3daaa78b$0$4451@echo-01.iinet.net.au>
Source record: 40753

carltons <motsteve@attbi.com> wrote in message
news:motsteve-14100206303000001@c-66-176-144-254.se.client2.attbi.com...
> In article <3daa0796$0$4432@echo-01.iinet.net.au>, "Richard Hosking"
> <richardh@iinet.net.au> wrote:
>
>
> If you are using a wideband scope I would worry about the triangular
> wave. Put the scope in DC couple and use the ground input to set the 0v
> level. The clock should show a swing from ground to 5vdc and it should be
> square. If you are using a 10:1 probe, also go through the trouble of
> making sure that it is compensated properly. Use the calibrator output
> and set the timebase accordingly, and adjust the probe's trimmer until you
> can see a good square wave. Then you can measure the clock with some
> certainty. You can verify the scope also with the DC measurement of
> voltage using a DMM or even an analog meter, for that matter.
>
>
> Steve WB4CZR

The scope is a 100 MHz Tek which is OK and reads the same on both channels.
The DC level is 0 ie the waveform is symmetrical around GND
It would make sense that the timebase is not working as the counter doesnt
work either.

Richard

3075. Re: FS: Old Radio Books

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 03:30:08 UTC
From: Steve Roach <stevero@inetone.net>
Message-ID: <3DAB8BC0.A2217F23@inetone.net>
Source record: 40787

Dave, I would be interested in "Audels radioman's Guide","Fundementals of Radio", and "War Department Tech manual".

Thanks Steve Roach

3076. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 03:56:56 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3daabef0$0$4443@echo-01.iinet.net.au>
Source record: 40757

Having opened the beast up - the LED on the -5.2V/Fan supply board is not on
There are a few components which have got hot - one is a 0.91 ohm (?series
regulator) resistor which reads correctly
and a 4.7 ohm 1/4W which reads 15 ohms. Replacing this makes no difference.
I presume one of the power supply loads is a short circuit.
I will await a manual unless anyone has any ideas.
It sure is a beautifully engineered piece of equipment!

Thanks

Richard

3077. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 04:25:40 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3dab97b9.2268967@news.cantech.net.au>
Source record: 40788

On Mon, 14 Oct 2002 16:17:28 GMT, "Richard Heindel"
<rheindel@neo.rr.com> wrote:

>Hi Markus,
>
>There should have been a "module" in the original laptop battery pack, take
>that out and use it.
>
>I didn't the same thing as you several years ago, took a pack apart and wire
>4 in series for my FT-530. For charging I just connect the pack across my
>station battery over night and let it take what it wants. It may not be
>"safe" or "smart"

it isn't

> but it works and never a problem.

If they are Li-Ion then you should seriously consider yourself (a)
lucky and (b) at risk that this luck won't last.

Overcharging presents a serious risk to the cell integrity and its
surroundings.

Normally Li-Ion manufs recommend a current-limited constant voltage
charge regime. This applies typically 4.2V/cell and regulation is
required to be tight - one company's prot modules open at 4.25!!!

Because of the serious implications of overvoltage, PM's also
generally include cell voltage mismatch monitoring, so that applying
4.2V/cell to a series string doesn't risk pushing any one cell over
the edge.

3078. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 04:32:27 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3dab98ea.2574107@news.cantech.net.au>
Source record: 40789

On 14 Oct 2002 15:16:46 GMT, Dick Carroll <dixie@townsqr.com> wrote:

>
>
>budgie wrote:
>>
>> >> >Am I overlooking something ?
>> >>
>> >> the protection module
>> >=========
>> >With 'the protection module ' ,do you mean just an internal fuse ,or
>> >something more elaborate ?
>>
>> They are far more elaborate than a "fuse".
>>
>> Usually comprise under/over-voltage and excess charge/discharge
>> current sensing. Open ccts a series FET in the event of any of the
>> above conditions. Usually also activates on mismatched cell voltages.
>>
>> Li-Ion cells require these measures for YOUR safety. Anyone who
>> operates them outside the 'envelope" is running the rsik of
>> catastrophic cell failure at the very least.
>>
>> Prot modules are almost invariably configured for the number of cells
>> in the pack, so a 3-cell module cannot be used with a 2-cell cut-down
>> version of the same pack.
>
> Seems you're saying there's a definite explosion hazard involved with
>Lithium Ion batteries. If so I'd like to know more, since I've begun to
>use them for some applications and was not aware of any hazard other
>than to the batteries themselves.
>
> I recently bought a set of four 1800ma lithium AA cells with a matching
>charger for use with my digital camera. Later I picked up another set of
>four
>rechargeable AA's that are marked 1600ma NiMH as a spare set. I've been
>charging them in the same charger that came with the lithium ion cells.
>I noticed they seem to get somewhat warmer while charging. Am I screwing
>up or is this a workable situation? If the NiMH cells shouldn't be
>charged in the LiION charger, can they be charged in an older NICAD
>charger?

(refer your later post where these have been identified as NiMH)
>
> Can you charge Li Ion batteries successfully using a low rate of charge

>with an adjustable power source with a charging current level meter, say
>at a 5 or 10% of the full current rating?

NO. These cells need to have the applied VOLTAGE controlled fairly tightly. They are not able to absorb excess coulombs by way of recombination as do NiCd/NiMH types. they also have a VERY HIGH coulomb efficiency - typically better than 97% compared to 65% for Ni types. (Coulomb efficiency rates the amount of charge obtained on discharge as a percentage of what was put in during the charge phase).

>Individual cells?

Same story.

>How about
>the NiMH units? This works well with the older Nicads. Such info seems
>to be hard to find in any one place even on the WWW. A link or URL to
>such a site would be nice.

NiMH and NiCd share a lot of common attributes. One is their ability to accept long-term "overcharge" at low rates without serious harm. As this rate increases, so does the heat dissipation and temp buildup - which is the main cause of cell failure in Ni types. If the rate is civilised (e.g C/50 or so) then indefinite overcharge appears not to present a risk to Ni types.

3079. Re: Plans for 2m transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 04:40:36 UTC
From: Roger Leone <arleoneNoSpam@inreach.com>
Message-ID: <y%Mq9.184$Lc1.116776004@news.inreach.com>
Source record: 40790

Matt:

Cost is not usually the reason for homebrewing ham radio gear these days. Unless you have a well stocked parts room, you will spend more buying parts to build something than you would buying the item ready made. Most of us who build equipment do so for the fun of it, not to save money. That doesn't mean you can't save money by building things yourself, especially when you are an adept scrounger and flea market browser, but often you spend more.

And when you said you wanted to build a transmitter, did you mean transceiver? A transmitter needs a receiver to be useful, and that adds to the complexity and cost of your project.

Also, unless you have some experience building, troubleshooting and tuning VHF RF devices, a 2 meter transmitter is a big project to start with.

You might look at some of the kits available from TenTec or Ramsey as an alternative to scratch building.

Good luck,

Roger K6XQ

3080. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 05:02:17 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3dab9ed5.4089342@news.cantech.net.au>
Source record: 40791

On 14 Oct 2002 15:16:46 GMT, Dick Carroll <dixie@townsqr.com> wrote:

>
>
>budgie wrote:
>>
>> >> >Am I overlooking something ?
>> >>
>> >> the protection module
>> >=========
>> >With 'the protection module ' ,do you mean just an internal fuse ,or
>> >something more elaborate ?
>>
>> They are far more elaborate than a "fuse".
>>
>> Usually comprise under/over-voltage and excess charge/discharge
>> current sensing. Open ccts a series FET in the event of any of the
>> above conditions. Usually also activates on mismatched cell voltages.
>>
>> Li-Ion cells require these measures for YOUR safety. Anyone who
>> operates them outside the 'envelope" is running the rsik of
>> catastrophic cell failure at the very least.
>>
>> Prot modules are almost invariably configured for the number of cells
>> in the pack, so a 3-cell module cannot be used with a 2-cell cut-down
>> version of the same pack.
>

>Such info seems
>to be hard to find in any one place even on the WWW. A link or URL to
>such a site would be nice.

For starters, check out the .pdf on the Maxim MAX1737 for an insight
into the manuf-recommended " & feeding" of Li-Ions. A good chip, we
use it in our commercial/industrial charger designs. (NO, we don't
do domestic/consumer).

Protection circuits - I have a huge# of .pdfs and the like we sourced
over a period, but unfortunately the originators don't provide the URL
in the document.

Look at powerlogics.co.kr

A Google search on: lithium ion charge controller
will turn up more C&F stuff, while searching on:
lithium ion protection module

should be useful - that's where we started.

Also search on
PLM-4005
SC4000S

as some example prot modules.

For the cells, maybe search on: lithium 18650

Hope this helps.

3081. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 08:46:45 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1510020447500001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40792

In article <XlpvmFBYLvq9EA9m@ifwtech.co.uk>, "Ian White, G3SEK"
<g3sek@ifwtech.co.uk> wrote:

> While the experts are gathered, has anyone experienced a small frequency
> dither/flicker with the 8640A? I haven't looked into it yet, but just
> wondered if it is a Known Problem.

Ian,

I'm not an expert by any means on this gen, but have used it for 25 years. Someone correct me if I'm wrong, but the HP8640B is frequency locked and not phase locked. That's why you have to constantly have to retune it in unlock mode and then go back to locked. I'm guessing, not knowing what the dither is, that the dither is caused by the +/- half digit effect of frequency locking. This is due to the uncertainty of the time gate drifting in and out of phase with the signal. Like I said, this is a guess on my part.

BTW, I think that the HP8640A is not locked at all. It's just a very clean, stable, tunable, cavity oscillator rf gen. Both of these models are works of art, but you must remember, they came from the HP608, which literally was built by machinists and other craftsmen. Brother! What a boat anchor! :-)

Steve WB4CZR

3082. Re: Microphone Preamplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 09:01:28 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1510020502330001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40793

In article <uqmfjbkprc1t2f@corp.supernews.com>, "M.E." <bogus@nonspam.com>
wrote:

> www.qsl.net/kk5dr/micamp.html
>
>
> --
> Respond to my "real" e-mail;
> kk5dr@ev1.net
> "Deos" <lineoffiretoday@yahoo.com> wrote in message
> news:aoe9khron1@nic.grnet.gr...
> >
> > can any one help me out i want to make a desk top mike
> > got any ideasor schematics? i found this but its only for members....
> > http://www.arrl.org/members-only/tis/info/pdf/9803033.pdf
> >
> > thanks!
> > --
> > http://deosiereas.virtualave.net
> >
> >

This is a great time to be homebrewing mics. You can make one that is
super using a really cheap electret cartridge. They are flat from DC to
blue light and they don't "colour" the sound. If you like shaped
frequency response, you will have to do that after the mic. The only
caveat: when soldering these cartridges little heating of the cartridge
can be tolerated. Too much heat and the dielectric of the element no
longer has a built in charge and there is no audio out of the mic. A hot
(800 deg) iron with a small tip and fast hands should be used for
soldering. A clean tip and some flux on the terminals may also help to do
a quick clean job. If you're having trouble and you're soldering a small
cartridge, go to one that's larger, they are a little more forgiving.
Also, get the cardioid mic if possible and don't plug up the port on the
back of the mic. It will then be non-cardioid or omnidirectional.

Steve WB4CZR

3083. Re: Calculating self-capacitance of an inductor?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 09:11:21 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1510020512270001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40794

In article <0rmmqu83ni71npd2rbgs2bio1ppu4pc0hb@4ax.com>, Jack Smith
<jsmith@mnsinc.com> wrote:

> On Mon, 14 Oct 2002 21:01:46 GMT, la8ak.xnd@online.no (J M Noeding)
> wrote:
>
> >On Sun, 13 Oct 2002 01:37:39 GMT, motsteve@attbi.com (carltons) wrote:
> >
> >
> >>
> >>Why not measure your SRF and calculate the Cp? You could then verify it
> >>against the other data if nothing else.
> >>
> >>At these frequencies that should be a breeze.
> >>
> >>Steve WB4CZR
> >
> >what is SRF ?
> >
> >It was quite easy to calculate the capacitance, just to remember the
> >math ..., as LA7MI points out
> >capacitance on 120kHz is 4 times the capacitance on 240kHz, and the
> >calculation is
> >(50 + x) * 4 = (800 + x)
> >3x = 600
> >x = 200pF
> >
> >73
> >LA8AK
>
> When plotting and using the regression analysis plot 1/(2*pi*F)^2, not
> 1/F^2. Sorry about the error.
>
> When I redid the calculation got 208.6 pF +/- 23 pF.
>
> Jack

Hi Jan,

SRF is short for self resonant frequency. It's the frequency at which the
inductor ceases being a coil and crosses over into the realm of a
capitor. In the cross over, there's a point where it is neither L or C,
but R. The coil is a one component tank circuit at this point also,
comprised of the inductance in coil its series resistance, and the
parallel capacitance of the winding to winding capacitance totalled up.

It looks really neat on a vector impedance meter because you can actually see where it is resistive only (it's narrow though).

Steve WB4CZR

3084. Re: Plans for 2m transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 10:03:35 UTC
From: rhmcus@yahoo.com
Message-ID: <3dabe728.594575864@news.us.dell.com>
Source record: 40795

Matt

I applaud you in your intrest in building a 2m xmtr. Once you have a schematic check on the availabilty of parts and their cost. You may be able to scrounge some parts for free. The ones you cant look at the price closely. You can buy a used handi talkie at a hamfest for <60 bucks. I saw 2 radio shack htx202's at the last hamfest both for 50.00 and both worked.

Best of luck on your project though.

Rich

On Mon, 14 Oct 2002 08:23:21 -0700, "Matt Senecal" <msenecal@logicon.com> wrote:

>Hi,
>
>Does anyone have any plans for a 2m voice transmitter? I find myself unable
>to afford a professionally-produced transmitter, so I though I'd take a
>crack at building one myself.
>
>---Matt
>KG6NLE
>

3085. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 10:07:57 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <aogpdt$8ef$0@208.206.142.79>
Source record: 40796

budgie wrote:
>
> On 14 Oct 2002 15:16:46 GMT, Dick Carroll <dixie@townsqr.com> wrote:
>
> >
> >
> >budgie wrote:
> >>
> >> >> >Am I overlooking something ?
> >> >>
> >> >> the protection module
> >> >=========
> >> >With 'the protection module ' ,do you mean just an internal fuse ,or
> >> >something more elaborate ?
> >>
> >> They are far more elaborate than a "fuse".
> >>
> >> Usually comprise under/over-voltage and excess charge/discharge
> >> current sensing. Open ccts a series FET in the event of any of the
> >> above conditions. Usually also activates on mismatched cell voltages.
> >>
> >> Li-Ion cells require these measures for YOUR safety. Anyone who
> >> operates them outside the 'envelope" is running the rsik of
> >> catastrophic cell failure at the very least.
> >>
> >> Prot modules are almost invariably configured for the number of cells
> >> in the pack, so a 3-cell module cannot be used with a 2-cell cut-down
> >> version of the same pack.
> >
> > Seems you're saying there's a definite explosion hazard involved with
> >Lithium Ion batteries. If so I'd like to know more, since I've begun to
> >use them for some applications and was not aware of any hazard other
> >than to the batteries themselves.
> >
> > I recently bought a set of four 1800ma lithium AA cells with a matching
> >charger for use with my digital camera. Later I picked up another set of
> >four
> >rechargeable AA's that are marked 1600ma NiMH as a spare set. I've been
> >charging them in the same charger that came with the lithium ion cells.
> >I noticed they seem to get somewhat warmer while charging. Am I screwing
> >up or is this a workable situation? If the NiMH cells shouldn't be
> >charged in the LiION charger, can they be charged in an older NICAD
> >charger?
>

> (refer your later post where these have been identified as NiMH)
> >
> > Can you charge Li Ion batteries successfully using a low rate of charge
> >with an adjustable power source with a charging current level meter, say
> >at a 5 or 10% of the full current rating?
>
> NO. These cells need to have the applied VOLTAGE controlled fairly
> tightly. They are not able to absorb excess coulombs by way of
> recombination as do NiCd/NiMH types. they also have a VERY HIGH
> coulomb efficiency - typically better than 97% compared to 65% for Ni
> types. (Coulomb efficiency rates the amount of charge obtained on
> discharge as a percentage of what was put in during the charge phase).
>
> >Individual cells?
>
> Same story.
>
> >How about
> >the NiMH units? This works well with the older Nicads. Such info seems
> >to be hard to find in any one place even on the WWW. A link or URL to
> >such a site would be nice.
>
> NiMH and NiCd share a lot of common attributes. One is their ability
> to accept long-term "overcharge" at low rates without serious harm.
> As this rate increases, so does the heat dissipation and temp buildup
> - which is the main cause of cell failure in Ni types. If the rate is
> civilised (e.g C/50 or so) then indefinite overcharge appears not to
> present a risk to Ni types.

Thank you very much. I expect that info is out there somewhere buried
in reams of dry reading, but I hadn't came across it yet. Now I know.

Dick

3086. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 10:10:22 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <aogpie$8ef$1@208.206.142.79>
Source record: 40647

budgie wrote:
>
> On 14 Oct 2002 15:16:46 GMT, Dick Carroll <dixie@townsqr.com> wrote:
>
> >
> >
> >budgie wrote:
> >>
> >> >> >Am I overlooking something ?
> >> >>
> >> >> the protection module
> >> >=========
> >> >With 'the protection module ' ,do you mean just an internal fuse ,or
> >> >something more elaborate ?
> >>
> >> They are far more elaborate than a "fuse".
> >>
> >> Usually comprise under/over-voltage and excess charge/discharge
> >> current sensing. Open ccts a series FET in the event of any of the
> >> above conditions. Usually also activates on mismatched cell voltages.
> >>
> >> Li-Ion cells require these measures for YOUR safety. Anyone who
> >> operates them outside the 'envelope" is running the rsik of
> >> catastrophic cell failure at the very least.
> >>
> >> Prot modules are almost invariably configured for the number of cells
> >> in the pack, so a 3-cell module cannot be used with a 2-cell cut-down
> >> version of the same pack.
> >
>
> >Such info seems
> >to be hard to find in any one place even on the WWW. A link or URL to
> >such a site would be nice.
>
> For starters, check out the .pdf on the Maxim MAX1737 for an insight
> into the manuf-recommended " & feeding" of Li-Ions. A good chip, we
> use it in our commercial/industrial charger designs. (NO, we don't
> do domestic/consumer).
>
> Protection circuits - I have a huge# of .pdfs and the like we sourced
> over a period, but unfortunately the originators don't provide the URL
> in the document.
>
> Look at powerlogics.co.kr

>
> A Google search on: lithium ion charge controller
> will turn up more C&F stuff, while searching on:
> lithium ion protection module
> should be useful - that's where we started.
>
> Also search on
> PLM-4005
> SC4000S
>
> as some example prot modules.
>
> For the cells, maybe search on: lithium 18650
>
> Hope this helps.

Thanks, I'll take a look.

Dick

3087. NE568 PLL

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 11:11:48 UTC
From: c.a.m@nospamherethanks.blueyonder.co.uk
Message-ID: <jqtnquslvrooq0ekpj9jr1qgpk5iemo95h@4ax.com>
Source record: 40648

Hi.

Does anyone know a source for the NE568 (or SA568) PLL chip in the UK ?

If not then maybe a similar chip that can work around the 30 to 100MHz region
that can act as a wideband FM video demodulator (and possibly modulator).

Need to find a chip so I can send good quality video down coax along with power.

Regards ... Clive

3088. Re: NE568 PLL

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 12:05:46 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <uwTq9.18876$334.45475@news-server.bigpond.net.au>
Source record: 40649

<c.a.m@nospamherethanks.blueyonder.co.uk> wrote in message
news:jqtnquslvrooq0ekpj9jr1qgpk5iemo95h@4ax.com...
>
> Hi.
>
> Does anyone know a source for the NE568 (or SA568) PLL chip in the UK ?
>
> If not then maybe a similar chip that can work around the 30 to 100MHz
region
> that can act as a wideband FM video demodulator (and possibly modulator).
>
> Need to find a chip so I can send good quality video down coax along with
power.
>
> Regards ... Clive

RS Components stock the NE564D (At least the Australian branch does) - I have a data sheet for the NE564 that puts the max freq @ 50MHz. According to data in the RS catalogue (skimpy) the D version may be as low as 500KHZ. I've used the 564 for FSK demodulation with a 50MHZ carrier and it worked well. Should be OK for your app - hope the D version is suitable.

Steve Andrew

3089. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 12:24:10 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <doE91OLqjAr9EAFr@ifwtech.co.uk>
Source record: 40650

carltons wrote:
>In article <XlpvmFBYLvq9EA9m@ifwtech.co.uk>, "Ian White, G3SEK"
><g3sek@ifwtech.co.uk> wrote:
>
>> While the experts are gathered, has anyone experienced a small frequency
>> dither/flicker with the 8640A? I haven't looked into it yet, but just
>> wondered if it is a Known Problem.
>
>
>Ian,
>
>I'm not an expert by any means on this gen, but have used it for 25
>years. Someone correct me if I'm wrong, but the HP8640B is frequency
>locked and not phase locked. That's why you have to constantly have to
>retune it in unlock mode and then go back to locked. I'm guessing, not
>knowing what the dither is, that the dither is caused by the +/- half
>digit effect of frequency locking. This is due to the uncertainty of the
>time gate drifting in and out of phase with the signal. Like I said, this
>is a guess on my part.
>
Thanks for the confirmation. If it was a B-model, that would have been
my guess, and I'd have expected the dither to disappear on switching off
the locking.

But...

>BTW, I think that the HP8640A is not locked at all. It's just a very
>clean, stable, tunable, cavity oscillator rf gen.

That's the model I have, so there's some other problem. As far as I can
guess, it could be in either:

* The VFO itself... oh boy, I hope not!

* The power supply... easiest to fix, so it's sure not to be that...

* The electrical fine tune / FM side.

Unfortunately I can't find an 8640A manual at the US MIL site - any
ideas, please?

>Both of these models
>are works of art, but you must remember, they came from the HP608, which
>literally was built by machinists and other craftsmen. Brother! What a
>boat anchor! :-)

The 8640s aren't exactly stamped out of old tin cans either!

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3090. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 15:31:47 UTC
From: Mike <m.j.willis@rl.ac.uk>
Message-ID: <aohcdo$10eq@newton.cc.rl.ac.uk>
Source record: 40651

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:doE91OLqjAr9EAFr@ifwtech.co.uk...
> carltons wrote:
> >In article <XlpvmFBYLvq9EA9m@ifwtech.co.uk>, "Ian White, G3SEK"
> ><g3sek@ifwtech.co.uk> wrote:
> >
> >> While the experts are gathered, has anyone experienced a small
frequency
> >> dither/flicker with the 8640A? I haven't looked into it yet, but just
> >> wondered if it is a Known Problem.

Power supply ripple? Oven going on and off? Noisy contact?

I don't know if we have the manual any more. I will ask next time the person
who knows is in.

Mike

3091. Re: Calculating self-capacitance of an inductor?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 16:07:24 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aohefr$b7p$1@venus.btinternet.com>
Source record: 40652

> splendid, but the term "winding pitch" doesn't really makes sense when
> you try to crosswind it,

==========

What do you mean by "crosswind" ?

"winding pitch" means exactly what it says - it is the distance between the centres of adjacent wires in a solenoidal or helically wound coil.

If you wind coil turns over each other (crosswind) obviously it greatly increases self-capacitance. For a given number of turns it also decreases coil width (or length) and so increases inductance somewhat. You are not talking about the same antenna.

It should also be said, contrary to popular (guru) belief, an increase in self-capacitance does NOT result in a decrease in Q when a coil is used in a parallel tuned circuit. Circuit Q is degraded ONLY when a coil is used in a SERIES tuned circuit.

For example, in a tuned-anode tank circuit or receiver input circuit, Q is not affected by self-capacitance. But when a loading coil is inserted in an antenna the Q can be seriously affected and power dissipated in the loading coil will increase.

But to return to correctly designed LW and MW frame antennas, the effect of self-capacitance is to VERY slightly reduce the setting of the variable tuning capacitor. If a coupling coil is used then that may also slightly increase self-capacitance depending on location. If you lean the antenna against a wall, get off your chair and stand alongside it, or rotate it by 90 degrees, self-capacitance will change again. But nobody will notice any difference. <grin>

Yours, Reg, G4FGQ

3092. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 17:12:35 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <g6eSR8RDyEr9EAjn@ifwtech.co.uk>
Source record: 40653

Mike wrote:
>
>"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
>news:doE91OLqjAr9EAFr@ifwtech.co.uk...
>> carltons wrote:
>> >In article <XlpvmFBYLvq9EA9m@ifwtech.co.uk>, "Ian White, G3SEK"
>> ><g3sek@ifwtech.co.uk> wrote:
>> >
>> >> While the experts are gathered, has anyone experienced a small
>frequency
>> >> dither/flicker with the 8640A? I haven't looked into it yet, but just
>> >> wondered if it is a Known Problem.
>
>Power supply ripple?

Sounds more random than that.

>Oven going on and off?

No oven!

>Noisy contact?
>
That's more like it - more specifically, a noisy contact that can cause
FM but (as far as I can hear) not AM. When I can't tolerate it any more,
the FM circuit will be the first place I'll look.

I downloaded the 8640B manual, but the FM circuit is one area where the
8640A is definitely different - because the B has the lock facility but
the A doesn't.

>I don't know if we have the manual any more. I will ask next time the person
>who knows is in.

I'd be grateful if you could.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3093. Re: 50's Schematic Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 17:16:36 UTC
From: mcalhoun@ksu.edu
Message-ID: <aohihk$v0@unix2.cc.ksu.edu>
Source record: 40654

>When I was 15, in the mid 50's, I built a shortwave converter....
>But I don't have the schematic. Can anyone help me find it? ....

>It uses two 6J6s and a third tube I can't make out.
>....[snip]....

Put tube in refrigerator for 30 minutes or so. Remove tube and "huff"
on it with air from your lungs. Oftentimes, the condensation will
enhance the writing on the tube enough that you can make it out.

--Myron, W0PBV.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

3094. Re: Wavetek Sam I used as RF spectrum analyzer??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 21:16:25 UTC
From: Randy Ott <randy@iscdata.com>
Message-ID: <JA%q9.594$E%4.99528816@newssvr30.news.prodigy.com>
Source record: 40655
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design,sci.electronics.equipment,sci.electronics.misc

If you shop around, you should be able to find a decent HP 141T spectrum analyzer system that goes to 1250 MHz for under 500 dollars. A far cry from the SAM and the kits.

Randy Ott

"AJ Sanderson" <sjay@noospam.com> wrote in message
news:ao9eue$55c$1@nntp9.atl.mindspring.net...
> Ok, guys. What would be examples of good, used, lower cost rf analyzers
> that I could look for that wouldn't break the bank. Say 500 Mhz bandwidth
> (150 Mhz minimal acceptable).
>
> AJ
>
>
> "Man Li" <manli88@netvigator.com> wrote in message
> news:ao9ecp$5ub4@imsp212.netvigator.com...
> > No you should not use it as spectrum analyzer unless you only need a
very
> > simple, low resolution and poor accuracy analyzer.
> > Bye.
> >
> > Man
> >
> > "AJ Sanderson" <sjay@noospam.com> ���g��l��s�D
> > :ao7ak3buv1@slb5.atl.mindspring.net...
> > > I recently read a post where a gentlemen is using a Wavetek Sam I catv
> > > analyzer as a 4-400 Mhz spectrum analyzer at low cost. Is this
possible
> > and
> > > how does such a unit compare with regular commercial spectrum
analyzers?
> > > I'd like to find out a little more about this unit... is it solid
state,
> > can
> > > it be used at 50 ohm impedance, accuracy specs, step attenuator,
easily
> > > serviced, etc.... so I'd appreciate any such posts from someone using
> this
> > > unit as an RF analyzer.
> > >
> > > Thanks,

> > > AJ
> > >
> > >
> >
> >
>
>
>

3095. Re: Yaesu FT-901/902 frequency jumps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 22:15:52 UTC
From: la8ak.xnd@online.no
Message-ID: <3dac8d71.23210512@news.online.no>
Source record: 40656

Got the reply from LA8AV whom had serviced many such rigs,
he says that 90% of the cases of instability is caused by bad
edge-connectors and it is solved by cleaning the board-edge with
isopropanol (what you use in your car to clean windscreen), only in
one case was bad solder in the VFO - and it is a terrible job to
removed the box

73
LA8AK
--
remove ,xnd to reply

3096. Re: Plans for 2m transmitter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 22:26:47 UTC
From: scott <acepilot@bloomer.net>
Message-ID: <3DAC9627.EF4401B6@bloomer.net>
Source record: 40657

Well, if you build a transmitter, I assume you need to build a receiver as well? Or are you listening on a scanner? Either way, it may still be cheaper in the long run to buy a 2M mobile rig. AES has the Yaesu 1500M for $139.00. Can't hardly compete with that, especially if you build a crystal controlled transmitter. If you build VFO style, the cost of the parts in the PLL and the rest of the circuitry, box, etc. will add up and you'll probably only have a Watt or two. Why not start with a mobile that puts out 50 Watts, receives police and weather to boot?

Food for thought.....

Scott
N0EDV

Matt Senecal wrote:

> Hi,
>
> Does anyone have any plans for a 2m voice transmitter? I find myself unable
> to afford a professionally-produced transmitter, so I though I'd take a
> crack at building one myself.
>
> ---Matt
> KG6NLE

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

3097. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-15 23:30:39 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1510021931450001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40658

In article <g6eSR8RDyEr9EAjn@ifwtech.co.uk>, "Ian White, G3SEK"
<g3sek@ifwtech.co.uk> wrote:

> Mike wrote:
> >
> >"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
> >news:doE91OLqjAr9EAFr@ifwtech.co.uk...
> >> carltons wrote:
> >> >In article <XlpvmFBYLvq9EA9m@ifwtech.co.uk>, "Ian White, G3SEK"
> >> ><g3sek@ifwtech.co.uk> wrote:
> >> >
> >> >> While the experts are gathered, has anyone experienced a small
> >frequency
> >> >> dither/flicker with the 8640A? I haven't looked into it yet, but just
> >> >> wondered if it is a Known Problem.
> >>
> >>Power supply ripple?
>
> Sounds more random than that.
>
> >Oven going on and off?
>
> No oven!
>
> >Noisy contact?
> >
> That's more like it - more specifically, a noisy contact that can cause
> FM but (as far as I can hear) not AM. When I can't tolerate it any more,
> the FM circuit will be the first place I'll look.
>
> I downloaded the 8640B manual, but the FM circuit is one area where the
> 8640A is definitely different - because the B has the lock facility but
> the A doesn't.
>
> >I don't know if we have the manual any more. I will ask next time the person
> >who knows is in.
>
> I'd be grateful if you could.

Is this in FM mode or CW? If you put it in CW does it dither? Are you
using internal or external modulation, etc. ? Yes, rf is a pain.

BTW, you have to change the modulation scheme going from one to the
other. If you have a loop and a signal falls in the passband of the loop,
it will be extracted by the loop and you will end up with no modulation.

You end up having to modulate the reference or something else to get around the loop tracking.

Steve WB4CZR

3098. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 01:25:01 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3DACBFED.E754FD8B@nettally.com>
Source record: 40659

I wouldn't discount power supply ripple. I have a Motorola S1327B service monitor from same era. It did a lot of squirrly things before I changed the filter caps. The TTL logic is not tolerent of noise. I also found a lot of chips with very tarnished silver pins (gold plated boards with tin plated chip sockets!) replacing those helped a lot. The unit is 25 years old and working better than ever.

"Ian White, G3SEK" wrote:

> Mike wrote:
> >
> >"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
> >news:doE91OLqjAr9EAFr@ifwtech.co.uk...
> >> carltons wrote:
> >> >In article <XlpvmFBYLvq9EA9m@ifwtech.co.uk>, "Ian White, G3SEK"
> >> ><g3sek@ifwtech.co.uk> wrote:
> >> >
> >> >> While the experts are gathered, has anyone experienced a small
> >frequency
> >> >> dither/flicker with the 8640A? I haven't looked into it yet, but just
> >> >> wondered if it is a Known Problem.
> >
> >Power supply ripple?
>
> Sounds more random than that.
>
> >Oven going on and off?
>
> No oven!
>
> >Noisy contact?
> >
> That's more like it - more specifically, a noisy contact that can cause
> FM but (as far as I can hear) not AM. When I can't tolerate it any more,
> the FM circuit will be the first place I'll look.
>
> I downloaded the 8640B manual, but the FM circuit is one area where the
> 8640A is definitely different - because the B has the lock facility but
> the A doesn't.
>
> >I don't know if we have the manual any more. I will ask next time the person
> >who knows is in.
>
> I'd be grateful if you could.
>

> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

3099. MAKE MONEY THE EASY WAY

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 01:59:55 UTC
From: cindygmedrano@aol.com
Message-ID: <20021015215955.05821.00002135@mb-mm.aol.com>
Source record: 40661

MAKE MONEY THE EASY WAY

READING THIS COULD CHANGE YOUR LIFE! I found this on a bulletin board and decided to try it. A little while back, I was browsing through newsgroups, just like you are now, and came across an article similar to this that said you could make thousands of dollars within weeks with only an initial investment of $6.00! So I thought, ‘’Yeah right, this must be a scam’’, but like most of us, I was curious, so I kept reading. Anyway, it said that you send $1.00 to each of the 6 names and address stated in the article. You then place your own name and address in the bottom of the list at # 6, and post the article in at least 200 newsgroups. (There are thousands) No catch, that was it. So after thinking it over, and talking to a few people first, I thought about trying it. I figured : " what have I got to lose expect 6 stamps and $6.00, right ?" Then I invested the measly $6.00. Well GUESS WHAT !! Within 7 days, I started getting money in the mail! I was shocked! I figured it would end soon, but the money just kept coming in. In my first week, I made about $25.00. By the end of the second week I had made a total of over $1,000.00! In the third week I had over $10,000.00 and it’s still growing. This is now my fourth week and I have made a total of just over $42,000.00 and it’s still coming in rapidly. It’s certainly worth $6.00, and 6 stamps, I have spent more than that on the lottery!! Let me tell you how this works and most importantly, why it works. Also, make sure you print a copy of this article NOW, so you can get the information off of it as you need it. I promise you that if you follow the directions exactly, that you will start making more money than you thought possible by doing something so easy! Suggestion: Read this entire message carefully! (print it out or download it.) Follow the simple directions and watch the money come in! It’s easy. It’s legal. And, your investment is only $6.00 (plus postage) IMPORTANT: This is not a rip-off; it is not indecent; it is not illegal; and it’s virtually no risk - it really works!!!! If all of the following instructions are adhered to, you will receive extraordinary dividends . PLEASE NOTE: Please follow these directions EXACTLY, and $50,000 or more can be yours in 20 to 60 days. This program remains successful because of the honesty and integrity of the participants. Please continue its success by carefully adhering to the instructions. You will now become part of the Mail Order business. In this business your product is not solid and tangible, it’s a service. You are in business of developing Mail8ing lists. Many large corporations are happy to pay big bucks for quality lists. However, the money made from the mailing lists is secondary to the income which is made from people like you and me asking to be included in that list. Here are the 4 easy steps to success: STEP 1: Get 6 separate pieces of paper and write the following on each piece of paper "PLEASE PUT ME ON YOUR MAILING LIST." Now get 6 US $1.00 bills and place ONE inside EACH of the 6 pieces of paper so the bill will not be seen through the envelopes and seal them. You should now have 6 sealed envelopes, each with a piece of paper stating the above phrase, your

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3100. MAKE MONEY THE EASY WAY

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 02:00:29 UTC
From: cindygmedrano@aol.com
Message-ID: <20021015220029.05821.00002136@mb-mm.aol.com>
Source record: 40660

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3101. MAKE MONEY THE EASY WAY

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 02:00:53 UTC
From: cindygmedrano@aol.com
Message-ID: <20021015220053.05821.00002137@mb-mm.aol.com>
Source record: 40663

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3102. MAKE MONEY THE EASY WAY

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 02:01:19 UTC
From: cindygmedrano@aol.com
Message-ID: <20021015220119.05821.00002138@mb-mm.aol.com>
Source record: 40662

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READING THIS COULD CHANGE YOUR LIFE! I found this on a bulletin board and decided to try it. A little while back, I was browsing through newsgroups, just like you are now, and came across an article similar to this that said you could make thousands of dollars within weeks with only an initial investment of $6.00! So I thought, ‘’Yeah right, this must be a scam’’, but like most of us, I was curious, so I kept reading. Anyway, it said that you send $1.00 to each of the 6 names and address stated in the article. You then place your own name and address in the bottom of the list at # 6, and post the article in at least 200 newsgroups. (There are thousands) No catch, that was it. So after thinking it over, and talking to a few people first, I thought about trying it. I figured : " what have I got to lose expect 6 stamps and $6.00, right ?" Then I invested the measly $6.00. Well GUESS WHAT !! Within 7 days, I started getting money in the mail! I was shocked! I figured it would end soon, but the money just kept coming in. In my first week, I made about $25.00. By the end of the second week I had made a total of over $1,000.00! In the third week I had over $10,000.00 and it’s still growing. This is now my fourth week and I have made a total of just over $42,000.00 and it’s still coming in rapidly. It’s certainly worth $6.00, and 6 stamps, I have spent more than that on the lottery!! Let me tell you how this works and most importantly, why it works. Also, make sure you print a copy of this article NOW, so you can get the information off of it as you need it. I promise you that if you follow the directions exactly, that you will start making more money than you thought possible by doing something so easy! Suggestion: Read this entire message carefully! (print it out or download it.) Follow the simple directions and watch the money come in! It’s easy. It’s legal. And, your investment is only $6.00 (plus postage) IMPORTANT: This is not a rip-off; it is not indecent; it is not illegal; and it’s virtually no risk - it really works!!!! If all of the following instructions are adhered to, you will receive extraordinary dividends . PLEASE NOTE: Please follow these directions EXACTLY, and $50,000 or more can be yours in 20 to 60 days. This program remains successful because of the honesty and integrity of the participants. Please continue its success by carefully adhering to the instructions. You will now become part of the Mail Order business. In this business your product is not solid and tangible, it’s a service. You are in business of developing Mail8ing lists. Many large corporations are happy to pay big bucks for quality lists. However, the money made from the mailing lists is secondary to the income which is made from people like you and me asking to be included in that list. Here are the 4 easy steps to success: STEP 1: Get 6 separate pieces of paper and write the following on each piece of paper "PLEASE PUT ME ON YOUR MAILING LIST." Now get 6 US $1.00 bills and place ONE inside EACH of the 6 pieces of paper so the bill will not be seen through the envelopes and seal them. You should now have 6 sealed envelopes, each with a piece of paper stating the above phrase, your

name and address, and a $1.00 bill. What you are doing is creating a service. THIS IS ABSOLUTELY LEGAL! You are requesting a legitimate service and you are paying for it! Like most of us I was a little skeptical and a little worried about the legal aspects of it all. So I checked it out with the U.S. Post Office(1-800-725-2161) and they confirmed that it is indeed legal! Mail the 6 envelopes to the following addresses: #1) Daniel Goldstein, 1485 Biltmore Drive, Atlanta Georgia 30329 #2) Boris Milter 1057 Spalding Club Court, Atlanta Georgia 30338 #3) Gabe Rich, 2444 Sandell Drive, Atlanta Georgia 30338 #4) Justin Allgood 6800 Younger rd. The colony, TX 75056 #5) Greg Pierce 5021 Wheeler cir. The Colony, TX 75056 #6) Jeremy Tovar 139 Westhill San Antonio TX 78201 STEP 2: Now take the #1 name off the lists that you see above, move the other names up (6 becomes 5, 5 becomes 4, etc...) and add YOUR Name as number 6 on the list. STEP 3: Change anything you need t, but try to keep this article as close to original as possible. Now, post your amended article to at least 200 news groups. (There are hundreds of thousands of them)Try Wallstreet Sports, Sandbox Sports, Yahoo auctions, e-mails messages in chat rooms, letters in the mail, signs, anything else that will reach to the public. Be as creative as possible. The more you reach out to, the more $$$. Even make a website. All you need is 200 newsgroups, but remember, the more you post, the more money you make! This is perfectly legal! If you have any doubts, refer to Title 18 Sec. 1302 &1341 of the Postal lottery laws. Keep a copy of these steps for yourself and, whenever you need money, you can use it again, and again. PLEASE REMEMBER that this program remains successful because of the honesty and integrity of the participants and by their carefully adhering to the directions. Look at it this way. If you are of integrity, the program will continue and the money that so many others have received will come your way. NOTE: You may want to retain every name and address sent to you, either on a computer or hard copy and keep the notes people send you. This VERIFIES that you are truly providing a service. (Also, it might be a good idea to wrap the $1 bill in dark paper to reduce the risk of mail theft.) So, as each post is downloaded and the directions carefully followed, six members will reimbursed for their participation as a list Developer with one dollar each. Your name will move up the list geometrically so that when your name reaches the #1 position you will be receiving thousands of dollars in CASH!!! What an opportunity for only $6.00 (one for each of the first six people listed above) Send it now, add your own name to the list and you’re in business! DIRECTIONS FOR HOW TO POST NEWSGROUPS----------STEP1)You do not need to re-type this entire letter to do your own posting . Simply put your cursor at the beginning of this letter and drag your cursor to the bottom of this document, and select ‘copy’ from the edit menu. This will copy the entire letter into the computers memory. STEP 2) Open a blank ‘note pad’ file and place your cursor at the top of the blank page. From the ‘edit’ menu select ‘paste’. This will paste a copy of the letter into notepad so that you can add your name to the list. STEP 3) Save your new notepad as text file. If you want to do your posting in different settings, you’ll always have this file to go back to. STEP 4) Use Netscape or Internet explorer and try searching for various newsgroups (on-line forums, messages boards, chat sites, discussions.) STEP 5) Visit these massage boards and post this article as a new message by highlighting the text of this letter and selecting paste from the edit menu. Fill in the subject, this will be the header that everyone sees as they scroll through the list of postings in a

particular group, click the post message button. You're done with your first one! Congratulations..... THAT'S IT! All you have to do is jump to different news groups and post away, after you hang of it, it will take about 30 seconds for each newsgroup! **REMEMBER, THE MORE NEWSGROUPS YOU POST IN, THE MORE MONEY YOU WILL MAKE!! BUT YOU HAVE TO POST A MINIMUM OF 200** That's it! You will begin receiving money from around the world within days! You may eventually want to rent a P.O. Box due to the large amount. THIS IS NOT AN AUCTION BUT A OPPORTUNITY! Thanks for your time and you can bid if you want more money making opportunities like this one!!! I GUARANTEE THIS WILL WORK. IF IT DOESN'T WORK, WRITE TO THE BOTTOM PERSON ON THE LIST. HE WILL TRY TO GET YOU YOUR $6.00 BACK. YOU WILL GET AT LEAST $1.00 BACK IF IT DOESN'T WORK (FROM THE PERSON ON THE BOTTOM OF THE LIST) 30 DAY MONEY BACK GUARANTEE!!! (NOTE: THIS IS PERFECTLY LEGAL. I I WILL TRY AND GET $6.00 BACK, YOU WILL AT LEAST GET $1.00 BACK. SEND SASE TO BOTTOM ADDRESS DEMANDING FOR REFUND, WILL NEED PROF THOUGH.)

3103. Re: Motor run capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 02:03:13 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <uqpi7352di5vfb@corp.supernews.com>
Source record: 40664

Go to any furance A/C shop, they trash tons of old units containing good
caps every year.
<yeti@REMOVEcet.com> wrote in message news:3da1e3ad.2428124@news.cet.com...
> Anybody know a good source for new or used motor run caps?
>

3104. Re: Wavetek Sam I used as RF spectrum analyzer??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 03:47:46 UTC
From: AJ Sanderson <sjay@noospam.com>
Message-ID: <aoingh$gi9$1@slb7.atl.mindspring.net>
Source record: 40665
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design,sci.electronics.equipment,sci.electronics.misc

> If you shop around, you should be able to find a decent HP 141T spectrum
> analyzer system that goes to 1250 MHz for under 500 dollars. A far cry
from
> the SAM and the kits.
>
> Randy Ott
>

Yes, I have begun to look around for one of these 140/141T's. My only
concern here would be how it would hold up, especially being used. Also,
how easy/difficult is it to service yourself if the need arose?

AJ

3105. Re: F.A. not F.S.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 05:01:34 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <Oo6r9.663$vZ6.497186@newshog.newsread.com>
Source record: 40666

"Bill & Suzie Whatley" <spud286@attbi.com> wrote in message
news:pXno9.950$hb4.119@sccrnsc02...
> FA not FS.
>
>
What item is FA and not FS, or was this just a general comment?

An item "For Auction" is "For Sale, but an item For Sale is not necessiarily
For Auction.

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S/N CD-2)

3106. Re: shit college

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 05:06:50 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <Kt6r9.664$vZ6.497406@newshog.newsread.com>
Source record: 40667

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:ao1tca$m7f$1@paris.btinternet.com...
> "MoNkey" wrote -
> > I'm stoned.
>
> ==========
>
> What with the sorry state the world is in I am inclined to join you. But I
> drained the bottle yesterday. Any small donations gratefully received.

Today we have the terrorists. I had family only two blocks from the big one
in Bali last week.

When I was of college age we had the threat of someone pushing a putton and
blowing it all away. If you've watched the news lately you know just how
close we were to putting out the lights.

The world today isn't any worse than when I was a kid, or teenager, or in my
20s.

The problems may come under a different name, but I actually think things
are a bit better now over all.

Quit worrin' and get back to work.

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
>
>

3107. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 06:19:36 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <tbAB5PH4TQr9EAAZ@ifwtech.co.uk>
Source record: 40671

Steve wrote:
>
>Is this in FM mode or CW? If you put it in CW does it dither? Are you
>using internal or external modulation, etc. ? Yes, rf is a pain.
>
>BTW, you have to change the modulation scheme going from one to the
>other. If you have a loop and a signal falls in the passband of the
>loop, it will be extracted by the loop and you will end up with no
>modulation. You end up having to modulate the reference or something
>else to get around the loop tracking.
>
This is in plain CW. The reason I suspect the FM circuit is that even when FM is switched off, the FM circuit is still active and the possibility of modulation by contact noise is still there.

I also note Joe's point about the power supply. It's not normal ripple, but all these instruments are now of an age where electrolytic capacitors become suspect, so that's something to look at too.

I was really only wondering whether this dither was a known common fault, or whether I have to go into the full trouble-shooting routine. Looks like the latter... but thank you, everyone.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3108. am transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 06:28:44 UTC
From: Thinus du Plooy <s2102535@student.up.ac.za>
Message-ID: <3DAD071C.D50822DD@student.up.ac.za>
Source record: 40668

hi

i'm look for circuit schematic for a AM transmitter with a range of 1 -
2km(1.65 - 3miles)

or FM :)

thanks
thinus

3109. Ameco PT-2 preamp; line conditioner; book

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 07:01:40 UTC
From: yeti@REMOVEcet.com
Message-ID: <3dad0d29.5307018@news.cet.com>
Source record: 40669
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

Ameco PT-2 preamplifer: Covers 160 to 6 meters, automatic Tx/Rx relay
passes up to 200 watts. Receive bulb is burnt out, but otherwise it
works great! Would make a fine front-end for a shortwave receiver or
homebrew ham rig. Manual can be found here: www://6mt.com/e1.zip
$60 shipped in ConUS

OneAC CL1101 line conditioner: Rated 1.0 Amp output at 120VAC, single
socket. This is a special isolation transformer + capacitor inside a
case that's flanged for mounting anywhere. Better than a surge
protector or line filter against spikes, surges and other line noise.
$40 shipped in ConUS.

Book: "RF Microelectronics" by Behzad Razavi, Prentice Hall, 1998.
Book is like new, just some wear on the cover from shelf-shuffling
(it's an extra copy from the shop). Check it out at Amazon:
http://www.amazon.com/exec/obidos/ASIN/0138875715/ref=ase_absolutsearch05/103-3859525-6143
843
Amazon's price: $93.00. My price: $30 shipped in ConUS.

3110. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 07:03:27 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1610020304300001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40670

In article <3DACBFED.E754FD8B@nettally.com>, Joe Leikhim
<jleikhim@nettally.com> wrote:

> I wouldn't discount power supply ripple. I have a Motorola S1327B
service monitor
> from same era. It did a lot of squirrly things before I changed the
filter caps.
> The TTL logic is not tolerent of noise. I also found a lot of chips with very
> tarnished silver pins (gold plated boards with tin plated chip sockets!)
> replacing those helped a lot. The unit is 25 years old and working better than
> ever.
>

Joe is right. I didn't think of that because I thought that we were
talking B model. When you go back in history to the early days of UHF
radio on the ham bands, hams used to use AM modulated oscillators for
short range communication. What they got instead was a very wide signal
due to both AM and unintentional FM on the xmtr. If anyone is interested
in the why, I could send them an email or they can look up the reactance
modulator explanation in one of the old Orr Radio Handbooks. What is
important is that modulation of the B+ in an oscillator or even its buffer
is ungood. No matter how nice the equipment looks, if the electrolytics
are more than 15 to 20 years old, they are probably close to useless as
filter caps. Change as many as you are able without a manual and then
change them all if you get one. The other caps that HP used were
extremely stable mica's, etc. You won't find any paper caps in HP
equipment, I would bet. Watch, someone will send my a bill of material
for a HP200 oscillator with paper caps on it. :-)

Steve WB4CZR

3111. Re: shit college

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 07:12:45 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1610020313510001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40672

In article <Kt6r9.664$vZ6.497406@newshog.newsread.com>, "Roger Halstead"
<rdhalste@tm.net> wrote:

> "Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
> news:ao1tca$m7f$1@paris.btinternet.com...
> > "MoNkey" wrote -
> > > I'm stoned.
> >
> > ==========
> >
> > What with the sorry state the world is in I am inclined to join you. But I
> > drained the bottle yesterday. Any small donations gratefully received.
>
> Today we have the terrorists. I had family only two blocks from the big one
> in Bali last week.
>
> When I was of college age we had the threat of someone pushing a putton and
> blowing it all away. If you've watched the news lately you know just how
> close we were to putting out the lights.
>
> The world today isn't any worse than when I was a kid, or teenager, or in my
> 20s.
>
> The problems may come under a different name, but I actually think things
> are a bit better now over all.
>
> Quit worrin' and get back to work.
>
>
> --
> Roger Halstead (K8RI EN73)
> www.rogerhalstead.com
> N833R World's oldest Debonair? (S# CD-2)
> >
> >

10-4 on the worrying. When the missles were moving to Cuba and JFK was
ready to kick Russia's ass, my father and all the fathers of the kids I
was in school with, were on the flight line ready to take off. My father
was in the 28th Air Refueling Squadron and all the other kids had dads
there or who were on the B52's that the KC135's were ready to refuel. The
Buffs were fully loaded and ready to bomb. That is something to worry
about and not some rag head with a bomb. We were talking cities not city
blocks. Go on with your life and let God take care of the rest.

Steve WB4CZR

3112. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 08:17:01 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-1610020418060001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40673

In article <tbAB5PH4TQr9EAAZ@ifwtech.co.uk>, "Ian White, G3SEK"
<g3sek@ifwtech.co.uk> wrote:

> Steve wrote:
> >
> >Is this in FM mode or CW? If you put it in CW does it dither? Are you
> >using internal or external modulation, etc. ? Yes, rf is a pain.
> >
> >BTW, you have to change the modulation scheme going from one to the
> >other. If you have a loop and a signal falls in the passband of the
> >loop, it will be extracted by the loop and you will end up with no
> >modulation. You end up having to modulate the reference or something
> >else to get around the loop tracking.
> >
> This is in plain CW. The reason I suspect the FM circuit is that even
> when FM is switched off, the FM circuit is still active and the
> possibility of modulation by contact noise is still there.
>
> I also note Joe's point about the power supply. It's not normal ripple,
> but all these instruments are now of an age where electrolytic
> capacitors become suspect, so that's something to look at too.
>
> I was really only wondering whether this dither was a known common
> fault, or whether I have to go into the full trouble-shooting routine.
> Looks like the latter... but thank you, everyone.

Cavity oscillators are clean and fairly stable. There should be no FM
associated with them in CW mode. If there is, then Joe's point is the
best one that I've seen suggested. If you can puzzle out where the
oscillator section is, replace every electrolytic you can find. If you
find some tantalum's, then replace them too, but only if the electrolytic
change doesn't do the trick.

I didn't ask yet, but did you put your oscope on AC couple and look at
what ripple you do have on the various supplies? I don't remember the
architechure of the gen so ripple elsewhere could also contribute to your
dither.

Steve WB4CZR

3113. Re: F.A. not F.S.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 08:24:56 UTC
From: Me <byteme@my.shorts>
Message-ID: <o98qquckj15hjfkr2j4o5c4hkganmektnv@4ax.com>
Source record: 40674

On Wed, 16 Oct 2002 05:01:34 GMT, "Roger Halstead" <rdhalste@tm.net>
wrote:

>
>"Bill & Suzie Whatley" <spud286@attbi.com> wrote in message
>news:pXno9.950$hb4.119@sccrnsc02...
>> FA not FS.
>>
>>
>What item is FA and not FS, or was this just a general comment?
>
>An item "For Auction" is "For Sale, but an item For Sale is not necessiarily
>For Auction.

But it's lamers who post "FS:" in NGs when they what to advertise
their auction. Most readers wouldn't waste the time opening it if they
knew it was really a "FA:" item. We all know where to go to check out
the auctions and it aint in USENET.

3114. HHH News

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 08:55:56 UTC
From: Harry Lythall - SM0VPO <someone@micro$oft.com>
Message-ID: <aoj93e$2u9$1@newstoo.ericsson.se>
Source record: 40675

Hi all,

Harry's Homebrew Homepages - http://w1.859.telia.com/~u85920178/

We have had a very nice and long summer here in Sweden, so work on the page was a bit slow. There are, however, some new projects, including:

TRANSMITTER - AM CW RC TX
Basically an AM transmitter that delivers 200mW. Usefull for CW, AM and radio-control of models. Crystal controlled but will operate on crystal harmonics. Article gives coil winding from 1MHz to 40MHz.

TRANSMITTER - V7 and V7b
A fre-running 400mW VHF FM transmitter that can be modified for 50MHz, 70MHz and 144MHz NBFM. Leave it as it is and ic covers 88MHz - 108MHz WBFM. the V7b included pre-emphasis and even an on-board prescaler for adding a simple CMOS only synthesiser.

DOWNLOAD - PCB and foil patters for above.

I was selling kits for the V5 (VHF WBFM 10mW) but these were handed over to Lycom Co in the UK. Sales via Lycom have slowed down so I am offering them again. Just building up stocks at the moment.

New kit added over summer - All CMOS Frequency synthesiser. All board mounted components, including crystal resonator frequency standard. Synthesises 50KHz to 800KHz in 1KHz steps, extended to 3.5MHz. Can be extended to 15MHz with external VCO. With external VCO/Prescaler - light?

Best regards fromHarry - SM0VPO

3115. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 10:15:08 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <rZlgpaBswTr9EAR0@ifwtech.co.uk>
Source record: 40680

Steve wrote:
>
>Cavity oscillators are clean and fairly stable. There should be no FM
>associated with them in CW mode. If there is, then Joe's point is the
>best one that I've seen suggested. If you can puzzle out where the
>oscillator section is, replace every electrolytic you can find. If you
>find some tantalum's, then replace them too, but only if the
>electrolytic change doesn't do the trick.
>
I don't think the problem is due to ripple as such, because the
dithering is pseudo-random.

>I didn't ask yet, but did you put your oscope on AC couple and look at
>what ripple you do have on the various supplies?

Not yet, but that will be the first thing when I open it up.

> I don't remember the architechure of the gen so ripple elsewhere could
>also contribute to your dither.
>
It's a 256-512MHz cavity oscillator with cascaded divide-by-2s. Come to
think, I need to check the fundamental against a 432MHz receiver to see
whether the ripple is in the oscillator or comes in further down the
divider chain.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3116. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 10:20:22 UTC
From: Mike <m.j.willis@rl.ac.uk>
Message-ID: <aojela$ka0@newton.cc.rl.ac.uk>
Source record: 40678

> This is in plain CW. The reason I suspect the FM circuit is that even
> when FM is switched off, the FM circuit is still active and the
> possibility of modulation by contact noise is still there.
>

Another thing - where is it? Don't put it on top of a video display or near an electric motor. You can imagine the problems I have Ian. Just look at the web page (213.152.32.180/Spectra/index.html) for an example of what an intense magnetic field can do for you.

Mike

3117. SAA1957 PLL Out of lock?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 10:21:29 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <VoOWraGp2Tr9Ewks@fslife.co.uk>
Source record: 40677

I am currently using a SAA1957 PLL chip in a synth design but cannot see
a way of adding an out of lock circuit.

I'm sure there must be a way!

Is it worth going the CMOS route, 4060, 4059 and cheap prescaler route?

Many thanks for your thoughts.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3118. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 10:23:49 UTC
From: Mike <m.j.willis@rl.ac.uk>
Message-ID: <aojeoi$haq@newton.cc.rl.ac.uk>
Source record: 40679

> This is in plain CW. The reason I suspect the FM circuit is that even
> when FM is switched off, the FM circuit is still active and the
> possibility of modulation by contact noise is still there.
>

Another thing - where is it? Don't put it on top of a video display or near an electric motor. You can imagine the problems I have Ian. Just look at the web page (213.152.32.180/Spectra/index.html) for an example of what an intense magnetic field can do for you.

I think the sidebands at 50Hz on strong signals are caused by direct modulation of the VCO.

Mike

3119. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 10:24:39 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <uqqfj19pdlnq1d@corp.supernews.com>
Source record: 40676

I took apart a couple of laptop battery packs and salvaged some similar Li-ion cells. The MAHA 777+ seems to charge them according to manufacturers' specs for similar cells. So I don't see anything wrong with doing what you're planning, except for two things. One is to make sure that you don't exceed the manufacturer's maximum discharge rate. For the ones I've investigated, this is C, in your case 1.8 A. Don't use the cells if your rig draws more than this on transmit. The other precaution is that the cells can be permanently damaged if allowed to discharge below 3.0 volts per cell. So don't use them unless you have a circuit that disconnects the battery when the cell voltage drops to this value.

Ni-MH cells are generally a better choice for this type of service because of the Li-ion cells' limitations. In applications like a laptop, you'll see a circuit board inside the battery case which takes care of the charge and discharge restrictions. But if you were going to scrap the cells anyway and already have the charger, you might as well get some use out of them.

You can get more information about the care and feeding of Li-ion cells on the Panasonic web site.

Roy Lewallen, W7EL

Markus Baertschi wrote:
> I recently got an almost new, but mechanically broken Lithium-Ion laptop
> battery-pack. It contains 6 3.6V 1.8AH battery cells. Two of those could
> make a perfect 7.2V 1.8AH battery pack for my FT-50r. To charge the pack
> I'll use a MAHA 777-plus universal charger.
>
> Am I overlooking something ?
>
> If no then I'll just have to find a broken battery pack te re-use the
> housing.
>
> Markus

3120. Re: Wavetek Sam I used as RF spectrum analyzer??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 11:26:17 UTC
From: john@jjdesigns.fsnet.co.uk
Message-ID: <871568ec.0210160326.23004775@posting.google.com>
Source record: 40681
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design,sci.electronics.equipment,sci.electronics.misc

"AJ Sanderson" <sjay@noospam.com> wrote in message
news:<aoingh$gi9$1@slb7.atl.mindspring.net>...
> > If you shop around, you should be able to find a decent HP 141T spectrum
> > analyzer system that goes to 1250 MHz for under 500 dollars. A far cry
> from
> > the SAM and the kits.
> >
> > Randy Ott
> >
>
> Yes, I have begun to look around for one of these 140/141T's. My only
> concern here would be how it would hold up, especially being used. Also,
> how easy/difficult is it to service yourself if the need arose?
>
> AJ

The 141's ect are reliable and eminently servicable. They are full of
metal sheeting, PCB's, wires, transistors, diodes, resistors, cap's
and L's.
The service manuals are superb.

Note though, that the initial mixer frequencies are -high- and would
need capable test gear to fault find in these areas.

3121. ** FLEA at MIT ** Sunday October 20th Cambridge MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 12:39:05 UTC
From: w1gsl@mit.edu
Message-ID: <3dad5de9$0$3935$b45e6eb0@senator-bedfellow.mit.edu>
Source record: 40682
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.info,sci.electronics.misc,ne.forsale,ne.general,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

This coming Sunday.... The seasons last...

!! ** More Buyers PARKING is available ** for details see
http://web.mit.edu/w1gsl/Public/flyer

*** !!!! In our Traditional GARAGE and lot !!!! ****
so come rain or shine or super heat the Flea is on !!!

********* $1 buyers discount with hardcopy of this notice ********

COMPUTERS - ELECTRONICS - HAM RADIO - COMPUTERS - ELECTRONICS - HAM RADIO

FLEA all SUMMER at MIT
Sunday October 20th 2002
9AM-2PM

Come to the city for a great flea - plenty of free parking.

MIT's electronics and ham radio flea will take
place on the third Sunday of each month this summer,
April thru October.

There is tailgate space for over 600 sellers and
free, off-street parking for >2000 cars!

Buyers admission is $5 (you get $1 off if
you're lucky enough to have a copy of our ad)
and sellers spaces are $20 for the first and
$15 for each additional at the gate.

The flea will be held at the corner of Albany and
Main streets in Cambridge; right in the Kendall
Square area from 9AM to 2PM, with sellers set-up
time starting at 7AM.

*** Attention Sellers ***
Prepaid vendors.. Season Pass or monthly,
will be admitted FIRST.
Separate lines will form prior to gate opening
for prepaid and nonprepaid vendors

!! RAIN or SHINE !! Have no fear of rain, a covered
well illuminated tailgate area is available for all
sellers (6'8" clearance).

Talk-in: 145.23- (PL 88.5) W1BOS/R and
W1XM/R-449.725/444.725 (PL 114.8/2A).

Sponsors: MIT Electronics Research Society
MIT UHF Repeater Association (W1XM)
MIT Radio Society (W1MX)
Harvard Wireless Club (W1AF)

For more info / advanced reservations 617 253 3776

********** $1 buyers discount with hard copy of this notice ************

<<<<<<<<<<<<<<<<<<<<<<< cut here >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

Mail the coupon below by the 5th of the month to be a Prepaid Vendor.

FLEA at MIT 2002 Rates

SELLERS

This year each vendor must have a Cambridge Vendor License.
We will do all the paperwork to get the one day Cambridge licenses.
To keep the spaces affordable we are discounting your first space.
To use your spaces the named vendor MUST be present.
Rates include one admission per space.

Advance $17 First space - includes $10 Cambridge Vendor License
$12 Additional Spaces
Must be received by the 5th of the month.

Gate Admission $20 First Space - includes $10 Cambridge Vendor License
$15 Additional Spaces
Admission is after the prepaid vendors

Early Bird Buyer -Admission after the prepaid vendor line is admitted. ~ 7:15AM
** You may not sell. **
$15 per person at the gate.

****************************** cut here ******************************

FLEA at MIT 2002 Advance Space Application

____April ____May ____June ____ July ____Aug ___Sept ____Oct
@ $17 for the first each month + $12 each additional

Name _____ Call _____ $ Included_____

Address _____ Phone _____ Make Check to
The MIT Radio Society
City _____ State _____ Zip _____ PO Box 397082
Cambridge MA 02139
E-mail _____

****
Steve Finberg W1GSL w1gsl@mit.edu
PO Box 82 MIT Br Cambridge MA 02139-7082 617 258 3754
****

3122. Re: F.A. not F.S.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 13:00:41 UTC
From: Dale Parfitt <parinc@verizon.net>
Message-ID: <3DAD627E.74E4F38A@verizon.net>
Source record: 40683

Me wrote:

> On Wed, 16 Oct 2002 05:01:34 GMT, "Roger Halstead" <rdhalste@tm.net>
> wrote:
>
> >
> >"Bill & Suzie Whatley" <spud286@attbi.com> wrote in message
> >news:pXno9.950$hb4.119@sccrnsc02...
> >> FA not FS.
> >>
> >>
> >What item is FA and not FS, or was this just a general comment?
> >
> >An item "For Auction" is "For Sale, but an item For Sale is not necessiarily
> >For Auction.
>
> But it's lamers who post "FS:" in NGs when they what to advertise
> their auction. Most readers wouldn't waste the time opening it if they
> knew it was really a "FA:" item. We all know where to go to check out
> the auctions and it aint in USENET.

I often have this complaint- but in this case the item was both- FS and FA- and
in fact the auction ended by FS

Dale W4OP

3123. Yeasu Multi-CAT Circuit pse?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 13:35:58 UTC
From: Ken Page <vk4akp@yahoo.com>
Message-ID: <3dad6764@dnews.tpgi.com.au>
Source record: 40684

Hi, I'm looking for the circuit for the Multi-CAT interface to suit the Yaesu radios. I have seen reference to it on the net, but can't find any info.

I believe it uses two rs232 lines to select between four different radio's but using only one com port.

I wish to run a Yaesu FT-890AT, FT-757GX & FT-212RH off the one CAT interface.

I'm also looking for info on how to make the multi-drop Kiss interface to run 4 TNC's off the one com port. (2x PK232MBX's & 2x PK88's).

Any help appreciated!

Regards,
Ken. VK4AKP.
P.O.Box 3061, West Ipswich 4305. Australia.
Packet: vk4akp@vk4wip
Email: vk4akp@hotpop.com
.-.-.

3124. Re: Wavetek Sam I used as RF spectrum analyzer??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 13:45:17 UTC
From: Mjolinor <mjolinor@hotmail.com>
Message-ID: <64er9.4262$n61.11167@newsfep3-gui.server.ntli.net>
Source record: 40685
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design,sci.electronics.equipment,sci.electronics.misc

> The 141's ect are reliable and eminently servicable. They are full of
> metal sheeting, PCB's, wires, transistors, diodes, resistors, cap's
> and L's.
> The service manuals are superb.

Talking of service manuals do HP sell them for anything, I have an 8591E with a power supply fault and I can't fix the thing. Does anyone know how much they cost or how to get them.

3125. Re: F.A. not F.S.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 14:11:29 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <aojs2h$32c$0@208.207.71.145>
Source record: 40686

Roger Halstead wrote:
>
> "Bill & Suzie Whatley" <spud286@attbi.com> wrote in message
> news:pXno9.950$hb4.119@sccrnsc02...
> > FA not FS.
> >
> >
> What item is FA and not FS, or was this just a general comment?
>
> An item "For Auction" is "For Sale, but an item For Sale is not necessiarily
> For Auction.

And on Ebay, when the seller uses the "Buy it now" option with a
instant selling price shown, it is both for sale immediately and for
auction if no one decides to "buy it not" at that price

Dick

3126. Touch lamp EMF damaging to nearby equipment?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 14:57:10 UTC
From: Mike Shiva <icd3SPAMBEGONE@hotmail.com>
Message-ID: <Xns92A96FF959CADjoiuwret9q34thae7@64.154.60.171>
Source record: 40687
Cross-posted to: rec.radio.amateur.homebrew,alt.ham-radio,alt.radio.amateur,rec.radio.amateur.misc,alt.cellular-phone-tech

Hello. I have a small touchlamp, with 3 brightness settings. I've heard from other newgroups that touchlamps radiate an EMF/EMI field which can interfere with radio equipment.

I often store electronic stuff mere inches from the lamp, like my cellphone, Zip disks, MP3 player, etc. Can any equipment like this, turned on or off, be damaged (even slightly) by remaining near a touch-lamp for long periods of time?

Thanks!

-Mike Shiva

--
*Remove "Spam Be Gone" from my email address, if you want to email me directly. Thanks.

3127. Re: Yeasu Multi-CAT Circuit pse?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 17:17:48 UTC
From: North <non@telia.com>
Message-ID: <0bhr9.2573$MV.107561@newsc.telia.net>
Source record: 40688

Try this links:
http://www.qsl.net/dk7in/CAT.html
http://www.qsl.net/vu2upx/Projects/cat.htm

/North

"Ken Page" <vk4akp@yahoo.com> skrev i meddelandet
news:3dad6764@dnews.tpgi.com.au...
> Hi, I'm looking for the circuit for the Multi-CAT interface to suit the
> Yaesu radios. I have seen reference to it on the net, but can't find any
> info.
>
> I believe it uses two rs232 lines to select between four different radio's
> but using only one com port.
>
> I wish to run a Yaesu FT-890AT, FT-757GX & FT-212RH off the one CAT
> interface.
>
> I'm also looking for info on how to make the multi-drop Kiss interface to
> run 4 TNC's off the one com port. (2x PK232MBX's & 2x PK88's).
>
> Any help appreciated!
>
> Regards,
> Ken. VK4AKP.
> P.O.Box 3061, West Ipswich 4305. Australia.
> Packet: vk4akp@vk4wip
> Email: vk4akp@hotpop.com
> .-.-.
>
>
>

3128. Re: Touch lamp EMF damaging to nearby equipment?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 17:50:04 UTC
From: Idontwantspam@net
Message-ID: <3dada56a.15562818@news.bellatlantic.net>
Source record: 40689

On Wed, 16 Oct 2002 14:57:10 GMT, Mike Shiva
<icd3SPAMBEGONE@hotmail.com> wrote:

>Hello. I have a small touchlamp, with 3 brightness settings. I've heard
>from other newgroups that touchlamps radiate an EMF/EMI field which can
>interfere with radio equipment.
>
>I often store electronic stuff mere inches from the lamp, like my
>cellphone, Zip disks, MP3 player, etc. Can any equipment like this, turned
>on or off, be damaged (even slightly) by remaining near a touch-lamp for
>long periods of time?
>
I don't think it is powerful enough to damage electronic equipment,
but it can easily interfere with its normal functioning like any RFI.

It could interfere with radio reception, and potentially erase or
scramble magnetic memory, like a hard disk, floppy disk, Zip, backup
tape.

The distance is important for any electromagnetic effect, once your
stuff is more than a foot away the effect will be unnoticable. RFI can
carry further.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3129. MODES WHICH USE SOUNDCARD. PSK RTTY ETC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 18:30:26 UTC
From: Dave <g3vfp@blueyonder.co.uk>
Message-ID: <ogir9.25946$jR.25380@news-binary.blueyonder.co.uk>
Source record: 40690

Hi guys

If you are interested in PSK,MFSK,RTTY,SSTV etc via the soundcard then check out my site which is regularly updated with software's.

http://www.g3vfp.org

Enjoy :-).

Dave G3VFP

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.394 / Virus Database: 224 - Release Date: 03/10/2002

3130. Re: F.A. not F.S.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 18:42:57 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0210161042.a83fcc1@posting.google.com>
Source record: 40691

Me <byteme@my.shorts> wrote in message
news:<o98qquckj15hjfkr2j4o5c4hkganmektnv@4ax.com>...
> On Wed, 16 Oct 2002 05:01:34 GMT, "Roger Halstead" <rdhalste@tm.net>
> wrote:
>
> >
> >"Bill & Suzie Whatley" <spud286@attbi.com> wrote in message
> >news:pXno9.950$hb4.119@sccrnsc02...
> >> FA not FS.
> >>
> >>
> >What item is FA and not FS, or was this just a general comment?
> >
> >An item "For Auction" is "For Sale, but an item For Sale is not necessiarily
> >For Auction.
>
> But it's lamers who post "FS:" in NGs when they what to advertise
> their auction. Most readers wouldn't waste the time opening it if they
> knew it was really a "FA:" item. We all know where to go to check out
> the auctions and it aint in USENET.

I don't particularly care, though I think it's silly when someone simply
posts a link to an auction, rather than put some detail into the message.
And it is silly when someone doesn't bother mentioning in the header
that they are selling something in some way.

But the issue of auction versus forsale just seems to be a way of
ignoring a bigger issue, which is ads in discussion newsgroups.
By arguing over the ebay ads, we ignore the fact that these newsgroups
were set up for discussion. Once we've let ads in, one can hardly
discriminate against auction ads, or treat them like they are somehow
something much slimier than simple forsale ads. Both are relatively rude,
and usually come from people who are more interested in selling things
than in the actual newsgroup.

Michael VE2BVW

3131. Re: NE568 PLL

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 18:43:45 UTC
From: c.a.m@nospamherethanks.blueyonder.co.uk
Message-ID: <72crquk4vsb4562r86bkmeevuge6rghj27@4ax.com>
Source record: 40692

Hi Steve.

Thanks for the reply !

>RS Components stock the NE564D (At least the Australian branch does) - I
>have a data sheet for the NE564 that puts the max freq @ 50MHz. According to
>data in the RS catalogue (skimpy) the D version may be as low as 500KHZ.
>I've used the 564 for FSK demodulation with a 50MHZ carrier and it worked
>well. Should be OK for your app - hope the D version is suitable.

Well, I have 3 NE564's laying around somewhere, I'll dig them out and test them.

but ....

It was the low max MHz operating point and availability reasons why I decided not to use the NE564 (what with the 13MHz BW requirement, well, at least for a good enough video quality), but I've since found out that the NE568 is just as non obtainable anyway :(... was given a uk source by someone else but they too no longer have them, even though their web site shows they do/can get them.

Looking like I'll have to resort to using the 480MHz devices and laying out a discrete vco for the freq so I'll prolly do that, although a vco at around 480 is 'not' that hard to get going, it's ease/simplicity/cost of construction I'm looking for atm, so a ready made SMT vco I'll prolly go for like the microwave devices types etc.

Clive.

3132. SAA1057 / TSA5511 PLL's

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 20:11:40 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <33ru83G8fcr9EwwC@fslife.co.uk>
Source record: 40693

I made a typo the first time round!

This is the correct chip or at least one of them.

The other is the TSA5511.

I'd like any ideas on adding an out of lock circuit to the above PLL
IC's.

Any help appreciated.

((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3133. FA: Homebrew copper regen chassis 1930's unused

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-16 23:30:35 UTC
From: GS <greatsurplus@hotmail.com>
Message-ID: <3dadf593$1_4@news.meganetnews.com>
Source record: 40694
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1390444543&rd=1

Full description at above link. I've owned this since
the mid 70's but will never get around to building
a regen receiver with it. Beautifully built homebuilt
metal chassis that's never had a hole cut in it.

Thanks for the look

3134. Re: Wavetek Sam I used as RF spectrum analyzer??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-17 00:13:49 UTC
From: john@jjdesigns.fsnet.co.uk
Message-ID: <871568ec.0210161613.2d439e9d@posting.google.com>
Source record: 40695
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,sci.electronics.design,sci.electronics.equipment,sci.electronics.misc

"Mjolinor" <mjolinor@hotmail.com> wrote in message
news:<64er9.4262$n61.11167@newsfep3-gui.server.ntli.net>...
> > The 141's ect are reliable and eminently servicable. They are full of
> > metal sheeting, PCB's, wires, transistors, diodes, resistors, cap's
> > and L's.
> > The service manuals are superb.
>
> Talking of service manuals do HP sell them for anything, I have an 8591E
> with a power supply fault and I can't fix the thing. Does anyone know how
> much they cost or how to get them.

A Google search (HP +8591E +manual) turned up loads of service manual
suppliers for the HP8951E. Pick one local to your neck of the woods.
regards
john

3135. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-17 00:49:36 UTC
From: k7itm@aol.com
Message-ID: <3200347.0210161649.63c47013@posting.google.com>
Source record: 40696

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:<XlpvmFBYLvq9EA9m@ifwtech.co.uk>...
> While the experts are gathered, has anyone experienced a small frequency
> dither/flicker with the 8640A? I haven't looked into it yet, but just
> wondered if it is a Known Problem.

Well, it does have some phase noise. Any way you can characterize the
noise you see spectrally? Does it meet spec? (I can supply specs if
needed.) I'd go looking for things I can correlate it to; there are
lots of tricks you can play to localize where it's happening. How is
the phase noise amplitude versus band, for example? -- That is, does
the problem show up on the 256-512MHz range and on lower ranges in
proportion, or is it stronger than it should be on the lower ranges
only? Mechanically-tuned cavities can develop mechanical instability
as they age, so that's a possibility. I guess in the "A" version you
don't have phase locking...

Cheers,
Tom
(Who has been working recently on reducing close-in phase noise in one
of our products...)

3136. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-17 00:54:04 UTC
From: k7itm@aol.com
Message-ID: <3200347.0210161654.b4aa8d5@posting.google.com>
Source record: 40597

motsteve@attbi.com (carltons) wrote in message
news:<motsteve-1510020447500001@c-66-176-144-254.se.client2.attbi.com>...

...
> I'm not an expert by any means on this gen, but have used it for 25
> years. Someone correct me if I'm wrong, but the HP8640B is frequency
> locked and not phase locked.

OK, please stand corrected. It's most certainly phase locked. The
reason you have to re-tune if you lock before it's warmed up is that
the VCO part is accomplished with a lightly-coupled varicap diode in
the oscillator cavity that has a very limited range of frequency
adjustment. When the cavity drifts off too far, there's no way the
varicap can keep it locked (phase or frequency). But locked, it
really is a phase lock.

Cheers,
Tom

3137. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-17 01:07:17 UTC
From: k7itm@aol.com
Message-ID: <3200347.0210161707.3e1fb3d4@posting.google.com>
Source record: 40598

motsteve@attbi.com (carltons) wrote in message
news:<motsteve-16100203043000001@c-66-176-144-254.se.client2.attbi.com>...
...
> The other caps that HP used were
> extremely stable mica's, etc. You won't find any paper caps in HP
> equipment, I would bet. Watch, someone will send my a bill of material
> for a HP200 oscillator with paper caps on it. :-)

Actually, I've met up with way too many individual micas that have
nasty small instabilities to think of them as "extremely stable."
It's been rather a long time since we've used any of them around here,
though they were fairly common in the 8640 era.

Cheers,
Tom

3138. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-17 02:48:04 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <7i8squ8pl2i7mbjvlrr0nqm7umg5cobtnq@4ax.com>
Source record: 40599

On Wed, 16 Oct 2002 07:03:27 GMT motsteve@attbi.com (carltons) wrote:

>No matter how nice the equipment looks, if the electrolytics
>are more than 15 to 20 years old, they are probably close to useless as
>filter caps. Change as many as you are able without a manual and then
>change them all if you get one. The other caps that HP used were
>extremely stable mica's, etc. You won't find any paper caps in HP
>equipment, I would bet. Watch, someone will send my a bill of material
>for a HP200 oscillator with paper caps on it. :-)

In general, I believe HP used parts which they thought were the best quality available. While most of my older HP gear still has electrolytics in them which are original, some have failed. And yes, the 200CD has 4 paper caps in it. While these are almost always bad by now, I have one unit at work where they are all still fine.

OTOH, one of the mica caps in my first 200CD was leaky when I got it. By that time it was probably 35 years old, however. The paper caps in that unit were all bad, but the electrolytics are all still bad. This was a late 50s unit.

I have quite a few HP items from the 70s where the electrolytics are still fine, but I just fixed a 70s DMM last weekend where the + & - 22V PS rails were both completely dead. Boy, did THAT ever make a difference!

-

Jim Adney jadney@vwtype3.org
Madison, Wisconsin USA

3139. Re: Scope FAQ

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-17 10:20:02 UTC
From: John Seney <wd1v@amsat.org>
Message-ID: <wd1v-9560A7.06200317102002@netnews.attbi.com>
Source record: 40600

It can be viewed at http://www.qsl.net/wd1v

JS
Scope FAQ at http://www.qsl.net/wd1v

3140. What temp for temp controlled soledering station?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-17 19:12:38 UTC
From: SeeSignature@below.com
Message-ID: <3daf0902.96325061@news.ga.comcast.giganews.com>
Source record: 40601

What temp do you guys set a temperature-controlled soldering station
to for typical printed circuit, etc, soldering with typical solder?

I picked up one of these at a hamfest this past weekend. I get a
readout of tip temp.

I have never used one before, and need some guidance. It is easy to
find what temp my solder melts at, but how much higher than that works
best for typical use?

TIA

Jerry W4UK

--
To reply, remove space in je flanders@comcast.net

3141. Re: What temp for temp controlled soledering station?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-17 19:22:21 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <N5Er9.164622$S32.11627033@news2.west.cox.net>
Source record: 40602

Jerry From URL:
http://www.epemag.wimborne.co.uk/solderfaq.htm#Temp

Temperature
Another step to successful soldering is to ensure that the temperature of all the parts is raised to roughly the same level before applying solder. Imagine, for instance, trying to solder a resistor into place on a printed circuit board: it's far better to heat both the copper p.c.b. and the resistor lead at the same time before applying solder, so that the solder will flow much more readily over the joint. Heating one part but not the other is far less satisfactory joint, so strive to ensure that the iron is in contact with all the components first, before touching the solder to it. The melting point of most solder is in the region of 188�C (370�F) and the iron tip temperature is typically 330-350�C (626�-662�F).

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com
<SeeSignature@below.com> wrote in message
news:3daf0902.96325061@news.ga.comcast.giganews.com...
> What temp do you guys set a temperature-controlled soldering station
> to for typical printed circuit, etc, soldering with typical solder?
>
> I picked up one of these at a hamfest this past weekend. I get a
> readout of tip temp.
>
> I have never used one before, and need some guidance. It is easy to
> find what temp my solder melts at, but how much higher than that works
> best for typical use?
>
> TIA
>
> Jerry W4UK
>
> --
> To reply, remove space in je flanders@comcast.net

3142. Cell phone>900 Mhz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-17 19:33:37 UTC
From: Gary Tait <taitg@hurontel.on.ca>
Message-ID: <2r3uqu0ta50eh0lp16ms945uf3rn9f1ne2@4ax.com>
Source record: 40603

Has any one here, or can direct me to resources, to modify an 800 Mhz AMPS (old analog modile set) cellular phone into a half duplex/simplex 900 Mhz transciever? I figure it won't be too hard, other than to make sure it is operation properly in band. I'd be dumping the CPU electronics, and removing the cell band filters, or modifying them for 902-928 Mhz use. The RX LO is usually around 936 Mhz, so it won't be too hard to rework. I can use a micro to program the PLLs.

3143. Re: What temp for temp controlled soledering station?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-17 21:50:31 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <uquc5oblib2s07@corp.supernews.com>
Source record: 40604

I run mine 650 to 700 degrees F.

3144. Re: What temp for temp controlled soledering station?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-17 22:13:03 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <uqud9lqtb3pv5d@corp.supernews.com>
Source record: 40605

The temp should be enough to melt the solder on the joint you are wanting soldered, this varies much, depends on the size & type of metal being soldered.
For most soldering my station runs 600-800 dregrees F.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
<SeeSignature@below.com> wrote in message
news:3daf0902.96325061@news.ga.comcast.giganews.com...
> What temp do you guys set a temperature-controlled soldering station
> to for typical printed circuit, etc, soldering with typical solder?
>
> I picked up one of these at a hamfest this past weekend. I get a
> readout of tip temp.
>
> I have never used one before, and need some guidance. It is easy to
> find what temp my solder melts at, but how much higher than that works
> best for typical use?
>
> TIA
>
> Jerry W4UK
>
> --
> To reply, remove space in je flanders@comcast.net

3145. Re: What temp for temp controlled soledering station?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-17 23:21:13 UTC
From: "Mike G." <nospam@my.email.address>
Message-ID: <kuguqukerfcrs4dl7aej9gvgodkc0bt1hh@4ax.com>
Source record: 40606

Jerry,

Generally 700°F works for average tips and general purpose soldering
chores. Lower it to 600°-650° for small tips and fine pitch soldering
and raise it to 800° for your heavy ground lugs and things like that.

Just remember, the lower your tip temperature, the longer your tips
will last. So if you DO need to go to 800°, don't let it sit there in
the holder for hours on end without lowering the temp back down.

Cheers,
Mike

On Thu, 17 Oct 2002 19:12:38 GMT, SeeSignature@below.com wrote:

>What temp do you guys set a temperature-controlled soldering station
>to for typical printed circuit, etc, soldering with typical solder?
>
>I picked up one of these at a hamfest this past weekend. I get a
>readout of tip temp.
>
>I have never used one before, and need some guidance. It is easy to
>find what temp my solder melts at, but how much higher than that works
>best for typical use?
>
>TIA
>
>Jerry W4UK

3146. CMOS keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-17 23:28:49 UTC
From: Jim Leder <jleder@cinci.rr.com>
Message-ID: <pdhuqu8sdj6ftjhj2026of8p7ok81gk0jo@4ax.com>
Source record: 40607

I have seen references to modifying old CMOS keyers to work with the newer rigs, but can't find any schematics on the web. I have an old Trac TE122 that I would like to get to work with my Kenwood 450. Can anyone help me out or point me in the right direction? Thanks.

****
Jim Leder
Origin of the archery 'clicker' at
http://home.cinci.rr.com/jleder/
EMAIL: jleder@cinci.rr.com

3147. looking for ADMS-2E

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 00:41:19 UTC
From: Francois Berube <francois.berube@ccapcable.com>
Message-ID: <IMIr9.7706$Mi5.73728@weber.videotron.net>
Source record: 40608

Hello, i'm looking for an ADMS-2E interface programing, i want to have
schematic to built one.

thank you

VA2RC
Frank
va2rc_2000@hotmail.com

3148. Re: What temp for temp controlled soledering station?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 01:08:08 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <uquno8343mn636@corp.supernews.com>
Source record: 40609

> The temp should be enough to melt the solder on the joint you are
wanting
> soldered, this varies much, depends on the size & type of metal
being
> soldered.

If the tip is really temperature controlled you shouldn't have to change the temperature setting depending upon the size of the joint (within reason). If the joint absorbs more heat and the tip begins to cool, the controller should increase the power to the tip to keep it at the set temperature.

3149. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 02:53:07 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3daf7611.9506794@news.cantech.net.au>
Source record: 40610

On Tue, 15 Oct 2002 04:25:40 GMT, budgie@nowhere.cantech.net.au
(budgie) wrote:

>On Mon, 14 Oct 2002 16:17:28 GMT, "Richard Heindel"
><rheindel@neo.rr.com> wrote:
>
>>Hi Markus,
>>
>>There should have been a "module" in the original laptop battery pack, take
>>that out and use it.
>>
>>I didn't the same thing as you several years ago, took a pack apart and wire
>>4 in series for my FT-530. For charging I just connect the pack across my
>>station battery over night and let it take what it wants. It may not be
>>"safe" or "smart"
>
>it isn't
>
>> but it works and never a problem.
>
>If they are Li-Ion then you should seriously consider yourself (a)
>lucky and (b) at risk that this luck won't last.
>
>Overcharging presents a serious risk to the cell integrity and its
>surroundings.
>
>Normally Li-Ion manufs recommend a current-limited constant voltage
>charge regime. This applies typically 4.2V/cell and regulation is
>required to be tight - one company's prot modules open at 4.25!!!

Just a follow-up. As a result of Dick's enquiry I dug out the
paperwork i have on protection modules. There is data from Nexcon
Technology (unfortunately not fo release to unauthorised persons) and
Seiko. The Seiko S8232 2-cell protection module has its overvoltage
detection threshold set at 4.20V+/-25mV through 4.35V+/-25mV.

If anyone is interested, I could possibly email an Excel chart showing
the charge cycle V/I. This might better illustrate how easily even a
low a current source will get these cells into the overvoltage region.
Without an overvolt protection module, you are then in tiger country.

>Because of the serious implications of overvoltage, PM's also
>generally include cell voltage mismatch monitoring, so that applying
>4.2V/cell to a series string doesn't risk pushing any one cell over
>the edge.

3150. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 02:59:58 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3daf77ae.9919234@news.cantech.net.au>
Source record: 40611

On Wed, 16 Oct 2002 03:24:39 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>I took apart a couple of laptop battery packs and salvaged some similar
>Li-ion cells. The MAHA 777+ seems to charge them according to
>manufacturers' specs for similar cells. So I don't see anything wrong
>with doing what you're planning, except for two things.
(snip)

Roy, I have read your posts with a deal of interest and respect for
quite a period, so I was interested in your comments here.

Unfortunately I am not familiar with the MAHA charger so I can't
comment. However, I will add that I have seen a number of
commercially available chargers (usually Asian origin) labelled
"universal" and claiming to charge NiCd/NiMH and Li-Ion. Our
examination of these shows they do NOT in general employ a CLCV
regime. According to manufacturers' recommendations we have at hand,
a tightly limited voltage is necessary, and I would add especially so
where no protection module is fitted as a safety measure.

Your other comments are endorsed.

>One is to make
>sure that you don't exceed the manufacturer's maximum discharge rate.
>For the ones I've investigated, this is C, in your case 1.8 A. Don't use
>the cells if your rig draws more than this on transmit. The other
>precaution is that the cells can be permanently damaged if allowed to
>discharge below 3.0 volts per cell. So don't use them unless you have a
>circuit that disconnects the battery when the cell voltage drops to this
>value.
>
>Ni-MH cells are generally a better choice for this type of service
>because of the Li-ion cells' limitations. In applications like a laptop,
>you'll see a circuit board inside the battery case which takes care of
>the charge and discharge restrictions. But if you were going to scrap
>the cells anyway and already have the charger, you might as well get
>some use out of them.
>
>You can get more information about the care and feeding of Li-ion cells
>on the Panasonic web site.
>
>Roy Lewallen, W7EL
>
>Markus Baertschi wrote:
>> I recently got an almost new, but mechanically broken Lithium-Ion laptop

>> battery-pack. It contains 6 3.6V 1.8AH battery cells. Two of those could
>> make a perfect 7.2V 1.8AH battery pack for my FT-50r. To charge the pack
>> I'll use a MAHA 777-plus universal charger.
>>
>> Am I overlooking something ?
>>
>> If no then I'll just have to find a broken battery pack te re-use the
>> housing.
>>
>> Markus
>

3151. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 03:03:52 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3daf79bf.10448964@news.cantech.net.au>
Source record: 40612

On Mon, 14 Oct 2002 16:17:28 GMT, "Richard Heindel"
<rheindel@neo.rr.com> wrote:

>Hi Markus,
>
>There should have been a "module" in the original laptop battery pack, take
>that out and use it.

Good idea but UIAVMM it won't work. All the PM's I've seen are
specific to the cell count, and cannot be configured to work with a
series string of less cells.

>I didn't the same thing as you several years ago, took a pack apart and wire
>4 in series for my FT-530. For charging I just connect the pack across my
>station battery over night and let it take what it wants. It may not be
>"safe" or "smart" but it works and never a problem.
>
>73 Richard
>
>
>"Markus Baertschi" <markus@markus.org> wrote in message
>news:MPG.1814cdd8579d2987989690@News.CIS.DFN.DE...
>
>There is a fair amount of free space in the case and I could easily add
>an protection module. Where can I find corresponding schematics ?
>
>73 Markus
>
>
>

3152. Re: CMOS keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 03:57:01 UTC
From: Roger Leone <arleoneNoSpam@inreach.com>
Message-ID: <3FLr9.346$lx7.175753336@news.inreach.com>
Source record: 40613

Jim:

Are you sure you aren't thinking about mods to allow CMOS keyers to work with older rigs, like the cathode keyed vacuum tube transmitters? I would think that a CMOS keyer probably has the ability to key any radio as modern as a TS-450 without mods.

Roger K6XQ

3153. Re: What temp for temp controlled soledering station?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 06:53:29 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0210172253.392e9814@posting.google.com>
Source record: 40614

Hi Jerry,
I set my soldering iron to 300-330ï¿½C (570-630ï¿½F) for common PCB and thin wire soldering. I use a Sn60Pb solder wire 1,0 mm dia. For thick wires and big joints I use a higher-power unregulated soldering iron.

BR from Ivan

3154. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 07:46:03 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <uqvf1tfg859ldb@corp.supernews.com>
Source record: 40615

The MAHA MH-C777 plus has different, switch selected, charging regimens for NiCd/NiMH and Li-ion cells. I see they're now offering an MH-C777 plus II model. There's some information about this newer model at http://www.mahaenergy.com. I haven't done any test of my MH-C777 plus except to compare the state of charge (determined by a timed constant current discharge) of MAHA-charged Li-ion cells with ones manually charged according to the Panasonic recommendations. There wasn't any appreciable difference in the capacity obtained with the two charging methods, so within the bounds of this very limited test, the MAHA seemed to do what it claimed.

I was surprised to find that the Li-ion cells I have don't have that much of an edge over NiMH cells with regard to energy per unit weight. But the Li-ion cells I have are quite a few years old, salvaged from non-working packs from an old laptop computer, and I was comparing them to modern NiMH cells. Considering the extra care the Li-ion cells require, the relatively small weight advantage isn't worth the bother to me. I imagine that more modern Li-ion cells would show more of an advantage, but I don't (yet) have any source of cheap or free ones. Guess I'll have to wait until the batteries of my current laptop go flaky.

Roy Lewallen, W7EL

budgie wrote:
> On Wed, 16 Oct 2002 03:24:39 -0700, Roy Lewallen <w7el@eznec.com>
> wrote:
>
>
>>I took apart a couple of laptop battery packs and salvaged some similar
>>Li-ion cells. The MAHA 777+ seems to charge them according to
>>manufacturers' specs for similar cells. So I don't see anything wrong
>>with doing what you're planning, except for two things.
>
> (snip)
>
> Roy, I have read your posts with a deal of interest and respect for
> quite a period, so I was interested in your comments here.
>
> Unfortunately I am not familiar with the MAHA charger so I can't
> comment. However, I will add that I have seen a number of
> commercially available chargers (usually Asian origin) labelled
> "universal" and claiming to charge NiCd/NiMH and Li-Ion. Our
> examination of these shows they do NOT in general employ a CLCV
> regime. According to manufacturers' recommendations we have at hand,
> a tightly limited voltage is necessary, and I would add especially so

> where no protection module is fitted as a safety measure.
>
> Your other comments are endorsed.

3155. LCD suppliers in UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 08:31:58 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <L3rh8XF+b8r9Ew38@fslife.co.uk>
Source record: 40616

Can anyone suggest an inexpensive or even surplus source for 1x16 serial
lcd displays?

Many thanks
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3156. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 10:21:39 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <ipRr9.2583$KO2.46873@newsfep2-win.server.ntli.net>
Source record: 40617

> Roy, I have read your posts with a deal of interest and respect for
> quite a period, so I was interested in your comments here.
>
> Unfortunately I am not familiar with the MAHA charger so I can't
> comment. However, I will add that I have seen a number of
> commercially available chargers (usually Asian origin) labelled
> "universal" and claiming to charge NiCd/NiMH and Li-Ion. Our
> examination of these shows they do NOT in general employ a CLCV
> regime. According to manufacturers' recommendations we have at hand,
> a tightly limited voltage is necessary, and I would add especially so
> where no protection module is fitted as a safety measure.
========
The MAHA C777PLUS charger/analyser is in sofar universal that one has to
manually select whether the battery (pack) is Ni or Li.
As per the instuction manual :
NiCAD and NiMH batteries are supported from 1.2 to 14.4 V Rapid charge
current 800 mA plus/minus 50mA
Li-ion batteries are supported from 3.6 to 14.4 V Rapid charge current
400 mA max.

Trickle charge current 70 mA

Voltage accuracy plus/minus 0.3 V

Detection : Negative Delta V - Zero Delta V - Max temperature

Frank gm0csz.kn6wh@ntlworld.com

3157. Re: CMOS keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 12:43:18 UTC
From: Jim Leder <jleder@cinci.rr.com>
Message-ID: <8qvvqus6rfj7u2klc023kfkdqgfj60u1be@4ax.com>
Source record: 40618

This keyer does not do 'direct' keying. If I put an ohm meter across the keying leads, I get no deflection. It's a pretty old keyer and I have no documentation for it, so I can only assume it's a negative line keyer intended for use in grid block keyed transmitters. I would like to see if I can change it for 'direct' keying. I've seen references to using reed relays and such and I am looking to see if anyone has more specific details on how to do it, or any other 'better' way. Thanks.

****
Jim Leder
Origin of the archery 'clicker' at
http://home.cinci.rr.com/jleder/
EMAIL: jleder@cinci.rr.com

3158. icom 737

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 12:54:16 UTC
From: Vince ve3elb <vcl@sympatico.ca>
Message-ID: <XwTr9.11297$Md7.1273343@news20.bellglobal.com>
Source record: 40619

hello all I am looking for the computer control software for the icom-737 hf transceiver can anyone help me in finding it please let me know thank you

Vince ve3elb

3159. FA : Tek tube scopes + Home Brew Cabinets + HV Caps +++

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 13:23:26 UTC
From: "Phil T." <xyzphil@vaxxine.com>
Message-ID: <3DB00B4E.5B2DC4DC@vaxxine.com>
Source record: 40621

You can view the list here. Feel free to contact me if there's
something there
that you absolutely can't live without. The Majestic 100B chassis used
a pair
of P-P 45's.

http://cgi6.ebay.com/ws/eBayISAPI.dll?ViewSellersOtherItems&userid=vaxxine&include=0&since=-1&sort=3&rows=25

More to come.

Thanks...Phil

3160. Re: CMOS keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 13:26:05 UTC
From: Jim Leder <jleder@cinci.rr.com>
Message-ID: <9f20ru05868eetooko359hqa0h987ns0v0@4ax.com>
Source record: 40620

Thanks to the replies. The consensus was that the keyer should work. Well, Mike Willis suggested I check the polarity of the output leads with an Ohm meter and I did get a reading. So, all I did was reverse the output leads and now it works fine. No mods necessary! Thanks to Mike Willis!

****
Jim Leder
Origin of the archery 'clicker' at
http://home.cinci.rr.com/jleder/
EMAIL: jleder@cinci.rr.com

3161. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 14:31:10 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3db01627.1224393@news.cantech.net.au>
Source record: 40622

On Fri, 18 Oct 2002 00:46:03 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>The MAHA MH-C777 plus has different, switch selected, charging regimens
>for NiCd/NiMH and Li-ion cells. I see they're now offering an MH-C777
>plus II model. There's some information about this newer model at
>http://www.mahaenergy.com. I haven't done any test of my MH-C777 plus
>except to compare the state of charge (determined by a timed constant
>current discharge) of MAHA-charged Li-ion cells with ones manually
>charged according to the Panasonic recommendations. There wasn't any
>appreciable difference in the capacity obtained with the two charging
>methods, so within the bounds of this very limited test, the MAHA seemed
>to do what it claimed.
>
>I was surprised to find that the Li-ion cells I have don't have that
>much of an edge over NiMH cells with regard to energy per unit weight.
>But the Li-ion cells I have are quite a few years old, salvaged from
>non-working packs from an old laptop computer, and I was comparing them
>to modern NiMH cells. Considering the extra care the Li-ion cells
>require, the relatively small weight advantage isn't worth the bother to
>me. I imagine that more modern Li-ion cells would show more of an
>advantage, but I don't (yet) have any source of cheap or free ones.
>Guess I'll have to wait until the batteries of my current laptop go flaky.
>
>Roy Lewallen, W7EL

Interesting observation. I modelled our commercial/industrial Li-Ion
charger design around the 18650 cells. They are 42g and variously
1700mAh to 1800mAh for a 3.0V end-point. I just weighed four 1800mAh
NiMH cells and got 104g, albeit on the kitchen scales, so working on
+/- 10% thats 24-28g each. For the Li-Ion's we use 3.6 as the mean
voltage on discharge vs say 1.2 for the NiMH. So that gives 3 times
the grunt for about 60% more weight, or nearly twice the
energy/weight. If your comparison isn't that favourable then it could
be the condition of your Li-Ions that lets them down.

There are certainly areas where Ni-anythings will shine over Li-Ion.
One is charging rate. Using the CLCV regime, we wwere getting about
98% return in three hours, but only 50 minutes or so was in current
limit. SO even if we cranked the CL up by a factor of two, the
reduction in cycle length would only be 25 minutes MAX - hardly worth
fussing over. In a design in hand for some large-ish NiMH packs (20
cells of 13Ah) we are considering charging at 4C and using dT/dt
termination only. After transition to trickle, this will give us an
estimated 90% plus recovery inside 30 minutes. If recovery speed is

any sort of issue, Li-Ion aren't in the photo frame at the finish.

The other aspect to use of Li-Ion in the O/P's context is discharge current capability of the L-I's. Apart from any PM intervention, I have personally experienced cells which suffered a transient short by a wandering meter lead, and were never able to deliver anything useful thereafter - almost as if the cell itself contained a fusible link with a high R across it.

In case you are interested, our capacity and coulomb efficiency measurement was done with a constant load R and numerical integration of V/I samples taken at 1 minute intervals with a mean load current of ~0.5C. Samples were taken with an HP34970 which is quite an accurate basis for such calculations.

Peter

>budgie wrote:
>> On Wed, 16 Oct 2002 03:24:39 -0700, Roy Lewallen <w7el@eznec.com>
>> wrote:
>>
>>
>>>I took apart a couple of laptop battery packs and salvaged some similar
>>>Li-ion cells. The MAHA 777+ seems to charge them according to
>>>manufacturers' specs for similar cells. So I don't see anything wrong
>>>with doing what you're planning, except for two things.
>>
>> (snip)
>>
>> Roy, I have read your posts with a deal of interest and respect for
>> quite a period, so I was interested in your comments here.
>>
>> Unfortunately I am not familiar with the MAHA charger so I can't
>> comment. However, I will add that I have seen a number of
>> commercially available chargers (usually Asian origin) labelled
>> "universal" and claiming to charge NiCd/NiMH and Li-Ion. Our
>> examination of these shows they do NOT in general employ a CLCV
>> regime. According to manufacturers' recommendations we have at hand,
>> a tightly limited voltage is necessary, and I would add especially so
>> where no protection module is fitted as a safety measure.
>>
>> Your other comments are endorsed.
>

3162. Re: Homegrown Li-Ion battery pack for FT-50

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 14:32:54 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3db01b32.2515088@news.cantech.net.au>
Source record: 40625

On Fri, 18 Oct 2002 11:21:39 +0100, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>> Roy, I have read your posts with a deal of interest and respect for
>> quite a period, so I was interested in your comments here.
>>
>> Unfortunately I am not familiar with the MAHA charger so I can't
>> comment. However, I will add that I have seen a number of
>> commercially available chargers (usually Asian origin) labelled
>> "universal" and claiming to charge NiCd/NiMH and Li-Ion. Our
>> examination of these shows they do NOT in general employ a CLCV
>> regime. According to manufacturers' recommendations we have at hand,
>> a tightly limited voltage is necessary, and I would add especially so
>> where no protection module is fitted as a safety measure.
>========
>The MAHA C777PLUS charger/analyser is in sofar universal that one has to
>manually select whether the battery (pack) is Ni or Li.
>As per the instuction manual :
>NiCAD and NiMH batteries are supported from 1.2 to 14.4 V Rapid charge
>current 800 mA plus/minus 50mA
>Li-ion batteries are supported from 3.6 to 14.4 V Rapid charge current
>400 mA max.
>
>Trickle charge current 70 mA
>
>Voltage accuracy plus/minus 0.3 V
>
>Detection : Negative Delta V - Zero Delta V - Max temperature

Thanks for the heads-up on the specs. I only hope that the voltage
accuracy is better than that on (for example) a single Li-Ion. 3.9V
won't give you a great charge restoration, while 4.5V would have me
move out of the room real fast.

3163. Re: CMOS keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 15:56:50 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <9dWr9.1929$t12.91210@newsfep1-win.server.ntli.net>
Source record: 40626

> This keyer does not do 'direct' keying. If I put an ohm meter across
> the keying leads, I get no deflection. It's a pretty old keyer and I
> have no documentation for it, so I can only assume it's a negative
> line keyer intended for use in grid block keyed transmitters. I would
> like to see if I can change it for 'direct' keying. I've seen
> references to using reed relays and such and I am looking to see if
> anyone has more specific details on how to do it, or any other
> 'better' way. Thanks.
==========
To interface the keyer with a valve transmitter you could use an
opto-coupler followed by a suitable high(er) voltage transistor if
necessary . A good HV transistor is the SD869 originally used for video
sweep and good for 1500 V.
In principle I would always use an opto-coupler to interface a keyer with
any transmitter.

On a different but related subject , years ago I have seen a circuit for a
VFO employing a high-speed opto-coupler to avoid any possible variable
loading .
In general , opto-couplers can prevent a lot of potential interfacing hassle
; I love them .

Frank gm0csz.kn6wh@ntlworld.com

3164. Re: LCD suppliers in UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 16:52:39 UTC
From: Jason Dugas <jdugas@ems.jsc.nasa.gov>
Message-ID: <r%Wr9.644$WP1.38136033@newssvr17.news.prodigy.com>
Source record: 40627

Try Purdy Electronics on the web: www.purdyelectronics.com

They are in the U.S. but they could probably sample one to you.

Jason

"Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message
news:L3rh8XF+b8r9Ew38@fslife.co.uk...
> Can anyone suggest an inexpensive or even surplus source for 1x16 serial
> lcd displays?
>
> Many thanks
> --
> Philip de Cadenet G4ZOW
> Transmitters 'R' Us
> http://www.transmittersrus.com

3165. Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 18:46:22 UTC
From: la8ak.xnd@online.no
Message-ID: <3db02277.170352299@news.online.no>
Source record: 40628
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

Capacitors for ATU are difficult to find nowadays, and a friend are travelling to Taiwan with one of the purpose of finding variable capcitors for ATU projects.

Have seen ATU's for sale in Germany with tuning capacitors which looks like 'home-made', but quite good work. Wonder if somebody has experience in making his own variable capcitorsm and what is possible maximum capacity?

I am particularly interested if it is possible to make a 5000pF 2000V or larger capacitor for 136kHz ATU, dimensions for 136kHz could be 100 times larger than 14MHz for similar performance. Suggest mica as dielectricum?

73
Jan-Martin
LA8AK

--
remove ,xnd to reply

3166. AD270 DATA SHEET

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 19:06:43 UTC
From: kurt winebäck <kurt.wineback@mailbox.swipnet.se>
Message-ID: <3DB05BC2.B6879242@mailbox.swipnet.se>
Source record: 40629

hello
Who knows where i can find the data sheet of AD270 Datong pre-amplifier
thanks in advance

kurt

3167. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 19:50:26 UTC
From: john graesser <graesser@tca.net>
Message-ID: <ur0pafk7doe888@corp.supernews.com>
Source record: 40630
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3db02277.170352299@news.online.no...
> Capacitors for ATU are difficult to find nowadays, and a friend are
> travelling to Taiwan with one of the purpose of finding variable
> capcitors for ATU projects.
>
> Have seen ATU's for sale in Germany with tuning capacitors which looks
> like 'home-made', but quite good work. Wonder if somebody has
> experience in making his own variable capcitorsm and what is possible
> maximum capacity?
>
> I am particularly interested if it is possible to make a 5000pF 2000V
> or larger capacitor for 136kHz ATU, dimensions for 136kHz could be 100
> times larger than 14MHz for similar performance. Suggest mica as
> dielectricum?
>
> 73
> Jan-Martin
> LA8AK

I have made homemade caps in the past but nothing approaching what you want,
I thought most lowfer equipment was very low power, are you sure you need
that 2000v spec?

Do you need the full 0-5000 swing for the variable cap? Or could you break
it up into a fixed cap and a smaller variable cap?

If creating a rotating varible is too difficult for you, you might make one
with a sliding adjustment, that is how my first variable was designed, I
just used a sliding track to mesh the rectangular plates together instead of
rotating them together.

Whatever you do, make sure you keep everything insulated, both from the case
and from the knob, ceramic standoffs seem to be in shorter supply around
here than variable caps.
thanks, John.
KC5DWD

3168. Re: LCD suppliers in UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 19:52:46 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <3OZr9.5815$WY3.65930@newsfep1-gui.server.ntli.net>
Source record: 40631

Bull Electrical the surplus dealers normally have some on their lists. Try
http://www.bullnet.co.uk/shops/test/opto.htm

Alec Wood M1BNK
Teesside UK

"Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message
news:L3rh8XF+b8r9Ew38@fslife.co.uk...
> Can anyone suggest an inexpensive or even surplus source for 1x16 serial
> lcd displays?
>
> Many thanks
> --
> Philip de Cadenet G4ZOW
> Transmitters 'R' Us
> http://www.transmittersrus.com

3169. 73 Magazine Article - VLF to HF Loop Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 20:18:10 UTC
From: dinoal7lz@aol.com
Message-ID: <20021018161810.02028.00003605@mb-fc.aol.com>
Source record: 40632

73 magazine had a three-part article in the July/August/September issues by K8ZOA on a VLF to HF loop receiving antenna that I want to build....I've got parts 1 and 2 but missed the Sep issue. Anyone out there have that issue who could make a copy or scan the third part from the Sep issue for me?

Thanks very much in advance!

Dino KL0S/4

3170. Re: 73 Magazine Article - VLF to HF Loop Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 20:50:29 UTC
From: Idontwantspam@net
Message-ID: <3db07322.33905313@news.bellatlantic.net>
Source record: 40633

On 18 Oct 2002 20:18:10 GMT, dinoal7lz@aol.com (Dino AL7LZ) wrote:

>73 magazine had a three-part article in the July/August/September issues by
>K8ZOA on a VLF to HF loop receiving antenna that I want to build....I've got
>parts 1 and 2 but missed the Sep issue. Anyone out there have that issue who
>could make a copy or scan the third part from the Sep issue for me?
>
HRO in Salem, NH often has some back issues of 73 and the other
magazines around on the sales floor, usually the current one and two
back, IIRC.

if you strike out here, give them a call:

800-444-0047 603-898-3750 24 HOUR FAX 603-898-1041
salem@hamradio.com
224 N Broadway Suite D12, Salem NH 03079

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3171. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-18 21:42:05 UTC
From: yeti@REMOVEcet.com
Message-ID: <3db07f49.204925@news.cet.com>
Source record: 40634
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

You can get some pretty good sized air variable caps on ebay and elsewhere, and then you can triple their size and voltage rating by immersing them in mineral oil. Build a tank that will hold the cap and the oil, then add an insulated shaft extention to bring the shaft out from the top. It may not be pretty, but it works very well.

In <3db02277.170352299@news.online.no>, la8ak.xnd@online.no (J M Noeding) wrote:

>Capacitors for ATU are difficult to find nowadays, and a friend are
>travelling to Taiwan with one of the purpose of finding variable
>capcitors for ATU projects.
>
>Have seen ATU's for sale in Germany with tuning capacitors which looks
>like 'home-made', but quite good work. Wonder if somebody has
>experience in making his own variable capcitorsm and what is possible
>maximum capacity?
>
>I am particularly interested if it is possible to make a 5000pF 2000V
>or larger capacitor for 136kHz ATU, dimensions for 136kHz could be 100
>times larger than 14MHz for similar performance. Suggest mica as
>dielectricum?
>
>73
>Jan-Martin
>LA8AK
>
>--
>remove ,xnd to reply

3172. Building a variable condenser

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 00:24:55 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <CG1s9.4036$KO2.145609@newsfep2-win.server.ntli.net>
Source record: 40636

> Have seen ATU's for sale in Germany with tuning capacitors which looks
> like 'home-made', but quite good work. Wonder if somebody has
> experience in making his own variable capcitorsm and what is possible
> maximum capacity?
>
> I am particularly interested if it is possible to make a 5000pF 2000V
> or larger capacitor for 136kHz ATU, dimensions for 136kHz could be 100
> times larger than 14MHz for similar performance. Suggest mica as
> dielectricum?
=======
A variable capacitor of 5000 pf - 2000 V can perhaps be best made by a low - 1000 pF variable vacuum cap with additional 4 switched fixed 1000 pF HV caps . using a HV ceramic switch , adding/reducing 1000 pF to the system each step

The 1000 pF - 3000 V (Jennings) variable vacuum cap can be found in Collins aircraft ATUs which a few years ago were sold by surplus trader J. Birkett - Lincoln in the UK . He still might have a few . He regularly advertises in the RSGB's magazine RADCOM.

The HV fixed caps can often be found in surplus 2 MHz marine equipment or on fleamarkets in continental Europe ,nowadays 'teeming ' with HV components of Russian origin. In this respect personal contacts with fellow radio amateurs in (the eastern part of) Germany , Poland or the Baltic states might be useful.

Alternatively a 500 pF HV variable air cap. with added switched 500 -1000 - 1000 - 1000 - 1000 pF fixed HV caps.

You can even use a lower capacity HV variable air cap often available ex WW2 equipment (eg BC-602 tuner) but then you need more fixed caps with a smaller capacity and hence a more position 'adding' switch to enable a smooth step wise increase/decrease of capacity.

Frank gm0csz.kn6wh@ntlworld.com

3173. Re: 73 Magazine Article - VLF to HF Loop Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 00:26:31 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <jj91rugpcvln15bfr6bjrif6jhhkhf2vii@4ax.com>
Source record: 40635

On 18 Oct 2002 20:18:10 GMT, dinoal7lz@aol.com (Dino AL7LZ) wrote:

>73 magazine had a three-part article in the July/August/September issues by
>K8ZOA on a VLF to HF loop receiving antenna that I want to build....I've got
>parts 1 and 2 but missed the Sep issue. Anyone out there have that issue who
>could make a copy or scan the third part from the Sep issue for me?
>
>Thanks very much in advance!
>
>Dino KL0S/4

Glad to see someone is working on building one of my projects.

Drop me an e-mail with your mailing address and I'll pop a copy in the
mail to you.

Jack K8ZOA

3174. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 04:08:25 UTC
From: mcalhoun@ksu.edu
Message-ID: <aoqlrp$a0h@unix1.cc.ksu.edu>
Source record: 40637
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

>Have seen ATU's for sale in Germany with tuning capacitors which looks
>like 'home-made', but quite good work. Wonder if somebody has
>experience in making his own variable capcitorsm and what is possible
>maximum capacity?

I've read articles (in QST or other ham-related magazines) which made
variable capacitors out of short lengths of concentric tubing separated
by thin plastic; just slide the tubing in/out to change capacitance.
However, I don't recall capacitance values.

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

3175. Need schematic diagram for linear amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 09:58:49 UTC
From: Robban <sm0xod@hotmail.com>
Message-ID: <t1as9.278$1r1.10571@newsc.telia.net>
Source record: 40638

Hi i am looking for a schematic diagram for this solid state linear
amplifier
http://w1.855.telia.com/~u85529008/slutsteg.htm
I hope anyone can help me!
73 de sm0xod Robban Sweden

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.404 / Virus Database: 228 - Release Date: 2002-10-15

3176. Re: LCD suppliers in UK

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 10:16:18 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <Oc$Q2iUyDTs9Ew9B@fslife.co.uk>
Source record: 40639

Thanks for the previous replies.

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3177. making pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 11:52:05 UTC
From: Ms Jillian Fryer <fryer@melbpc.org.au>
Message-ID: <aorguibeu1@possum.melbpc.org.au>
Source record: 40640
Cross-posted to: aus.electronics,rec.radio.amateur,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.repair

I have just bought the techniks "press n peel"kit for making PCB'S my question concerns the directions ,the first step, where you photocopy the circuit image onto the dull side of the emulsion. Not being used to photocopiers,which way faces up as it is loaded into photocopier the shiny side or the dull side,I've only got a few sheets and don't want to waste them,.
Mark.

3178. Re: making pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 12:14:00 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3db14c1a.3102424@news.cantech.net.au>
Source record: 40642
Cross-posted to: aus.electronics,rec.radio.amateur,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.repair

On Sat, 19 Oct 2002 21:52:05 +1000, "Ms Jillian Fryer"
<fryer@melbpc.org.au> wrote:

>I have just bought the techniks "press n peel"kit for making PCB'S my
>question concerns the directions ,the first step, where you photocopy the
>circuit image onto the dull side of the emulsion. Not being used to
>photocopiers,which way faces up as it is loaded into photocopier the shiny
>side or the dull side,I've only got a few sheets and don't want to waste
>them,.

I know the problem from trying to do double-sided copying. Simple
solution - take a sheet of plain paper and write "this side up" on the
side that is up (logical, but I figured I should say so). Then shove
that through the copier, and the result will solve your dilemma.

3179. weather sat reception

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 12:24:21 UTC
From: dazz <darrena@btinternet.com>
Message-ID: <aoritkheq1@knossos.btinternet.com>
Source record: 40641

does any one have a schematic for a weather sat reciever in the 137mhz band
cheers
dazz

3180. Re: making pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 12:31:47 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailnospamorama.com>
Message-ID: <spms9.2934$uu1.2842@news.bellsouth.net>
Source record: 40556
Cross-posted to: aus.electronics,rec.radio.amateur,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.repair

Best way is to take a piece of paper. Make a mark on it. put face down in the paper tray. make a copy and see if the mark is up or down in the output tray. then you know which way to put your sheet.

--
73,
Chuck
KE4ETH

"Ms Jillian Fryer" <fryer@melbpc.org.au> wrote in message news:aorguibeu1@possum.melbpc.org.au...
> I have just bought the techniks "press n peel"kit for making PCB'S my
> question concerns the directions ,the first step, where you photocopy the
> circuit image onto the dull side of the emulsion. Not being used to
> photocopiers,which way faces up as it is loaded into photocopier the shiny
> side or the dull side,I've only got a few sheets and don't want to waste
> them,.
> Mark.
>
>

3181. Re: making pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 13:19:52 UTC
From: Idontwantspam@net
Message-ID: <3db15b00.3376445@news.bellatlantic.net>
Source record: 40643
Cross-posted to: aus.electronics,rec.radio.amateur,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.repair

On Sat, 19 Oct 2002 12:14:00 GMT, budgie@nowhere.cantech.net.au
(budgie) wrote:

>On Sat, 19 Oct 2002 21:52:05 +1000, "Ms Jillian Fryer"
><fryer@melbpc.org.au> wrote:

>>circuit image onto the dull side of the emulsion. Not being used to
>>photocopiers,which way faces up as it is loaded into photocopier the shiny
>>side or the dull side,I've only got a few sheets and don't want to waste
>>them,.
>
>I know the problem from trying to do double-sided copying. Simple
>solution - take a sheet of plain paper and write "this side up" on the
>side that is up (logical, but I figured I should say so). Then shove
>that through the copier, and the result will solve your dilemma.

This works well. Remember that different models will vary, so check on
the one you are actually using. For a printer or copier you use
frequently, you might want to put a label on the paper tray when you
figure it out.

Also useful for double sided copies, letterhead, label stock, special
stock, and so on.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3182. Re: making pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 15:32:36 UTC
From: A E <aeisenhut@videotron.ca>
Message-ID: <3DB17B14.66810C90@videotron.ca>
Source record: 40646
Cross-posted to: aus.electronics,rec.radio.amateur,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.repair

Ms Jillian Fryer wrote:

> I have just bought the techniks "press n peel"kit for making PCB'S my
> question concerns the directions ,the first step, where you photocopy the
> circuit image onto the dull side of the emulsion. Not being used to
> photocopiers,which way faces up as it is loaded into photocopier the shiny
> side or the dull side,I've only got a few sheets and don't want to waste
> them,.
> Mark.

Sometimes, there is a logo of a sheet of paper that tells you.

3183. Re: making pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 15:36:59 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3db17bec$1@news.netacc.net>
Source record: 40547
Cross-posted to: aus.electronics,rec.radio.amateur,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.repair

"Gary S." <Idontwantspam@net> wrote in message
news:3db15b00.3376445@news.bellatlantic.net...
> On Sat, 19 Oct 2002 12:14:00 GMT, budgie@nowhere.cantech.net.au
> (budgie) wrote:
>
> This works well. Remember that different models will vary, so check on
> the one you are actually using. For a printer or copier you use
> frequently, you might want to put a label on the paper tray when you
> figure it out.
>

Most paper trays manufactured in the past decade have an icon indicating
print side. If it prints on the side facing down, it shows a corner folded
with squiggly lines of print showing on the folded portion.

Steve

3184. Re: making pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 16:00:44 UTC
From: Idontwantspam@net
Message-ID: <3db180e2.13075181@news.bellatlantic.net>
Source record: 40548
Cross-posted to: aus.electronics,rec.radio.amateur,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.repair

On Sat, 19 Oct 2002 11:36:59 -0400, "Stephen C. Robbins"
<srobbinsNoSPaMDUDES@netacc.net> wrote:

>Most paper trays manufactured in the past decade have an icon indicating
>print side. If it prints on the side facing down, it shows a corner folded
>with squiggly lines of print showing on the folded portion.
>
Although if they actually were visible, this wouldn't be a problem.
They are often a raised molding in the plastic, in exactly the same
color.

Fax machines have similar labeling, and I have seen faxes of the back
side (blank) of something more than once.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3185. Re: My HP8640 has died

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 16:02:28 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <gosuquk3mb7jdumu0unkvctsr88tv4h79g@4ax.com>
Source record: 40644

On Wed, 16 Oct 2002 20:48:04 -0600 Jim Adney <jadney@vwtype3.org>
wrote:

>OTOH, one of the mica caps in my first 200CD was leaky when I got it.
>By that time it was probably 35 years old, however. The paper caps in
>that unit were all bad, but the electrolytics are all still bad. This
>was a late 50s unit.

I MEANT to say "but the electrolytics are all still fine."

-

Jim Adney jadney@vwtype3.org
Madison, Wisconsin USA

3186. Re: What temp for temp controlled soledering station?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 16:02:29 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <lssuqug0dsu0k1tud41509s2tfluhr53s2@4ax.com>
Source record: 40645

On Thu, 17 Oct 2002 19:12:38 GMT SeeSignature@below.com wrote:

>What temp do you guys set a temperature-controlled soldering station
>to for typical printed circuit, etc, soldering with typical solder?

700F is a very good choice.

Higher will oxidize the tip quickly while lower may work too slowly
for some jobs. If you have a lot of work to do with it you can
experiment and see if you can get by with lower, but I wouldn't expect
anything below 650F to be satisfactory with normal solder and normal
parts.

-

Jim Adney jadney@vwtype3.org
Madison, Wisconsin USA

3187. Re: making pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 18:03:31 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3db19d7d.410853@news.freeserve.net>
Source record: 40549
Cross-posted to: aus.electronics,rec.radio.amateur,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.repair

Why not mark a sheet of photocopy paper with a message like "this
side" copy a document and see if your scribble gets overwritten ;-)
either way you will know what way to fit your 'Press and peel" stuff
--

On Sat, 19 Oct 2002 21:52:05 +1000, "Ms Jillian Fryer"
<fryer@melbpc.org.au> wrote:

>I have just bought the techniks "press n peel"kit for making PCB'S my
>question concerns the directions ,the first step, where you photocopy the
>circuit image onto the dull side of the emulsion. Not being used to
>photocopiers,which way faces up as it is loaded into photocopier the shiny
>side or the dull side,I've only got a few sheets and don't want to waste
>them,.
> Mark.
>
>

3188. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 19:44:07 UTC
From: hcb@phc.chalmers.se
Message-ID: <aoscm7$3nk$1@nyheter.chalmers.se>
Source record: 40555
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

In article <aoqlrp$a0h@unix1.cc.ksu.edu>,
Myron A Calhoun <mcalhoun@ksu.edu> wrote:
>
>I've read articles (in QST or other ham-related magazines) which made
>variable capacitors out of short lengths of concentric tubing separated
>by thin plastic; just slide the tubing in/out to change capacitance.
>However, I don't recall capacitance values.
>
Sounds like a good idea, and the capacitors should be relatively easy
to build too (save for their possibly awkward dimensions. The capacitance
should be easy to calculate from surface area, spacing, and dielectric
material.
For higher frequencies (or rather lower capacitances) I think a project
in the Handbook used two plates at variable distance from each other.
Building a 5000 pF unit like that seems quite impractical, though.
Good luck,
Hans-Christian W6/SM6TLH

--
Dr. Hans-Christian Becker
Department of Chemistry, California Institute of Technology
Pasadena, CA 91125, U.S.A.
'96 VN750

3189. where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 22:42:21 UTC
From: davekdo@aol.com
Message-ID: <20021019184221.26282.00002363@mb-cm.aol.com>
Source record: 40550

```
Can't get 1N34's at radio shack since 9-11.
Germanium is radioactive and can't be shipped or mailed it sets
off the sniffers.
True or False?
test
```

3190. RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 23:04:56 UTC
From: lagagnon@fakesprint.ca
Message-ID: <3db1e430.1824590@news.sprint.ca>
Source record: 40551

I need to measure a 20mV 1440 MHz oscillator signal. Is it possible to do so with a homebrew RF probe that can measure into this UHF range? If so, can anyone recommend a suitable design? Any help greatly appreciated.

Larry VE6MK
****
to send direct email remove "fake" from address

3191. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 23:07:18 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <ur3pd4e0pqtb34@corp.supernews.com>
Source record: 40552

False.

Roy Lewallen, W7EL

Davekdo wrote:
> Can't get 1N34's at radio shack since 9-11.
> Germanium is radioactive and can't be shipped or mailed it sets
> off the sniffers.
> True or False?
> test

3192. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 23:35:14 UTC
From: lc <larryc@northwest.com>
Message-ID: <3DB1EC32.40E4F36B@northwest.com>
Source record: 40553

maybe "radio shack" is radio-active?

Davekdo wrote:

> Can't get 1N34's at radio shack since 9-11.
> Germanium is radioactive and can't be shipped or mailed it sets
> off the sniffers.
> True or False?
> test

--
Welcome to Oregon - "The Food Stamp State"

3193. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-19 23:38:46 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3DB1ED07.FA55C040@rica.net>
Source record: 40554

Davekdo wrote:
>
> Can't get 1N34's at radio shack since 9-11.
> Germanium is radioactive and can't be shipped or mailed it sets
> off the sniffers.
> True or False?
> test

They are often offered on EBAY.

--
John Popelish

3194. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 01:11:42 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <nb04ru4ml1e0cghgeu1m9q0cli3ehvrl4k@4ax.com>
Source record: 40557
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

On Fri, 18 Oct 2002 18:46:22 GMT, la8ak.xnd@online.no (J M Noeding)
wrote:

>Capacitors for ATU are difficult to find nowadays, and a friend are
>travelling to Taiwan with one of the purpose of finding variable
>capcitors for ATU projects.
>
>Have seen ATU's for sale in Germany with tuning capacitors which looks
>like 'home-made', but quite good work. Wonder if somebody has
>experience in making his own variable capcitorsm and what is possible
>maximum capacity?
>
>I am particularly interested if it is possible to make a 5000pF 2000V
>or larger capacitor for 136kHz ATU, dimensions for 136kHz could be 100
>times larger than 14MHz for similar performance. Suggest mica as
>dielectricum?
>
>73
>Jan-Martin
>LA8AK

How about fixed caps in binary with relay switching? 2500 pF 1200 pF
600 pF, etc. Building fixed caps is pretty easy and at 136 KHz, relay
switching isn't hard either with very inexpensive relays.

Eight relays = 256 steps = about 20 pF/step.

If that gives steps that are too coarse, then use say 5 relays = 32
steps = 156 pF/step and a 200 pF continuous variable as a vernier.

Jack K8ZOA

3195. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 01:54:39 UTC
From: Lou <tech@dp.net>
Message-ID: <aot3td$14a6$1@news.dp.net>
Source record: 40558

sounds like a crock to me! Any other company will sell them.

--
****

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"Davekdo" <davekdo@aol.com> wrote in message
news:20021019184221.26282.00002363@mb-cm.aol.com...
> Can't get 1N34's at radio shack since 9-11.
> Germanium is radioactive and can't be shipped or mailed it sets
> off the sniffers.
> True or False?
> test

3196. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 02:16:48 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <y96cnQKZ4oxdvC-gXTWcqA@ctc.net>
Source record: 40561
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

I have to ask why such high voltage ? Isn't 136 khz a low power (under 10 watts or so) frequency or is it that you can run much more in your country ?
I have to admitt that I know very little about that frequency.

> like 'home-made', but quite good work. Wonder if somebody has
> experience in making his own variable capcitorsm and what is possible
> maximum capacity?
>
> I am particularly interested if it is possible to make a 5000pF 2000V
> or larger capacitor for 136kHz ATU, dimensions for 136kHz could be 100
> times larger than 14MHz for similar performance. Suggest mica as
> dielectricum?
>
> 73
> Jan-Martin
> LA8AK
>
> --
> remove ,xnd to reply

3197. RF Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 02:43:11 UTC
From: Mike Newman <mnewman@clear.net.nz>
Message-ID: <5o54ru4jfda1emtuivmkk1fbnq3dg9ofeb@4ax.com>
Source record: 40559

Have found some 1800Mhz linking equipment , and would like some information on the RF transistors, which are marked PH146, PH192, and PH190.

I would be grateful for any information on these devices, which could form the basis of a 23cm rig.

Thanks

Mike

3198. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 03:06:10 UTC
From: "atec77(nospam)" <"atec77(nospam)"@hotmail.com>
Message-ID: <3DB21DA2.F2DE42AA@hotmail.com>
Source record: 40560
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

simple way is to use two movable bits of single sided pc board , the capacitance
is easy to calculate for the requirements, swing one and fix the 'tuther .

Jack Smith wrote:
>
> On Fri, 18 Oct 2002 18:46:22 GMT, la8ak.xnd@online.no (J M Noeding)
> wrote:
>
> >Capacitors for ATU are difficult to find nowadays, and a friend are
> >travelling to Taiwan with one of the purpose of finding variable
> >capcitors for ATU projects.
> >
> >Have seen ATU's for sale in Germany with tuning capacitors which looks
> >like 'home-made', but quite good work. Wonder if somebody has
> >experience in making his own variable capcitorsm and what is possible
> >maximum capacity?
> >
> >I am particularly interested if it is possible to make a 5000pF 2000V
> >or larger capacitor for 136kHz ATU, dimensions for 136kHz could be 100
> >times larger than 14MHz for similar performance. Suggest mica as
> >dielectricum?
> >
> >73
> >Jan-Martin
> >LA8AK
>
> How about fixed caps in binary with relay switching? 2500 pF 1200 pF
> 600 pF, etc. Building fixed caps is pretty easy and at 136 KHz, relay
> switching isn't hard either with very inexpensive relays.
>
> Eight relays = 256 steps = about 20 pF/step.
>
> If that gives steps that are too coarse, then use say 5 relays = 32
> steps = 156 pF/step and a 200 pF continuous variable as a vernier.
>
> Jack K8ZOA

3199. Re: weather sat reception

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 04:01:29 UTC
From: Roger Leone <arleoneNoSpam@inreach.com>
Message-ID: <6Vps9.444$6r7.208136210@news.inreach.com>
Source record: 40562

Dazz:

I think most people use an ordinary scanner to receive this transmission.
And there are PC sound card interfaces to allow the image to be demodulated
from the tones and displayed on the PC monitor. You might try a web search
using "wefax" and you should get a lot of info.

Regards,

Roger K6XQ

3200. Motorola 3c23

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 04:12:53 UTC
From: Jim Ladd <jfladd@flash.net>
Message-ID: <3DB22EFF.3A503410@flash.net>
Source record: 40563

Would like info on this unit. Anyone have one for sale?
Want it for parts. Thanks, Jim.

3201. Re: Motorola 3c23

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 05:31:11 UTC
From: Bruce Lane <feedspammerstothebalrog.4.spamvac@spamgourmet.com>
Message-ID: <MPG.181bdf7b47ffd9e6989a27@news.drizzle.com>
Source record: 40564

In article <3DB22EFF.3A503410@flash.net>, jfladd@flash.net says...

> Would like info on this unit. Anyone have one for sale?
> Want it for parts. Thanks, Jim.

I worked for Motorola in the Comm Sector for 7 years, and I never saw any model number for anything in that product line that looked even remotely like '3c23.' Honestly, it sounds like the part number for a tube.

Do you have a better description? What is this mysterious "unit" supposed to be?

Keep the peace(es).

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to what I have now..." (Taki Kogoma)

3202. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 08:10:02 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2010020411090001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40565

In article <3db1e430.1824590@news.sprint.ca>, lagagnon@fakesprint.ca
(Larry Gagnon) wrote:

> I need to measure a 20mV 1440 MHz oscillator signal. Is it possible to
> do so with a homebrew RF probe that can measure into this UHF range?
> If so, can anyone recommend a suitable design? Any help greatly
> appreciated.
>
> Larry VE6MK
> **********
> to send direct email remove "fake" from address

What is the layout of the circuit. Is it a Colpitts with the
drain/collector driving a common base/gate buffer or what? Also, where in
the circuit did you want to probe? At these freq's a small C added to
the circuit from the probe can pull the oscillator off freq or even kill
the oscillation. If you can identify a low impedance point in the circuit
then you run a better chance of not causing any problems. For instance in
the above described circuit layout or typography, the drain or collector
of the oscillator could be probed with minimal effect because the node is
a low impedance. As far as the probe itself is concerned look at the
Agilent web pages for zero bias Schottky detectors. There is also a ic
called the LTC1957 which might do what you want, but the input may require
a buffer with very little input cap and basically no R to ground. We're
talking high impedance if you need absolute readings.

Hope this helps.

Steve WB4CZR

3203. Re: RF Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 08:15:19 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2010020416260001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40566

In article <5o54ru4jfda1emtuivmkk1fbnq3dg9ofeb@4ax.com>, Mike Newman <mnewman@clear.net.nz> wrote:

> Have found some 1800Mhz linking equipment , and would like some
> information on the RF transistors, which are marked PH146, PH192, and
> PH190.
>
> I would be grateful for any information on these devices, which could
> form the basis of a 23cm rig.
>
> Thanks
>
> Mike

Any logo's on the part? Are they SOT 23's ? I searched Questlink and found no match for the PH146, but I didn't try the others or try to go through the partial of PH. The PHXX number may just be a marking if the device is in SOT type of case. If so, searches are hit and miss at best.

Steve WB4CZR

3204. Re: Motorola 3c23

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 08:26:13 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2010020427200001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40567

In article <MPG.181bdf7b47ffd9e6989a27@news.drizzle.com>, Bruce Lane
<feedspammerstothebalrog.4.spamvac@spamgourmet.com> wrote:

> In article <3DB22EFF.3A503410@flash.net>, jfladd@flash.net says...
>
> > Would like info on this unit. Anyone have one for sale?
> > Want it for parts. Thanks, Jim.
>
> I worked for Motorola in the Comm Sector for 7 years, and I never
> saw any model number for anything in that product line that looked even
> remotely like '3c23.' Honestly, it sounds like the part number for a
> tube.
>
> Do you have a better description? What is this mysterious "unit"
> supposed to be?
>
> Keep the peace(es).

I worked for Moto Comm Sector for 22 years. What type of radio are we talking?
Portable, fixed, mobile, or satelite? Does it look military or HT type?
The 3C23 is part of what number? Moto made base units, terminals,
mobiles, portables, PT's, portable repeaters, etc. Give me a description
as best you can and I can probably steer you in the right direction. For
example, if it is carried and has a handle and looks like a lunch box then
it could be a PT500 or the like. If it's full of fire bottles, weighs 50
lbs, draws 20 amps in xmt and puts out 20 watts on 2mtrs, then it could be
a 43GGV mobile. I'm not trying to give you a hard time, but a little
description goes a long way when it comes to Motorola radios.

Steve WB4CZR

3205. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 09:47:07 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <emk4ru4le8cu6as4kapvt79gvcqd2q0jat@4ax.com>
Source record: 40568
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

On Sat, 19 Oct 2002 23:16:48 -0300, "Ralph Mowery" <rmowery@ctc.net>
wrote:

>I have to ask why such high voltage ? Isn't 136 khz a low power (under 10
>watts or so) frequency or is it that you can run much more in your country ?
>I have to admitt that I know very little about that frequency.

The 136 kHz started in Europe in 1997 (I think by CEPT) recommending
to the national administrations that the band could be created and
that the _radiated_ power (ERP) should be below 1 W.

Some countries copied this directly to their amateur radio rules,
while other converted this to a transmitter power rating assuming some
specific antenna efficiency. For instance in Finland, the maximum
transmitter output at that band is 100 W, which assumes an antenna
efficiency of 1 % which corresponds to an antenna gain of -20 dB (yes
that is minus 20 dB).

However, an antenna system efficiency of 1 % is very optimistic at 136
kHz for any typical antenna system built by hams, with towers
typically up to 30 m. The 1 % efficiency would be typical for maritime
and aeronautical beacons in the 300-400 kHz range with 50-60 m towers
according to field strength measurements on the ground and by in
flight measurements.

For a typical ham installation at 136 kHz a representative antenna
system efficiency is closer to 0.1 % (-30 dB gain) than 1 % (-20 dB
gain), thus, up to 1 kW is used in some countries to drive small
antennas, producing nearly 1 W of radiated power.

With typical antenna highs of about 1/100 wavelength, the radiation
resistance is well below 1 ohm. It is also capacitive, so a large
loading coil is required to resonate the antenna system.

Now the question is, does it make sense to build a transmitter with 50
ohm output impedance and use traditional pi or T antenna tuner to
transfer the impedance to something close to 1 ohm. Such high
impedance ratio will require quite different capacitor or inductor
values and can generate quite large voltages or currents in the ATU
components.

One other approach would be to use some wide band audio amplifier with
low output impedance and use an ordinary (ferrite) transformer to drop
the impedance level even further and then use multiple taps in the
loading coil to resonate the antenna.

A constantly variable inductance could be built by inserting some ferrite material into a large inductor with air core, or use two inductors, one fixed and the other that can be moved and/or rotated relative to the fixed inductor. With both inductors in line the inductance is about twice the sum of the inductances (since inductance is proportional to the number of turns squared). With the movable inductor perpendicular to the fixed inductor, the inductances are independent, thus the total impedance is equal to the sum of the individual inductances, with moveable inductor in the opposite direction, the inductances nearly cancel.

This variable inductance could be located at the base of the antenna and then it could be remotely tunable.

By rethinking the transmitter and antenna matching system, you can get rid of the need for huge variable capacitors with high voltage ratings.

Paul OH3LWR

3206. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 09:47:09 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <efm4rugo4a2krg22jpr9momd0rb5k4fpka@4ax.com>
Source record: 40569

On Sat, 19 Oct 2002 23:04:56 GMT, lagagnon@fakesprint.ca (Larry Gagnon) wrote:

>I need to measure a 20mV 1440 MHz oscillator signal. Is it possible to >do so with a homebrew RF probe that can measure into this UHF range? >If so, can anyone recommend a suitable design? Any help greatly >appreciated.

20 mV would be about -20 dBm into 50 ohms and many simple passive probes have usable sensitivities to 1 mW or perhaps 0.3 mW at 1300 MHz.

If you are only interested in detecting the signal for tuning purposes, a simple stripline amplifier consisting of one or two MAR-x or MAV-11 MMIC could be inserted in front of any passive detector to bring the signal level up to a few mW.

If you really need to measure the signal level, then you have to calibrate the system with a known signal level (signal generator etc.). Fixed -10 dB and -20 dB attenuators built into BNC or SMA barrel connectors are useful to drop the signal level sufficiently, so that the MAR/MAV does not saturate. The gain of these MMICs vary with collector current, temperature and frequency, so for accurate measurements, the calibration needs to be done before each measurement.

Paul OH3LWR

3207. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 10:27:26 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <ur518gheig2q22@corp.supernews.com>
Source record: 40570
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

Very interesting.

But while the radiation resistance is well below one ohm, is it really possible to get the ground and inductor losses low enough that you'll actually have one ohm at the feedpoint? Even with a fairly elaborate ground system you'd have two or three ohms of ground loss resistance, and depending on the tower diameter and whether you have a top hat, you'll need somewhere around 1000 - 5000 ohms of reactance for loading or matching. That will add anywhere from a few to 20 or so ohms of resistance, depending on the Q you can achieve. My guess is that all but the best installations will have a feedpoint resistance of at least 20 ohms or so, making matching to 50 ohms relatively simple.

The audio amplifier approach might still be a viable way to go, provided that it doesn't mind a load that's about 8 ohms only over a very narrow frequency range. It might be necessary to also hook its output to an 8 ohm resistor through a lowpass filter to keep it stable. But I'm sure the lowfers have been through all this, and they certainly know a great deal more about what does and doesn't work than I do.

Roy Lewallen, W7EL

Paul Keinanen wrote:
> On Sat, 19 Oct 2002 23:16:48 -0300, "Ralph Mowery" <rmowery@ctc.net>
> wrote:

> . . .

> With typical antenna highs of about 1/100 wavelength, the radiation
> resistance is well below 1 ohm. It is also capacitive, so a large
> loading coil is required to resonate the antenna system.
>
> Now the question is, does it make sense to build a transmitter with 50
> ohm output impedance and use traditional pi or T antenna tuner to
> transfer the impedance to something close to 1 ohm. Such high
> impedance ratio will require quite different capacitor or inductor
> values and can generate quite large voltages or currents in the ATU
> components.
>
> One other approach would be to use some wide band audio amplifier with
> low output impedance and use an ordinary (ferrite) transformer to drop
> the impedance level even further and then use multiple taps in the
> loading coil to resonate the antenna.
>
> A constantly variable inductance could be built by inserting some

> ferrite material into a large inductor with air core, or use two
> inductors, one fixed and the other that can be moved and/or rotated
> relative to the fixed inductor. With both inductors in line the
> inductance is about twice the sum of the inductances (since inductance
> is proportional to the number of turns squared). With the movable
> inductor perpendicular to the fixed inductor, the inductances are
> independent, thus the total impedance is equal to the sum of the
> individual inductances, with moveable inductor in the opposite
> direction, the inductances nearly cancel.
>
> This variable inductance could be located at the base of the antenna
> and then it could be remotely tunable.
>
> By rethinking the transmitter and antenna matching system, you can get
> rid of the need for huge variable capacitors with high voltage
> ratings.
>
> Paul OH3LWR
>

3208. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 10:54:13 UTC
From: chrisf <cflak@bigpond.net.au>
Message-ID: <pXvs9.5450$DP6.19012@news-server.bigpond.net.au>
Source record: 40571

Germanium (Ge) is NOT radioactive.
In fact it is close to Silicon on the periodic table.

try an equivalent I assume you are looking for a diode with the same
characteristics...
look up on internet for substitutes. Try http://www.google.com

cf

"Lou" <tech@dp.net> wrote in message news:aot3td$14a6$1@news.dp.net...
> sounds like a crock to me! Any other company will sell them.
>
> --
> **********
>
> C.L. FURLONG ENTERPRISES
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> sell out of shop,
> via newsgroups and e-bay.
>
> WE APPRECIATE OUR CUSTOMERS!
> "Davekdo" <davekdo@aol.com> wrote in message
> news:20021019184221.26282.00002363@mb-cm.aol.com...
> > Can't get 1N34's at radio shack since 9-11.
> > > Germanium is radioactive and can't be shipped or mailed it sets
> > > off the sniffers.
> > > True or False?
> > > test
>
>

3209. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 11:10:39 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ur53q37jivate4@corp.supernews.com>
Source record: 40572

A quick Internet search on "1N34" resulted in
http://www.fix.net/dans.html

3210. Re: weather sat reception

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 11:13:59 UTC
From: North <non@telia.com>
Message-ID: <Xdws9.447$h%5.12559@newsb.telia.net>
Source record: 40573

Look at this site:
http://ozon.homepage.dk/engelsk.htm

/North

"dazz" <darrena@btinternet.com> skrev i meddelandet
news:aoritkheq1@knossos.btinternet.com...
> does any one have a schematic for a weather sat reciever in the 137mhz
band
> cheers
> dazz
>
>

3211. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 11:31:27 UTC
From: "Joe S." <joe@schlatter.org>
Message-ID: <aou4770vh8@enews4.newsguy.com>
Source record: 40576

From what I observe at the two Radio Shacks in my area, they are cutting back dramatically on small parts and 1N34's are just part of the cutback -- nothing to do with 9-11.

I have trying to build a couple of small items recently and have made four trips to these two RS stores -- came back empty-handed each time. People at both stores told me they are not longer carrying most of the small parts. One store has even installed a new cabinet that holds the connectors that were previously hanging on the displays.

--

Regards,
Joe S.

"Davekdo" <davekdo@aol.com> wrote in message
news:20021019184221.26282.00002363@mb-cm.aol.com...
> Can't get 1N34's at radio shack since 9-11.
> Germanium is radioactive and can't be shipped or mailed it sets
> off the sniffers.
> True or False?
> test

3212. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 11:33:35 UTC
From: la8ak.xnd@online.no
Message-ID: <3db25008.313111088@news.online.no>
Source record: 40574

On Sat, 19 Oct 2002 23:04:56 GMT, lagagnon@fakesprint.ca (Larry
Gagnon) wrote:

>I need to measure a 20mV 1440 MHz oscillator signal. Is it possible to
>do so with a homebrew RF probe that can measure into this UHF range?
>If so, can anyone recommend a suitable design? Any help greatly
>appreciated.
>
>Larry VE6MK
>**********
>to send direct email remove "fake" from address

You will find some information on
Dubus on primary site ftp://dpmc.unige.ch/pub/dubus

Dubus Pages Size Title

86 02- 2 1 75k Inexpensive and accurate RF mV meter

73 Jan-Martin
LA8AK

--
remove ,xnd to reply

3213. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 11:35:10 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2010020736160001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40575

In article <ur53q37jivate4@corp.supernews.com>, "Bob Lewis \(AA4PB\)"
<rlewis@staffnet.com> wrote:

> A quick Internet search on "1N34" resulted in
> http://www.fix.net/dans.html

I image it may be expensive, but you may want to try a 1N62 or other type
diode. Does your application really need the 1N34? Are you willing to
design around another part? If it's Vf you're after, maybe a schottky
part might do.

Steve WB4CZR

3214. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 12:14:52 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ur57jd4tlvbv3a@corp.supernews.com>
Source record: 40577
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

"Jack Smith" <jsmith@mnsinc.com> wrote in message
news:nb04ru4ml1e0cghgeu1m9q0cli3ehvrl4k@4ax.com...
>
> How about fixed caps in binary with relay switching?
> 2500 pF 1200 pF 600 pF, etc. Building fixed caps is
> pretty easy and at 136 KHz, relay switching isn't
> hard either with very inexpensive relays.
>
> Eight relays = 256 steps = about 20 pF/step.
>

The challenge there, of course, is that you either need a really strange switch, or some sort of logic. Pretty easy to do with a PIC or something similar, but that seems to spook a lot of folks.

..

3215. PCB design software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 12:23:12 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <THvnwadwAqs9EwP+@fslife.co.uk>
Source record: 40578

I would appreciate preferences for some PCB design software suitable for
a newbie.

I found this list:

http://www.olimex.com/pcb/dtools.html

I had a quick read on the Eagle site and it looks quite comprehensive.

A package with benefits for RF designs would be an advantage.

Feedback appreciated.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3216. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 13:04:08 UTC
From: Marty <martinkleinfeld@earthlink.net>
Message-ID: <cRxs9.4646$U97.457233@newsread2.prod.itd.earthlink.net>
Source record: 40579

```
"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:ur57jd4tlvbv3a@corp.supernews.com...
> "Jack Smith" <jsmith@mnsinc.com> wrote in message
> news:nb04ru4ml1e0cghgeu1m9q0cli3ehvrl4k@4ax.com...
> >
> > How about fixed caps in binary with relay switching?
> > 2500 pF 1200 pF 600 pF, etc. Building fixed caps is
> > pretty easy and at 136 KHz, relay switching isn't
> > hard either with very inexpensive relays.
> >
> > Eight relays = 256 steps = about 20 pF/step.
> >
>
> The challenge there, of course, is that you either need a really strange
> switch, or some sort of logic. Pretty easy to do with a PIC or something
> similar, but that seems to spook a lot of folks.
>

That's the LDG AT-11 automatic antenna tuner. It uses several relays to
switch in fixed caps. 68HC11 controlled.
Works great btw.
.
>
>
>
>
```

3217. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 13:58:59 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <BsmcnWVQDPrLWy-gXTWcqA@ctc.net>
Source record: 40582
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

Thanks for the explination. As I said I knew very little about the rules.
Maybe that 1 watt erp is where I got the low power from. I understand how
it takes up to or maybe even more than a KW if the antenna is not very
efficent.
I did a 'google search' o the band and it is interisting.

> >I have to ask why such high voltage ? Isn't 136 khz a low power (under
10
> >watts or so) frequency or is it that you can run much more in your
country ?
> >I have to admitt that I know very little about that frequency.
>
> The 136 kHz started in Europe in 1997 (I think by CEPT) recommending
> to the national administrations that the band could be created and
> that the _radiated_ power (ERP) should be below 1 W.
>
> Some countries copied this directly to their amateur radio rules,
> while other converted this to a transmitter power rating assuming some
> specific antenna efficiency. For instance in Finland, the maximum
> transmitter output at that band is 100 W, which assumes an antenna
> efficiency of 1 % which corresponds to an antenna gain of -20 dB (yes
> that is minus 20 dB).
>
> However, an antenna system efficiency of 1 % is very optimistic at 136
> kHz for any typical antenna system built by hams, with towers
> typically up to 30 m. The 1 % efficiency would be typical for maritime
>

3218. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 14:42:40 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <1mf5rug91i17kv3ab3004khkuppr07ipf2@4ax.com>
Source record: 40580
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

On Sun, 20 Oct 2002 08:14:52 -0400, "xpyttl"
<xpyttl_nospam@earthling.net> wrote:

>"Jack Smith" <jsmith@mnsinc.com> wrote in message
>news:nb04ru4ml1e0cghgeu1m9q0cli3ehvrl4k@4ax.com...
>>
>> How about fixed caps in binary with relay switching?
>> 2500 pF 1200 pF 600 pF, etc. Building fixed caps is
>> pretty easy and at 136 KHz, relay switching isn't
>> hard either with very inexpensive relays.
>>
>> Eight relays = 256 steps = about 20 pF/step.
>>
>
>The challenge there, of course, is that you either need a really strange
>switch, or some sort of logic. Pretty easy to do with a PIC or something
>similar, but that seems to spook a lot of folks.
>
>..
>
>
You can buy a binary-decoded rotary switch with 4 lines. You could use
two of those if you want a simple, no PIC design.

One switch for coarse and for fine. Both marked 1...16. (Or, 0..15 if
you are a computer type!)

As far as dealing with the 2kv, granted if you buy those relays
off-the-shelf it will be expensive.

But, you could modify a standard relay for increased voltage standoff
without huge difficulty if you are mechanically inclined.

Could also look for some junked industrial 480 volt contactors. Those
have a lot of over-voltage designed into them. Stray C and L
presumably wouldn't be as much of an issue at 136 KHz. Wouldn't want
to switch RF with a contactor at 28 MHz, but suspect it could be made
to work at 136 KHz.

If it isn't to be remote controlled, you could use something as simple
as a knife switch. Those are cheap and can be found at the hardware
store and will take many KV. Might be a pain in the backside to tune,
or at least to keep track of which switch does which C, but presumably
it is a set-once or seldom-adjust situation, so the inconvenience may
be acceptable.

Jack K8ZOA

3219. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 14:50:24 UTC
From: Al <afjay*@earthlink.net>
Message-ID: <afjay*-9B60F6.10502620102002@news.bellatlantic.net>
Source record: 40581

In article <aou4770vh8@enews4.newsguy.com>,
"Joe S." <joe@schlatter.org> wrote:

> From what I observe at the two Radio Shacks in my area, they are cutting
> back dramatically on small parts and 1N34's are just part of the cutback --
> nothing to do with 9-11.
>
> I have trying to build a couple of small items recently and have made four
> trips to these two RS stores -- came back empty-handed each time. People at
> both stores told me they are not longer carrying most of the small parts.
> One store has even installed a new cabinet that holds the connectors that
> were previously hanging on the displays.

They only want to sell big ticket items with a large profit margin, TVs,
stereos, computers, cell phones and the like. The original concept of a
retail electronics parts store is no longer viable according to the bean
counters.

Al

--

Remove * from the address to reply.

3220. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 15:17:05 UTC
From: John O'Flaherty <oflahert@isp01.net>
Message-ID: <svh5rukkbqgr87jrmkp0mtqj6v7q4n50g2@4ax.com>
Source record: 40583

On Sun, 20 Oct 2002 14:50:24 GMT, Al <afjay*@earthlink.net> wrote:

>In article <aou4770vh8@enews4.newsguy.com>,
> "Joe S." <joe@schlatter.org> wrote:
>
>> From what I observe at the two Radio Shacks in my area, they are cutting
>> back dramatically on small parts and 1N34's are just part of the cutback --
>> nothing to do with 9-11.
>>
>> I have trying to build a couple of small items recently and have made four
>> trips to these two RS stores -- came back empty-handed each time. People at
>> both stores told me they are not longer carrying most of the small parts.
>> One store has even installed a new cabinet that holds the connectors that
>> were previously hanging on the displays.
>
>They only want to sell big ticket items with a large profit margin, TVs,
>stereos, computers, cell phones and the like. The original concept of a
>retail electronics parts store is no longer viable according to the bean
>counters.

Then they may be in trouble, because small retailers for big ticket
items located in high rent spaces aren't viable as long as Best Buy
and the like are around. They can't compete on prices for tv's and
stereos with bigger stores, and they can't compete on prices for
common cables and connectors with Wal-mart. Their only hope is to keep
a wider set of technological goodies.

--
john

3221. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 15:20:49 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <f5g5ru8rdoonj3v9hgkiv1cdrjhsv1u47d@4ax.com>
Source record: 40584
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

On Sun, 20 Oct 2002 03:27:26 -0700, Roy Lewallen <w7el@eznec.com>
wrote:

>But while the radiation resistance is well below one ohm, is it really
>possible to get the ground and inductor losses low enough that you'll
>actually have one ohm at the feedpoint? Even with a fairly elaborate
>ground system you'd have two or three ohms of ground loss resistance,
>and depending on the tower diameter and whether you have a top hat,
>you'll need somewhere around 1000 - 5000 ohms of reactance for loading
>or matching. That will add anywhere from a few to 20 or so ohms of
>resistance, depending on the Q you can achieve. My guess is that all but
>the best installations will have a feedpoint resistance of at least 20
>ohms or so, making matching to 50 ohms relatively simple.

Yes, you are right, the grounding losses can be quite large, unless
you live at the shoreline of the Dead Sea :-). The Q might be a few
hundred with Litz wire, so the feed point impedance is over 10 ohms in
nearly all cases and thus, not too difficult to match to 50 ohms.

But anyway, I don't think that the original idea of using huge
variable capacitors to achieve this matching would be very practical
at these frequencies, while other alternative methods (tapped loading
coils and variometers) are available.

Paul OH3LWR

3222. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 15:25:53 UTC
From: lagagnon@fakesprint.ca
Message-ID: <3db2cad2.1064563@news.sprint.ca>
Source record: 40585

On Sun, 20 Oct 2002 11:33:35 GMT, la8ak.xnd@online.no (J M Noeding)
wrote:

>You will find some information on
>Dubus on primary site ftp://dpmc.unige.ch/pub/dubus

There are no files or directories at that server beneath the directory
"pub". Is that the correct address??

>
>Dubus Pages Size Title
>
>86 02- 2 1 75k Inexpensive and accurate RF mV meter
>
>73 Jan-Martin
> LA8AK
>
>--
>remove ,xnd to reply

****
to send direct email remove "fake" from address

3223. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 16:14:26 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <csi5rukqlfd4ik7kfa3g2thclqd1cft01b@4ax.com>
Source record: 40586
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

On Sun, 20 Oct 2002 08:14:52 -0400, "xpyttl"
<xpyttl_nospam@earthling.net> wrote:

>"Jack Smith" <jsmith@mnsinc.com> wrote in message
>news:nb04ru4ml1e0cghgeu1m9q0cli3ehvrl4k@4ax.com...
>>
>> How about fixed caps in binary with relay switching?
>> 2500 pF 1200 pF 600 pF, etc. Building fixed caps is
>> pretty easy and at 136 KHz, relay switching isn't
>> hard either with very inexpensive relays.
>>
>> Eight relays = 256 steps = about 20 pF/step.
>>
>
>The challenge there, of course, is that you either need a really strange
>switch, or some sort of logic. Pretty easy to do with a PIC or something
>similar, but that seems to spook a lot of folks.

If you do not like the PIC or programming, just use two 4 bit CMOS
Up/Down counters and a multichannel darlington buffer to drive the
relays. Some LEDs for feedback could be driven by the same buffers.

Paul OH3LWR

3224. Refinishing Polished Aluminum Surfaces...??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 16:46:07 UTC
From: slseto@aol.com
Message-ID: <20021020124607.02521.00002923@mb-ct.aol.com>
Source record: 40587

This note is about repairing a stereo turntable, but I was hoping that someone on this newsgroup might know about this particular problem...

I am looking at restoring a late-80's technics turntable, an old SP-10. The motor deck, which is a soft aluminum, has some ding's that look like they could be sanded down (with proper care, of course) so that they would at least have a minimal appearance. However, I'm uncertain if that might cause a worse problem.

For years, I THOUGHT that most natural-finished aluminum surfaces on Japanese equipment was clearcoated. (maybe soft anodized if coloring was involved...) That seemed logical because untreated aluminum likes to oxidize, and I've seen plenty of that. Recently, however, I've begun to wonder about this, based on some of the damaged aluminum surfaces that I've seen on vintage 70's and 80's equipment. If there WAS a clearcoat, where's the oxidation that should be present on older damaged surfaces? In the damaged areas, most are still quite shiny...???

Does anyone know about this? Has anyone had any experience refinishing these aluminum surfaces? Please contact me at the e-mail address above.

Thanks.

3225. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 17:08:47 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <aounuv$2dd$0@216.39.177.168>
Source record: 40588

I suppose the sales margin for many items are too low to pay for the stockage. Contributing factors to this are the move of technology to SMT components and the 'dumbing down of ham radio'. Accompanied with the move to SMT is the fact that very few electronic end items are sold with schematics these days.

For instance a couple years back I purchased a cute little "circuit board video camera" which subsequently got zapped by a lightning spike. The dealer didn't have (or want to be bothered with getting) a schematic of the unit. This is a multi-layer board with incredibly small SMT components. I've determined that video is present close to the output connector but for the life of me I haven't been able to locate the little speck which should presumably be an open coupling capacitor.

73 de Jack

Al <afjay*@earthlink.net> wrote in message news:afjay*-9B60F6.10502620102002@news.bellatlantic.net...
> In article <aou4770vh8@enews4.newsguy.com>,
> "Joe S." <joe@schlatter.org> wrote:
>
> > From what I observe at the two Radio Shacks in my area, they are cutting
> > back dramatically on small parts and 1N34's are just part of the cutback --
> > nothing to do with 9-11.
> >
> > I have trying to build a couple of small items recently and have made four
> > trips to these two RS stores -- came back empty-handed each time. People at
> > both stores told me they are not longer carrying most of the small parts.
> > One store has even installed a new cabinet that holds the connectors that
> > were previously hanging on the displays.
>
> They only want to sell big ticket items with a large profit margin, TVs,
> stereos, computers, cell phones and the like. The original concept of a
> retail electronics parts store is no longer viable according to the bean
> counters.
>
> Al
>
> --
>

> Remove * from the address to reply.

3226. Re: Motorola 3c23

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 17:20:00 UTC
From: Jim Ladd <jfladd@flash.net>
Message-ID: <3DB2E77A.9CD0772D@flash.net>
Source record: 40589

Bruce Lane wrote:
>
> In article <3DB22EFF.3A503410@flash.net>, jfladd@flash.net says...
>
> > Would like info on this unit. Anyone have one for sale?
> > Want it for parts. Thanks, Jim.
>
> I worked for Motorola in the Comm Sector for 7 years, and I never
> saw any model number for anything in that product line that looked even
> remotely like '3c23.' Honestly, it sounds like the part number for a
> tube.
>
> Do you have a better description? What is this mysterious "unit"
> supposed to be?
>
> Keep the peace(es).
>
> --
> Bruce Lane, Owner and Head Hardware Heavy,
> Blue Feather Technologies -- http://www.bluefeathertech.com
> Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
> kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
> "I'll get a life when someone demonstrates to me it would be superior to
> what I have now..." (Taki Kogoma)

Sorry for the poor description. It is all I received via email from a
ham that told me this unit contained the
2c39a tube. The bottom line is that I am trying to find a filament
connector for the 2c39 to complete an amp.
for 1296 mhz. I had hoped to strip one out of said unit.
So, I am trying to find that connector, not any Motorola
unit in particular. BTW, I have no idea what this connector looks like.
Thanks, Jim, K8JL in Mi.

3227. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 18:19:42 UTC
From: North <non@telia.com>
Message-ID: <2tCs9.501$1r1.17965@newsc.telia.net>
Source record: 40590

Try this adress:
http://www.mrs.bt.co.uk/dubus/

/North

"Larry Gagnon" <lagagnon@fakesprint.ca> skrev i meddelandet
news:3db2cad2.1064563@news.sprint.ca...
> On Sun, 20 Oct 2002 11:33:35 GMT, la8ak.xnd@online.no (J M Noeding)
> wrote:
>
>
> >You will find some information on
> >Dubus on primary site ftp://dpmc.unige.ch/pub/dubus
>
> There are no files or directories at that server beneath the directory
> "pub". Is that the correct address??
>
> >
> >Dubus Pages Size Title
> >
> >86 02- 2 1 75k Inexpensive and accurate RF mV meter
> >
> >73 Jan-Martin
> > LA8AK
> >
> >--
> >remove ,xnd to reply
>
> **********
> to send direct email remove "fake" from address

3228. Re: Touch lamp EMF damaging to nearby equipment?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 19:34:03 UTC
From: Ghostrider57 <mikef1234@ameritech.net>
Message-ID: <LyDs9.853$z5.602695@newssvr28.news.prodigy.com>
Source record: 40591

That's interesting my HF rig used to play games with my touch lamp ! Dimming it turning it on and off !

3229. Re: Motorola 3c23

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 20:00:55 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2010021602020001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40592

In article <3DB2E77A.9CD0772D@flash.net>, Jim Ladd <jfladd@flash.net> wrote:

> Bruce Lane wrote:
> >
> > In article <3DB22EFF.3A503410@flash.net>, jfladd@flash.net says...
> >
> > > Would like info on this unit. Anyone have one for sale?
> > > Want it for parts. Thanks, Jim.
> >
> > I worked for Motorola in the Comm Sector for 7 years, and I never
> > saw any model number for anything in that product line that looked even
> > remotely like '3c23.' Honestly, it sounds like the part number for a
> > tube.
> >
> > Do you have a better description? What is this mysterious "unit"
> > supposed to be?
> >
> > Keep the peace(es).
> >
> > --
> > Bruce Lane, Owner and Head Hardware Heavy,
> > Blue Feather Technologies -- http://www.bluefeathertech.com
> > Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
> > kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
> > "I'll get a life when someone demonstrates to me it would be superior to
> > what I have now..." (Taki Kogoma)
>
> Sorry for the poor description. It is all I received via email from a
> ham that told me this unit contained the
> 2c39a tube. The bottom line is that I am trying to find a filament
> connector for the 2c39 to complete an amp.
> for 1296 mhz. I had hoped to strip one out of said unit.
> So, I am trying to find that connector, not any Motorola
> unit in particular. BTW, I have no idea what this connector looks like.
> Thanks, Jim, K8JL in Mi.

Sounds like a base station transmitter. A 2C39 socket should be
obtainable at a hamfest or in one of the ham surplus places.

Steve WB4CZR

3230. Re: PCB design software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 20:26:01 UTC
From: DrGrok@mungednet.com
Message-ID: <aov35hein1@bob.news.rcn.net>
Source record: 40593

In article <THvnwadwAqs9EwP+@fslife.co.uk>, phil@transmittersrus.com wrote:
>I would appreciate preferences for some PCB design software suitable for
>a newbie.
>
>I found this list:
>
>http://www.olimex.com/pcb/dtools.html
>
>I had a quick read on the Eagle site and it looks quite comprehensive.
>
>A package with benefits for RF designs would be an advantage.
>
>Feedback appreciated.

I've started to use a program simply called PCB. Its freeware -- don't have the URL for it handy but Google should give it to you. The latest version (IIRC) is 1.6.3.

It can do 2 sided boards as well as silkscreens. The library of parts that comes with it is mostly IC's [DIPs and SM's] and generic RLC's but you can create your own library parts.

It seems relatively easy to use -- I have been playing around with it a little and have generated some test artwork. It gives a an output in Postscript that you can print or in Gerber that you can have photoplotted.

Dr. G.

3231. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 20:28:07 UTC
From: DrGrok@mungednet.com
Message-ID: <aov39fein2@bob.news.rcn.net>
Source record: 40594

In article <20021019184221.26282.00002363@mb-cm.aol.com>, davekdo@aol.com (Davekdo) wrote:
>Can't get 1N34's at radio shack since 9-11.
>Germanium is radioactive and can't be shipped or mailed it sets
>off the sniffers.
> True or False?
>test

What Rat Shack sales droid spewed that garbage?

3232. Re: Motorola 3c23

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 21:19:10 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <6676ruoqttqo5jpi68s01v7k1u4srrqom2@4ax.com>
Source record: 40595

On Sun, 20 Oct 2002 17:20:00 GMT, Jim Ladd <jfladd@flash.net> wrote:

>Bruce Lane wrote:
>>
>> In article <3DB22EFF.3A503410@flash.net>, jfladd@flash.net says...
>>
>> > Would like info on this unit. Anyone have one for sale?
>> > Want it for parts. Thanks, Jim.
>>
>> I worked for Motorola in the Comm Sector for 7 years, and I never
>> saw any model number for anything in that product line that looked even
>> remotely like '3c23.' Honestly, it sounds like the part number for a
>> tube.
>>
>> Do you have a better description? What is this mysterious "unit"
>> supposed to be?
>>
>> Keep the peace(es).
>>
>> --
>> Bruce Lane, Owner and Head Hardware Heavy,
>> Blue Feather Technologies -- http://www.bluefeathertech.com
>> Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
>> kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
>> "I'll get a life when someone demonstrates to me it would be superior to
>> what I have now..." (Taki Kogoma)
>
>Sorry for the poor description. It is all I received via email from a
>ham that told me this unit contained the
>2c39a tube. The bottom line is that I am trying to find a filament
>connector for the 2c39 to complete an amp.
>for 1296 mhz. I had hoped to strip one out of said unit.
>So, I am trying to find that connector, not any Motorola
>unit in particular. BTW, I have no idea what this connector looks like.
>Thanks, Jim, K8JL in Mi.

You need a surplus T44. That is a tube-type 450 MHz transceiver that
was introduced by Motorola in the early 1950's and went out of
production in the early 60's. It uses two 2C39/3CX100 tubes. One for a
tripler/driver and one for a final. Both are in a rectangular cavity
structure and you can salvage the tube socket.

You should be able to find one for the taking. The key is knowing what
you are looking for. T44GGV was the mobile designation.

Jack K8ZOA

3233. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 22:11:56 UTC
From: la8ak.xnd@online.no
Message-ID: <3db2e3ff.350996121@news.online.no>
Source record: 40596
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

On Sat, 19 Oct 2002 23:16:48 -0300, "Ralph Mowery" <rmowery@ctc.net>
wrote:

>I have to ask why such high voltage ? Isn't 136 khz a low power (under 10
>watts or so) frequency or is it that you can run much more in your country
>?
>I have to admitt that I know very little about that frequency.
>
Well, I was considering G3YMC's approach using a loop antenna, this
requires 2500pF capacitors. But I am now told that the loop isn't as
good as I thought for a few days.

My intention was to learn which components were available and consider
the technical solutions then. Ground is a problem when you see only
rock around you, but a loop would have to hang E-W and would have a
zero to south, so I could possibly only work OH, SM and UA-stations.
Following Paul OH3LWR's and Roy W7EL's notes (further down the thread)
it is an interesting variometer described by IN3OTD at his site.

See also http://www.qsl.net/in3otd/indcalc.html (or find the other
documents from this URL).

73,
Jan-Martin
LA8AK
--
remove ,xnd to reply

3234. FA: Hvy Duty DC Cable...10 AWG....30 Feet Long

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 22:33:18 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <_bGs9.2588$YV1.345383@read2.cgocable.net>
Source record: 40448

Here is a Nice Heavy Duty Cable that can be used for transferring DC
Currents with Low Loss.... Maybe you can use it!

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1390242952

Thanks for Looking....Norm VE3CZI

3235. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 22:34:42 UTC
From: la8ak.xnd@online.no
Message-ID: <3db32c85.369565251@news.online.no>
Source record: 40449
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

Reposted: wrote 2500pf, should read 2500V, sri.
On Sat, 19 Oct 2002 23:16:48 -0300, "Ralph Mowery" <rmowery@ctc.net>
wrote:

>I have to ask why such high voltage ? Isn't 136 khz a low power (under 10
>watts or so) frequency or is it that you can run much more in your country
>?
>I have to admitt that I know very little about that frequency.
>
Well, I was considering G3YMC's approach using a loop antenna, this
requires 2500V capacitors. But I am now told that the loop isn't as
good as I thought for a few days.

My intention was to learn which components were available and consider
the technical solutions then. Ground is a problem when you see only
rock around you, but a loop would have to hang E-W and would have a
zero to south, so I could possibly only work OH, SM and UA-stations.
Following Paul OH3LWR's and Roy W7EL's notes (further down the thread)
it is an interesting variometer described by IN3OTD at his site.

See also http://www.qsl.net/in3otd/indcalc.html (or find the other
documents from this URL).

73,
Jan-Martin
LA8AK
--
remove ,xnd to reply

3236. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 23:08:56 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <17d6ru8oje28pvm4lg5d0p4mdodrkldljm@4ax.com>
Source record: 40447

On 19 Oct 2002 22:42:21 GMT davekdo@aol.com (Davekdo) wrote:

>Can't get 1N34's at radio shack since 9-11.

Possibly true, but most likely coincidental.

>Germanium is radioactive and can't be shipped or mailed it sets
>off the sniffers.

false

-

Jim Adney jadney@vwtype3.org
Madison, Wisconsin USA

3237. Article in QST Jan 1981 needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-20 23:54:10 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailnospamorama.com>
Message-ID: <ZhHs9.5487$uu1.2908@news.bellsouth.net>
Source record: 40450

Does anyone have a copy of the PFD file from the ARRL TIS page for 'The
(Not Quite) Ultimate Dummy Load' (pages 35-37) from the January 1981issue.
Andwould be willing to send me a copy.

http://www.arrl.org/tis/info/testproj.html

chuck_hawks (at) hotmail (dot) com

Thank in advance.
--
73,
Chuck
KE4ETH

3238. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 00:19:45 UTC
From: "Joe S." <joe@schlatter.org>
Message-ID: <aovh6o01qtv@enews3.newsguy.com>
Source record: 40451

I am very lucky to live in Bristol, TN, home of Shields Electronics. Shields is, literally, a mom-and-pop operation -- although now it's run by the son. They have stores in Bristol, Knoxville, and Chattanooga.

Most of their sales are to commercial folks -- huge spools of wire and cable, connectors by the case, and the like. However, they committed long ago to keeping a stock of small parts -- transistors, diodes, ICs; full stock of resistors from 1/4 watt to 10 watt; toroid cores; printed circuit board; ceramic, mica, poly, and tantalum capacitors; potentiometers of every value and design; aluminum boxes, cases, panels; hook-up wire; Shields is like lots of places used to be. Don't know how long they can keep it up -- visit their website and if you are within range, visit.

http://www.shieldselectronics.com/ Look at the left side of the screen and click on Shields History.

--

Regards,
Joe S.

"John O'Flaherty" <oflahert@isp01.net> wrote in message news:svh5rukkbqgr87jrmkp0mtqj6v7q4n50g2@4ax.com...
> On Sun, 20 Oct 2002 14:50:24 GMT, Al <afjay*@earthlink.net> wrote:
>
> >In article <aou4770vh8@enews4.newsguy.com>,
> > "Joe S." <joe@schlatter.org> wrote:
> >
> >> From what I observe at the two Radio Shacks in my area, they are cutting
> >> back dramatically on small parts and 1N34's are just part of the cutback --
> >> nothing to do with 9-11.
> >>
> >> I have trying to build a couple of small items recently and have made four
> >> trips to these two RS stores -- came back empty-handed each time. People at
> >> both stores told me they are not longer carrying most of the small parts.
> >> One store has even installed a new cabinet that holds the connectors that
> >> were previously hanging on the displays.
> >
> >They only want to sell big ticket items with a large profit margin, TVs,

> >stereos, computers, cell phones and the like. The original concept of a
> >retail electronics parts store is no longer viable according to the bean
> >counters.
>
> Then they may be in trouble, because small retailers for big ticket
> items located in high rent spaces aren't viable as long as Best Buy
> and the like are around. They can't compete on prices for tv's and
> stereos with bigger stores, and they can't compete on prices for
> common cables and connectors with Wal-mart. Their only hope is to keep
> a wider set of technological goodies.
>
> --
> john

3239. FS: BA/HB parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 01:05:18 UTC
From: msix@oldplato.nmia.com
Message-ID: <ipls9.6462$46.2313@fe01>
Source record: 40452

All used unless stated NIB/NOS. I ship all pp 48

Eimac SK-610 4X/4CX family socket. $12 ea

Good low-mileage 4CX250B w/above socket. $31 ea

ART-13 vacuum TR relay. $13

---solid state tube-replacement rectifiers---
2 each NIB Sarkes-Tarzian S5251/1N2389, 1600 PRV, 600ma
OK for all except 5R4
$14 ea

2 each FAA SSD1/1N1239, 2800 PRV, 500ma
1 each Semicon.Inc 1N1239, 2800 PRV, 500ma
OK for all including 5R4
$12 ea

All 5 S/S rectifiers for $55

---HW-100/101 VFO parts---
VFO tuning cap P/N 26 132
Jackson VFO drive P/N 100 1041
both $18

---filters---
Stock Drake 4-line C-F Networks xtal filter model 5645-2.4L
with carrier xtal 5644.999KHz. $35

Kokusai 455KHz 2.1KHz xtal filter model 455ZU-01H
Hermetically sealed. $20

---xtals---
38.1MHz xtal for Drake 4-line. $7

1 lot of 5 HC-6 xtals. 3.4, 10.4, 17.4, 23.4, 24.4MHz
$17

1 lot of 4 HC-6 xtals. 1.545, 4.545, 15.545, 22.545MHz
$14

73 - John W7ZFB

3240. Re: Hvy Duty DC Cable...10 AWG....30 Feet Long

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 02:11:22 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3db36220$1@news.netacc.net>
Source record: 40453

"Norm VE3CZI" <ve3czi@arrl.net> wrote in message
news:_bGs9.2588$YV1.345383@read2.cgocable.net...
> Here is a Nice Heavy Duty Cable that can be used for transferring DC
> Currents with Low Loss.... Maybe you can use it!
>

WOW A DC only cable! Guess it wouldnt work for , say, a 30 AMP AC power
cord for an amplifier :-)

3241. Re: Motorola 3c23

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 02:58:15 UTC
From: averyfineman@aol.com
Message-ID: <20021020225815.04888.00002174@mb-fq.aol.com>
Source record: 40454

In article <3DB2E77A.9CD0772D@flash.net>, Jim Ladd <jfladd@flash.net> writes:

>Sorry for the poor description. It is all I received via email from a
>ham that told me this unit contained the
>2c39a tube. The bottom line is that I am trying to find a filament
>connector for the 2c39 to complete an amp.
>for 1296 mhz. I had hoped to strip one out of said unit.
>So, I am trying to find that connector, not any Motorola
>unit in particular. BTW, I have no idea what this connector looks like.
>Thanks, Jim, K8JL in Mi.

A 2C39A has the outline of an "inverted lighthouse." No pins
whatsoever on the envelope. Filament connection is via
concentric cylinders at the narrow end. Cooling fins integral on
the wide plate end. Grid connection is essentially a flat disk.

Most "sockets" for the 2C39 are small finger-stock contacts
integral with the tuning cavity structures for L-band. If no good
metal-working machinery available it is best to use an already-
machined tuning structure with built-in contacts.

Leonard H. Anderson.

3242. Re: RF Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 04:55:43 UTC
From: Mike Newman <mnewman@clear.net.nz>
Message-ID: <9m17ru092aprh3v00a35rki2unm17e5ko7@4ax.com>
Source record: 40455

I think these could be Telefunken devices, they are in some AWA 1800 mhZ equipment built in early-mid 90's probably in Australia. They are power devices mounted, considerably larger than SOT-23 packege. Ceramic header is about 6mm dia, on metal base about 6 mm x 20 mm and fastened with two screws.

Mike ZL1BNB

On Sun, 20 Oct 2002 08:15:19 GMT, motsteve@attbi.com (carltons) wrote:

>In article <5o54ru4jfda1emtuivmkk1fbnq3dg9ofeb@4ax.com>, Mike Newman
><mnewman@clear.net.nz> wrote:
>
>> Have found some 1800Mhz linking equipment , and would like some
>> information on the RF transistors, which are marked PH146, PH192, and
>> PH190.
>>
>> I would be grateful for any information on these devices, which could
>> form the basis of a 23cm rig.
>>
>> Thanks
>>
>> Mike
>
>
>Any logo's on the part? Are they SOT 23's ? I searched Questlink and
>found no match for the PH146, but I didn't try the others or try to go
>through the partial of PH. The PHXX number may just be a marking if the
>device is in SOT type of case. If so, searches are hit and miss at best.
>
>Steve WB4CZR

3243. Re: RF Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 06:16:16 UTC
From: "Mike G." <nospam@my.email.address>
Message-ID: <dp57rucafhiong14015et20sh7tmobpd1a@4ax.com>
Source record: 40456

On Sun, 20 Oct 2002 15:43:11 +1300, Mike Newman <mnewman@clear.net.nz> wrote:

>Have found some 1800Mhz linking equipment , and would like some
>information on the RF transistors, which are marked PH146, PH192, and
>PH190.
>
>I would be grateful for any information on these devices, which could
>form the basis of a 23cm rig.
>
>Thanks
>
>Mike

Hi Mike,

I think you have some old PHI transistors there. PHI is short for Power Hybrids, Inc. who was bought by M/A-COM years ago. MA/COM was bought by AMP (the connector company) and a few years back, Amp was bought by the giant Tyco, Inc. So if you can follow all that, you're better than most. They are still in Torrence, CA and their URL is:

http://www.macom.com/

Maybe someone there has an old catalog that would have the info on the devices you have. I used to keep a LOT of those old catalogs around, but with the internet so handy, bound catalogs are getting to be a thing of the past.

Hope this gets you a little closer to what you a looking for.

Mike G.

3244. Re: making pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 08:28:28 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <MUOs9.8759$DP6.28662@news-server.bigpond.net.au>
Source record: 40457
Cross-posted to: aus.electronics,rec.radio.amateur,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.repair

Ms Jillian Fryer <fryer@melbpc.org.au> wrote in message
news:aorguibeu1@possum.melbpc.org.au...
> I have just bought the techniks "press n peel"kit for making PCB'S my
> question concerns the directions ,the first step, where you photocopy the
> circuit image onto the dull side of the emulsion. Not being used to
> photocopiers,which way faces up as it is loaded into photocopier the shiny
> side or the dull side,I've only got a few sheets and don't want to waste
> them,.
> Mark.

If anybody has had any experience with press-n-peel, either good or bad,
please let me know. I'm interested in using it for one-off 'quickies' but
would like to get some feedback first.

TIA

Steve

3245. Re: making pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 09:28:27 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <%MPs9.9172$DP6.29518@news-server.bigpond.net.au>
Source record: 40458
Cross-posted to: aus.electronics,rec.radio.amateur,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.repair

Thanks Dave...

DaveC <anon@example.net> wrote in message
news:0001HW.B9D90EFF00020498163F7590@news.covad.net...
> On Mon, 21 Oct 2002 1:28:28 -0700, Steve Andrew wrote
> (in message <MUOs9.8759$DP6.28662@news-server.bigpond.net.au>):
>
> > If anybody has had any experience with press-n-peel, either good or bad,
> > please let me know. I'm interested in using it for one-off 'quickies'
but
> > would like to get some feedback first.
>
> Check out this simple laser-printer toner technique:
> < http://www.fullnet.com/u/tomg/gooteepc.htm >
> --
> Note that my return address is corrupted in an attempt to reduce spam. If
you
> choose to e-mail me, please correct my address as described below.
>
> Thanks,
> Dave
> ---
> Dave Carpenter
> Sound Logic
> voicebox@d8n8a8i.com
>
> Remove the numbers to reply via e-mail
>

3246. Re: making pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 12:30:37 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <ap11vqgcb3@newsg1.svr.pol.co.uk>
Source record: 40459

"Steve Andrew" <sjandrew@bigpond.net.au> wrote in message
news:MUOs9.8759$DP6.28662@news-server.bigpond.net.au...
>
> If anybody has had any experience with press-n-peel, either good or bad,
> please let me know. I'm interested in using it for one-off 'quickies' but
> would like to get some feedback first.

I've used the blue PnP stuff occasionally, or just shiny paper put through
the printer. Results aren't bad, but it doesn't take me any longer to make
PCBs with positive resist board and UV exposure, printing the artwork onto
tracing paper or special film. The results are very much better, also, and I
can re-use the artwork.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

3247. Re: PCB design software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 14:48:27 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3DB413BA.F45C771@ix.netcom.com>
Source record: 40460

"Dr. Grok" wrote:

>
> I've started to use a program simply called PCB. Its freeware -- don't have
> the URL for it handy but Google should give it to you. The latest version
> (IIRC) is 1.6.3.
>

If anyone does know where this can be downloaded, I'd love to know. I spent a long time searching for it, to no avail. Google seems to only turn up Eastern European sites that give you passwords to open up the 3 or 4 disc set, mixed in with a lot of Porn links. Not a lot of interest or use. I have a 1 disc version of it that has no help files or libraries, but enough to be able to tell that it is a very useful tool for Ham use. I think it was originated by Protel, who no longer supply or support it.

dr

3248. Re: PCB design software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 15:00:15 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3db415fe.26507582@news.cantech.net.au>
Source record: 40461

On Mon, 21 Oct 2002 07:48:27 -0700, Dan Rae <rae4@ix.netcom.com>
wrote:

>
>
>"Dr. Grok" wrote:
>
>>
>> I've started to use a program simply called PCB. Its freeware -- don't have
>> the URL for it handy but Google should give it to you. The latest version
>> (IIRC) is 1.6.3.
>>
>
>If anyone does know where this can be downloaded, I'd love to know. I spent a
>long time searching for it, to no avail. Google seems to only turn up Eastern
>European sites that give you passwords to open up the 3 or 4 disc set, mixed in
>with a lot of Porn links. Not a lot of interest or use. I have a 1 disc
>version of it that has no help files or libraries, but enough to be able to tell
>that it is a very useful tool for Ham use. I think it was originated by Protel,
>who no longer supply or support it.

Don't think it was a Protel product. AFAIK their first effort was
EasyTrax (later EasyFree when they gave it away) and then AutoTrax
(now also free). these were DOS products and followed by the (not
free) Protel for Windows range.

Many here in Australia use EasyTrax and AutoTrax for medium level
professional layout. I do.

3249. Re: Hvy Duty DC Cable...10 AWG....30 Feet Long

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 15:06:33 UTC
From: Idontwantspam@net
Message-ID: <3db417ae.20911459@news.bellatlantic.net>
Source record: 40462

On Sun, 20 Oct 2002 22:11:22 -0400, "Stephen C. Robbins"
<srobbinsNoSPaMDUDES@netacc.net> wrote:

>
>"Norm VE3CZI" <ve3czi@arrl.net> wrote in message
>news:_bGs9.2588$YV1.345383@read2.cgocable.net...
>> Here is a Nice Heavy Duty Cable that can be used for transferring DC
>> Currents with Low Loss.... Maybe you can use it!
>>
>WOW A DC only cable! Guess it wouldnt work for , say, a 30 AMP AC power
>cord for an amplifier :-)
>
Many components are rated by the HIGHEST frequency they can handle.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3250. Re: making pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 15:13:57 UTC
From: Dennis <dont@spam.me>
Message-ID: <VQUs9.10198$DP6.33712@news-server.bigpond.net.au>
Source record: 40463
Cross-posted to: aus.electronics,rec.radio.amateur,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.repair

I've used "press n peel" quit a few times over the last year, the last time being about half an hour ago. In general I've found it to be effective and fairly simple, but limited to a fairly high track size. I've used it mostly for making audio amplifier PCBs which I use large/huge tracks on anyway so that limitation doesn't bother me. The smallest track I'd probably use would be about 20mil, but I usually use at least 40mil.

The most difficult part is the actual ironing onto the PCB. If it doesn't go to well there may be small breaks in a track, half a pad missing here and there, or if the plastic shifts slightly when you're first starting some tracks may end up with a smeared appearance, and end up wider than desired. Many of these defects can be corrected before you etch by using a permanent pen to cover over/replace any missing mask, or by scratching off any excess with a knife/scriber. Most boards I make will need about 1 minute with a pen to check and fix any small defects, but I rarely have to scratch anything off.

Before I first used the "press n peel" I came across a web site of tips on it (I no langer have the address). The two tips that I've found to be most helpful are:

1) Don't actually feed a whole sheet of the stuff into the printer. First print on plane paper exactly what you want to print onto the "P n P" noteing which way up the paper was in the tray it came from, and the direction the paper was fed through the printer. I usually use the straight feed paper tray that folds down on the front of the printer, not one the actual paper tray draws, and I draw an arrow somewhere on the paper to show the feed direction before it is printed on. You then cut a piece of the press n peel large enough to cover the image on the paper with maybe 1 cm overhang on all edges. With some sticky tape, tape down the leading edge (as it will feed through the printer) of the "P n P" directly over the image on the paper. Then put the paper back in the tray in the same orientation as before and reprint. You should end up with the paper being drawn into the printer, taking the small cutout piece of "P n P" smoothly in with it, in exactly the right spot for the image to be printed on it. Then take the "P n P" off the paper and iron it onto your clean blank PCB. By doing this you use far less of the "P n P" than if you used a whole sheet every time (unless you're making A4 sized PCBs). I'd generally get between 4 and 6 PCBs per sheet, so of the original 5 sheets I've got 2 left after making about 15 PCBs.

I've never had problems with the sticky tape going through the printer, but I can't make any promises about your tape going through your printer. (I wouldn't realy expect any difference, this is just a simple word of caution about the quality of tape you feed through your printer)

2) When you iron the "P n P" onto the PCB the corners will tend to curl up a bit, which will result in the tracks nearest the corners barely sticking down and not leaving the toner behind. So when laying out your PCB put a nice big fat (300mil) border around your layout to help stick the "P n P" in place when you iron it on and keep it nice and flat near the tracks you want to keep.

I would assume that not everyone would be happy with the quality of the results from "Press n Peel" but I'll continue to use it happily (until I finish the last 2 sheets then I might try something new so I have something to compare it to) as I was very quickly able to make PCBs adequate to my purposes with minimal initial cost outlay.

I hope this is of help.

Cheers

Dennis

"Steve Andrew" <sjandrew@bigpond.net.au> wrote in message
news:MUOs9.8759$DP6.28662@news-server.bigpond.net.au...
>
> Ms Jillian Fryer <fryer@melbpc.org.au> wrote in message
> news:aorguibeu1@possum.melbpc.org.au...
> > I have just bought the techniks "press n peel"kit for making PCB'S my
> > question concerns the directions ,the first step, where you photocopy
the
> > circuit image onto the dull side of the emulsion. Not being used to
> > photocopiers,which way faces up as it is loaded into photocopier the
shiny
> > side or the dull side,I've only got a few sheets and don't want to waste
> > them,.
> > Mark.
>
> If anybody has had any experience with press-n-peel, either good or bad,
> please let me know. I'm interested in using it for one-off 'quickies' but
> would like to get some feedback first.
>
> TIA
>
> Steve
>
>
>

3251. Re: PCB design software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 15:32:31 UTC
From: ronayling@hotmail.com
Message-ID: <3db41c75.22370339@news.freeserve.co.uk>
Source record: 40464

Eagle is ace, though its a pig when you first start as the
docs are rubbish, I didn't bother with the circuit conversion
though it is very clever, I've just finished an smd board for
ctcss encoder/decoder using an fx355 chip, I like being
able to print out x2 as well
The componant library is extensive, and the freebie is
FULLY working, just a limit on the board size, not like
these other cripples floating around...

On Sun, 20 Oct 2002 13:23:12 +0100, Philip de Cadenet
<Philstheboss@thebbc.fslife.co.uk> wrote:

>I would appreciate preferences for some PCB design software suitable for
>a newbie.
>
>I found this list:
>
>http://www.olimex.com/pcb/dtools.html
>
>I had a quick read on the Eagle site and it looks quite comprehensive.
>
>A package with benefits for RF designs would be an advantage.
>
>Feedback appreciated.

3252. Re: making pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 16:28:59 UTC
From: lc <larryc@northwest.com>
Message-ID: <3DB42B4B.58117C08@northwest.com>
Source record: 40465

I've also used PNP with good results. Forget doing 10 mil traces...they peel off
but you can easily do SOT23, SO8, and SOT323 transistors.

The PCB --has--- to be clean. No grunge or tarnish. Use a green pad if you must
but avoid scrubbing compounds if you want to tin plate later...(as they hv
elements that tie up the tin in the plating solution.) And, the iron must be
HOT...but not so hot to melt the backing. Make certain there are no dirt "bumps"
on the PNP or PCB before you iron on.

Peeling back can become an art in iteself....do it slowly. Create a few "throw
away" board to practice.

Etching... what kind of etchant are you using?
======

Leon Heller wrote:

> "Steve Andrew" <sjandrew@bigpond.net.au> wrote in message
> news:MUOs9.8759$DP6.28662@news-server.bigpond.net.au...
> >
> > If anybody has had any experience with press-n-peel, either good or bad,
> > please let me know. I'm interested in using it for one-off 'quickies' but
> > would like to get some feedback first.
>
> I've used the blue PnP stuff occasionally, or just shiny paper put through
> the printer. Results aren't bad, but it doesn't take me any longer to make
> PCBs with positive resist board and UV exposure, printing the artwork onto
> tracing paper or special film. The results are very much better, also, and I
> can re-use the artwork.
>
> 73, Leon
> --
> Leon Heller, G1HSM
> leon_heller@hotmail.com
> http://www.geocities.com/leon_heller

--
Welcome to Oregon - "The Food Stamp State"

3253. Re: Motorola 3c23

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 16:31:00 UTC
From: "Jim L." <jfladd@flash.net>
Message-ID: <3DB42D7F.3360EADD@flash.net>
Source record: 40466

Avery Fineman wrote:
>
> In article <3DB2E77A.9CD0772D@flash.net>, Jim Ladd <jfladd@flash.net> writes:
>
> >Sorry for the poor description. It is all I received via email from a
> >ham that told me this unit contained the
> >2c39a tube. The bottom line is that I am trying to find a filament
> >connector for the 2c39 to complete an amp.
> >for 1296 mhz. I had hoped to strip one out of said unit.
> >So, I am trying to find that connector, not any Motorola
> >unit in particular. BTW, I have no idea what this connector looks like.
> >Thanks, Jim, K8JL in Mi.
>
> A 2C39A has the outline of an "inverted lighthouse." No pins
> whatsoever on the envelope. Filament connection is via
> concentric cylinders at the narrow end. Cooling fins integral on
> the wide plate end. Grid connection is essentially a flat disk.
>
> Most "sockets" for the 2C39 are small finger-stock contacts
> integral with the tuning cavity structures for L-band. If no good
> metal-working machinery available it is best to use an already-
> machined tuning structure with built-in contacts.
>
> Leonard H. Anderson.

Thanks for responding. I am familar with the tube and its
construction. I am under the impression that there is
a filament/cathode connector that has a portion that inserts into the
inner cylinder and a spring loaded
(finger stock) piece that surrounds the exterior of the outer cylinder.
This connector is a loose piece and not part of any particular assembly.
I have a complete
metal working machine shop and could concoct something if it comes to
that. My cavity and tuning structure are complete. Thanks, Jim.

3254. Silk screen?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 17:02:29 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <ap1bv5tms0@216.39.177.26>
Source record: 40467

Seeing some great News Group comments on how to process PCB art work, thought I'd ask if anyone has information on how to silk screen a panel? In my case, a non-engraved BC-610 panel with black wrinkle paint.

73 de Jack

3255. Re: making pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 17:37:27 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <ap1g45$hg0$1@news5.svr.pol.co.uk>
Source record: 40469

"lc" <larryc@northwest.com> wrote in message
news:3DB42B4B.58117C08@northwest.com...
> I've also used PNP with good results. Forget doing 10 mil traces...they
peel off
> but you can easily do SOT23, SO8, and SOT323 transistors.
>
> The PCB --has--- to be clean. No grunge or tarnish. Use a green pad if you
must
> but avoid scrubbing compounds if you want to tin plate later...(as they hv
> elements that tie up the tin in the plating solution.) And, the iron must
be
> HOT...but not so hot to melt the backing. Make certain there are no dirt
"bumps"
> on the PNP or PCB before you iron on.
>
> Peeling back can become an art in iteself....do it slowly. Create a few
"throw
> away" board to practice.
>
> Etching... what kind of etchant are you using?

I use FeCl3.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

3256. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 18:12:17 UTC
From: k7itm@aol.com
Message-ID: <3200347.0210211012.5c38f91@posting.google.com>
Source record: 40468

lagagnon@fakesprint.ca (Larry Gagnon) wrote in message
news:<3db1e430.1824590@news.sprint.ca>...
> I need to measure a 20mV 1440 MHz oscillator signal. Is it possible to
> do so with a homebrew RF probe that can measure into this UHF range?
> If so, can anyone recommend a suitable design? Any help greatly
> appreciated.

It seems like a simple circuit using a microwave Schottky diode as a
rectifier should do the trick. You'd want to keep leads vanishingly
short. I can recommend especially Schottky "zero-bias detector
diodes" for this application, so long as you don't try to measure very
high voltages with them. They are capable of detecting signals down
well below a millivolt if you are careful about the readout part. You
need to be able to "see" down to the microvolt level of DC output.
And they typically have _very_ low breakdown voltages, on the order of
a volt, so avoid connecting to a point with high RF voltage. At low
signal levels, the output _voltage_ is proportional to input _power_
(input volts-squared).

The Agilent HSMS-2850 series of diodes is an example of a zero-bias
detector. You should be able to find the data sheet on Agilent's web
site, and I believe there's an ap note there too. The circuit can be
as simple as a capacitor (100pF or so) from the signal source to the
diode, other end of diode grounded, and junction of the diode and cap
fed to an RF filter (e.g., appropriate RF choke in series, 1000pF
shunt to ground after the RFC.), and then to a DC volt meter (DVM).
The diode's 0.18pF capacitance is helpful in avoiding loading of your
circuit. If you can keep things "clean" enough to limit the total
capacitance to, say, 0.25pF, that's close to 500 ohms impedance at
your op freq, and you can effectively make that a larger impedance by
using the RFC to broadly resonate the diode and stray capacitance. Of
course, at that freq., you'll need to keep leads to the point you're
testing extremely short as well. If you're testing a 50-ohm output,
then you can build it with a 50-ohm load on the end of a piece of
line, detector connected to the 50-ohm load. (It seems like, at 20mV
signal level, you must be at a low-impedance point.) It would be a
good idea to calibrate it with a known source!

Cheers,
Tom

3257. Re: Cell phone>900 Mhz?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 20:19:31 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0210211219.506485b8@posting.google.com>
Source record: 40470

Gary Tait <taitg@hurontel.on.ca> wrote in message
news:<2r3uqu0ta50eh0lp16ms945uf3rn9f1ne2@4ax.com>...
> Has any one here, or can direct me to resources, to modify an 800 Mhz
> AMPS (old analog modile set) cellular phone into a half duplex/simplex
> 900 Mhz transciever? I figure it won't be too hard, other than to make
> sure it is operation properly in band. I'd be dumping the CPU
> electronics, and removing the cell band filters, or modifying them for
> 902-928 Mhz use. The RX LO is usually around 936 Mhz, so it won't be
> too hard to rework. I can use a micro to program the PLLs.

Hmmm. Let me think.

I would guess that it would have to be a really old cell phone, like
maybe a 'bag phone'?

I used to work for AirTouch Cellular, before they became Verizon
Wireless. I've never seen inside a bag phone, but am guessing what it
would look like by comparing it to similar vintage equipment (and by a
guestimate based on its outside dimensions).

When I was working for AirTouch, they still had some of their 'first
generation' AMPS base stations built by GE, if I recall (or was it
Nortel?).

Anyway, these things would be relatively easy to convert. There was a
seperate receive and transmit module using parts you could actually
see (no surface mount!). The controller was an 8085 microprocessor on
its own board. They occupied about 8 inches of rack space per channel
(and a cell site might have 30-40 channels!). If you could figure out
how to control the PLL's, the RF boards would be easy to convert.
Several years ago I saw these things available surplus.

So my guestimate would be that anything older than 15 years, yes.
Newer than that would be difficult. As for how to do it, I can't say
myself.

Keep in mind that AMPS used wider bandwidths than Hams typically used.
Channel spacing is 30 kHz, and deviation was 20 kHz wide, IIRC. That
could be a problem for you.

Jim
N8Ee

3258. WTB: Wavetek 3001 modules

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 20:19:58 UTC
From: lagagnon@fakesprint.ca
Message-ID: <3db46152.221713@news.sprint.ca>
Source record: 40471

I am interested in finding some PLL modules for the Wavetek 3001
signal generator. Particularly interested in modules M30-1, M32A and
M34. I would also consider an entire Wavetek 3001 that you may not be
using, or wish to dispose of, at a reasonable price.

Please email me direct with details. thanks...

Larry VE6MK
****
to send direct email remove "fake" from address

3259. TS-430---->RTTY/SSTV

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 21:07:05 UTC
From: Robban <sm0xod@hotmail.com>
Message-ID: <Z%Zs9.658$h%5.19149@newsb.telia.net>
Source record: 40472

Hello im looking for a cable i can use with my TS-430 so i can send/recieve
RTTY/SSTV with
Anyone know what i need to make my own cable?
73 de sm0xod Robban

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.404 / Virus Database: 228 - Release Date: 2002-10-15

3260. Re: making pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 21:22:49 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <Je_s9.10556$DP6.34862@news-server.bigpond.net.au>
Source record: 40473
Cross-posted to: aus.electronics,rec.radio.amateur,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.repair

Dennis

Many thanks for your detailed reply. I have to say that it sounds as if I'd be better off sticking to my current method of printing positives onto overhead-transparency material in my laser printer and using pre-sensitised PCB material. I do both analog (RF) and digital, usually on the same PCB, with track widths going down to 12mils.

Steve

Dennis <dont@spam.me> wrote in message news:VQUs9.10198$DP6.33712@news-server.bigpond.net.au...
> I've used "press n peel" quit a few times over the last year, the last time
> being about half an hour ago. In general I've found it to be effective and
> fairly simple, but limited to a fairly high track size. I've used it mostly
> for making audio amplifier PCBs which I use large/huge tracks on anyway so
> that limitation doesn't bother me. The smallest track I'd probably use
> would be about 20mil, but I usually use at least 40mil.
>
> The most difficult part is the actual ironing onto the PCB. If it doesn't
> go to well there may be small breaks in a track, half a pad missing here and
> there, or if the plastic shifts slightly when you're first starting some
> tracks may end up with a smeared appearance, and end up wider than desired.
> Many of these defects can be corrected before you etch by using a permanent
> pen to cover over/replace any missing mask, or by scratching off any excess
> with a knife/scriber. Most boards I make will need about 1 minute with a
> pen to check and fix any small defects, but I rarely have to scratch
> anything off.
>
> Before I first used the "press n peel" I came across a web site of tips on
> it (I no langer have the address). The two tips that I've found to be most
> helpful are:
>
> 1) Don't actually feed a whole sheet of the stuff into the printer. First
> print on plane paper exactly what you want to print onto the "P n P" noteing

> which way up the paper was in the tray it came from, and the direction the
> paper was fed through the printer. I usually use the straight feed paper
> tray that folds down on the front of the printer, not one the actual paper
> tray draws, and I draw an arrow somewhere on the paper to show the feed
> direction before it is printed on. You then cut a piece of the press n
peel
> large enough to cover the image on the paper with maybe 1 cm overhang on
all
> edges. With some sticky tape, tape down the leading edge (as it will feed
> through the printer) of the "P n P" directly over the image on the paper.
> Then put the paper back in the tray in the same orientation as before and
> reprint. You should end up with the paper being drawn into the printer,
> taking the small cutout piece of "P n P" smoothly in with it, in exactly
the
> right spot for the image to be printed on it. Then take the "P n P" off
the
> paper and iron it onto your clean blank PCB. By doing this you use far
less
> of the "P n P" than if you used a whole sheet every time (unless you're
> making A4 sized PCBs). I'd generally get between 4 and 6 PCBs per sheet,
so
> of the original 5 sheets I've got 2 left after making about 15 PCBs.
>
> I've never had problems with the sticky tape going through the printer,
but
> I can't make any promises about your tape going through your printer. (I
> wouldn't realy expect any difference, this is just a simple word of
caution
> about the quality of tape you feed through your printer)
>
> 2) When you iron the "P n P" onto the PCB the corners will tend to curl up
a
> bit, which will result in the tracks nearest the corners barely sticking
> down and not leaving the toner behind. So when laying out your PCB put a
> nice big fat (300mil) border around your layout to help stick the "P n P"
in
> place when you iron it on and keep it nice and flat near the tracks you
want
> to keep.
>
> I would assume that not everyone would be happy with the quality of the
> results from "Press n Peel" but I'll continue to use it happily (until I
> finish the last 2 sheets then I might try something new so I have
something
> to compare it to) as I was very quickly able to make PCBs adequate to my
> purposes with minimal initial cost outlay.
>
> I hope this is of help.
>
> Cheers

>
> Dennis
>
> "Steve Andrew" <sjandrew@bigpond.net.au> wrote in message
> news:MUOs9.8759$DP6.28662@news-server.bigpond.net.au...
> >
> > Ms Jillian Fryer <fryer@melbpc.org.au> wrote in message
> > news:aorguibeu1@possum.melbpc.org.au...
> > > I have just bought the techniks "press n peel"kit for making PCB'S my
> > > question concerns the directions ,the first step, where you photocopy
> the
> > > circuit image onto the dull side of the emulsion. Not being used to
> > > photocopiers,which way faces up as it is loaded into photocopier the
> shiny
> > > side or the dull side,I've only got a few sheets and don't want to
waste
> > > them,.
> > > Mark.
> >
> > If anybody has had any experience with press-n-peel, either good or bad,
> > please let me know. I'm interested in using it for one-off 'quickies'
but
> > would like to get some feedback first.
> >
> > TIA
> >
> > Steve
> >
> >
> >
>
>

3261. Re: TS-430---->RTTY/SSTV

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 21:51:37 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <H5GcnbZ5MIkAGymgXTWc3w@ctc.net>
Source record: 40475

Do a Google search for RASCAL.

"Robban" <sm0xod@hotmail.com> wrote in message
news:Z%Zs9.658$h%5.19149@newsb.telia.net...
> Hello im looking for a cable i can use with my TS-430 so i can
send/recieve
> RTTY/SSTV with
> Anyone know what i need to make my own cable?
> 73 de sm0xod Robban
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.404 / Virus Database: 228 - Release Date: 2002-10-15
>
>

3262. Re: PCB design software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 21:52:04 UTC
From: Marty <vk2umj@NOSPAM.yahoo.com.au>
Message-ID: <Ox_s9.58619$g9.167502@newsfeeds.bigpond.com>
Source record: 40474

> If anyone does know where this can be downloaded, I'd love to know. I
spent a
> long time searching for it, to no avail. Google seems to only turn up
Eastern
> European sites that give you passwords to open up the 3 or 4 disc set,
mixed in
> with a lot of Porn links. Not a lot of interest or use. I have a 1 disc
> version of it that has no help files or libraries, but enough to be able
to tell
> that it is a very useful tool for Ham use. I think it was originated by
Protel,
> who no longer supply or support it.
>

My Google search turned up:

http://bach.ece.jhu.edu/~haceaton/pcb PCB freeware. This is *NIX
software that will only run with Linus, etc.

http://www.expresspcb.com ExpressPCB freeware, for Windows.

I haven't looked at the other results, but try searching using PCB rather
than pcb (i.e. use capitals not lower case).

--
Martin, VK2UMJ
vk2umj@NOSPAMyahoo.com.au

Remove NOSPAM from e-mail address to reply

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.404 / Virus Database: 228 - Release Date: 15/10/2002

3263. Re: PCB design software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-21 23:56:48 UTC
From: DrGrok@mungednet.com
Message-ID: <ap23smhiq1@bob.news.rcn.net>
Source record: 40476

In article <3DB413BA.F45C771@ix.netcom.com>, Dan Rae <rae4@ix.netcom.com> wrote:
>
>
>"Dr. Grok" wrote:
>
>>
>> I've started to use a program simply called PCB. Its freeware -- don't have
>> the URL for it handy but Google should give it to you. The latest version
>> (IIRC) is 1.6.3.
>>
>
>If anyone does know where this can be downloaded, I'd love to know. I spent a
>long time searching for it, to no avail. Google seems to only turn up Eastern
>European sites that give you passwords to open up the 3 or 4 disc set, mixed in
>with a lot of Porn links. Not a lot of interest or use. I have a 1 disc
>version of it that has no help files or libraries, but enough to be able to
> tell
>that it is a very useful tool for Ham use. I think it was originated by
> Protel,
>who no longer supply or support it.
>
>dr
>
>
I found the URL:

http://bach.ece.jhu.edu/~haceaton/pcb/pcb

[Only took a minute or less on Google]

Dr. G

3264. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-22 02:18:59 UTC
From: jos <soj@sympatico.ca>
Message-ID: <3DB4B592.9A6D3AA5@sympatico.ca>
Source record: 40477

Greetings!

Try "ALPHA" Zero bias rectifying diodes. They have a circuit diagram of a detector
capable of rectifying low voltages!

VE2AUC!

Larry Gagnon wrote:

> I need to measure a 20mV 1440 MHz oscillator signal. Is it possible to
> do so with a homebrew RF probe that can measure into this UHF range?
> If so, can anyone recommend a suitable design? Any help greatly
> appreciated.
>
> Larry VE6MK
> **********
> to send direct email remove "fake" from address

3265. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-22 04:20:57 UTC
From: rhaub <rhaub@itc.com>
Message-ID: <3DB4D228.45299CAA@itc.com>
Source record: 40478

I have had a close professional and personal relationship with my local Rat Shack for about 10 years now and they stopped carrying 1N34s long before 911. You could still get them until the your local store was out of them (And considering how few packs they were selling they lasted a long time, I was able to buy the last pack at my local store almost a year after they stopped carrying them.) but after the stock was gone that was it, no more. It has nothing to do with 911 or radioactivity (which 1N34s are not, although like most elements there are radioactive germanium isotopes) and more to do with the fact that no one except us homebrewers, who seem to be a dying breed, buy them. I design embedded controllers for a living and in 15 years as a designer I have yet to spec in a germanium diode.

My local store also recently went to the bin storage method to make room for the more "important" items. It makes shopping a lot more difficult since I used to go in and browse, now I have to open drawer after drawer to find what I want. I ran into a fellow who a few years ago was my local store manager and is now the regional manager and ask him why I could no longer get a 2N2955 and he told me that Rat Shack was going to continue to sell the higher volume small pieces but would no longer support the catalogue ordering that they have been experimenting with over the last 2 years and that they would be cutting back on the low sales volume, small piece items. When I asked him about the crappy drawer system he said that the small items would be packaged in smaller packages to fit in the drawers but the drawers where here to stay.

Didn't we have this discussion about 2 years ago? I could swear that the reason I bought the last of the 1N34s from my local Rat Shack is because there was a thread on this NG about the fact that the few manufacturers of germanium diodes had stopped production because of low sales and germanium diodes would no longer be available.

Rick KC0GIX

Davekdo wrote:

> Can't get 1N34's at radio shack since 9-11.
> Germanium is radioactive and can't be shipped or mailed it sets
> off the sniffers.
> True or False?
> test

3266. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-22 04:48:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <ur9m4ne9ssv8a8@corp.supernews.com>
Source record: 40479

rhaub wrote:
>. . .
> that was it, no more. It has nothing to do with 911 or radioactivity
> (which 1N34s are not, although like most elements there are radioactive
> germanium isotopes) . . .

The _Handbook of Chemistry and Physics_ (59th Ed.) lists 13 different radioactive isotopes of germanium. None occur naturally.

Roy Lewallen, W7EL

3267. Re: Synchronous detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-22 05:09:47 UTC
From: Dave <Dave@voceinc.com>
Message-ID: <R45t9.872$B15.488940633@twister2.starband.net>
Source record: 40480

You may wish to try a pair of high speed CMOS switches feeding a long-tailed pair on the back end after you find the proper PLL.

3268. Re: Synchronous detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-22 05:13:16 UTC
From: Dave <Dave@voceinc.com>
Message-ID: <685t9.873$y45.489123932@twister2.starband.net>
Source record: 40481

I haven't used it but the TLC2932 seems like it would be a good PLL to use.
Lock range is 22 Mhz to 50 Mhz.

"Dave" <Dave@voceinc.com> wrote in message
news:R45t9.872$B15.488940633@twister2.starband.net...
> You may wish to try a pair of high speed CMOS switches feeding a
long-tailed
> pair on the back end after you find the proper PLL.
>
>

3269. Re: PCB design software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-22 07:24:26 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <7FoNArAq0Pt9EwSJ@fslife.co.uk>
Source record: 40482

Ron,

>Eagle is ace, though its a pig when you first start as the
>docs are rubbish, I didn't bother with the circuit conversion
>though it is very clever, I've just finished an smd board for
>ctcss encoder/decoder using an fx355 chip, I like being
>able to print out x2 as well
>The componant library is extensive, and the freebie is
>FULLY working, just a limit on the board size, not like
>these other cripples floating around...
I have only had the time to browse over the Eagle software.

Does it offer the facility to 'automatic board size reduce'?

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3270. Re: TS-430---->RTTY/SSTV

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-22 08:15:20 UTC
From: Robban <sm0xod@hotmail.com>
Message-ID: <sO7t9.783$1r1.26410@newsc.telia.net>
Source record: 40483

Ok and what should i look for?
its well over 140.000 search results!
"Ralph Mowery" <rmowery@ctc.net> skrev i meddelandet
news:H5GcnbZ5MIkAGymgXTWc3w@ctc.net...
> Do a Google search for RASCAL.
>
>
> "Robban" <sm0xod@hotmail.com> wrote in message
> news:Z%Zs9.658$h%5.19149@newsb.telia.net...
> > Hello im looking for a cable i can use with my TS-430 so i can
> send/recieve
> > RTTY/SSTV with
> > Anyone know what i need to make my own cable?
> > 73 de sm0xod Robban
> >
> >
> > ---
> > Outgoing mail is certified Virus Free.
> > Checked by AVG anti-virus system (http://www.grisoft.com).
> > Version: 6.0.404 / Virus Database: 228 - Release Date: 2002-10-15
> >
> >
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.404 / Virus Database: 228 - Release Date: 2002-10-15

3271. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-22 13:51:49 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <VJct9.18247$Mb3.606369@bgtnsc04-news.ops.worldnet.att.net>
Source record: 40484

A 1N270 would be a good substitute.

3272. Re: making pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-22 14:10:37 UTC
From: Dennis <dont@spam.me>
Message-ID: <x%ct9.14073$DP6.45113@news-server.bigpond.net.au>
Source record: 40485
Cross-posted to: aus.electronics,rec.radio.amateur,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.repair

That sounds like the best option to me. With the lower track widths and track spacing you'd be much more likely to get track breaks and bridges. You might be able to use it successfully, but I'd guess that it would be unreliable, and if you've already got a method that works I'd stick with it.

Cheers

Dennis

"Steve Andrew" <sjandrew@bigpond.net.au> wrote in message news:Je_s9.10556$DP6.34862@news-server.bigpond.net.au...
> Dennis
>
> Many thanks for your detailed reply. I have to say that it sounds as if I'd
> be better off sticking to my current method of printing positives onto
> overhead-transparency material in my laser printer and using pre-sensitised
> PCB material. I do both analog (RF) and digital, usually on the same PCB,
> with track widths going down to 12mils.
>
> Steve
>
>
> Dennis <dont@spam.me> wrote in message
> news:VQUs9.10198$DP6.33712@news-server.bigpond.net.au...
> > I've used "press n peel" quit a few times over the last year, the last time
> > being about half an hour ago. In general I've found it to be effective and
> > fairly simple, but limited to a fairly high track size. I've used it mostly
> > for making audio amplifier PCBs which I use large/huge tracks on anyway so
> > that limitation doesn't bother me. The smallest track I'd probably use
> > would be about 20mil, but I usually use at least 40mil.
> >
> > The most difficult part is the actual ironing onto the PCB. If it doesn't
> > go to well there may be small breaks in a track, half a pad missing here and
> > there, or if the plastic shifts slightly when you're first starting some
> > tracks may end up with a smeared appearance, and end up wider than
> > desired.

> > Many of these defects can be corrected before you etch by using a
> permanent
> > pen to cover over/replace any missing mask, or by scratching off any
> excess
> > with a knife/scriber. Most boards I make will need about 1 minute with
a
> > pen to check and fix any small defects, but I rarely have to scratch
> > anything off.
> >
> > Before I first used the "press n peel" I came across a web site of tips
on
> > it (I no langer have the address). The two tips that I've found to be
> most
> > helpful are:
> >
> > 1) Don't actually feed a whole sheet of the stuff into the printer.
First
> > print on plane paper exactly what you want to print onto the "P n P"
> noteing
> > which way up the paper was in the tray it came from, and the direction
the
> > paper was fed through the printer. I usually use the straight feed
paper
> > tray that folds down on the front of the printer, not one the actual
paper
> > tray draws, and I draw an arrow somewhere on the paper to show the feed
> > direction before it is printed on. You then cut a piece of the press n
> peel
> > large enough to cover the image on the paper with maybe 1 cm overhang on
> all
> > edges. With some sticky tape, tape down the leading edge (as it will
feed
> > through the printer) of the "P n P" directly over the image on the
paper.
> > Then put the paper back in the tray in the same orientation as before
and
> > reprint. You should end up with the paper being drawn into the printer,
> > taking the small cutout piece of "P n P" smoothly in with it, in exactly
> the
> > right spot for the image to be printed on it. Then take the "P n P" off
> the
> > paper and iron it onto your clean blank PCB. By doing this you use far
> less
> > of the "P n P" than if you used a whole sheet every time (unless you're
> > making A4 sized PCBs). I'd generally get between 4 and 6 PCBs per
sheet,
> so
> > of the original 5 sheets I've got 2 left after making about 15 PCBs.
> >
> > I've never had problems with the sticky tape going through the printer,

> but
> > I can't make any promises about your tape going through your printer.
(I
> > wouldn't realy expect any difference, this is just a simple word of
> caution
> > about the quality of tape you feed through your printer)
> >
> > 2) When you iron the "P n P" onto the PCB the corners will tend to curl
up
> a
> > bit, which will result in the tracks nearest the corners barely sticking
> > down and not leaving the toner behind. So when laying out your PCB put
a
> > nice big fat (300mil) border around your layout to help stick the "P n
P"
> in
> > place when you iron it on and keep it nice and flat near the tracks you
> want
> > to keep.
> >
> > I would assume that not everyone would be happy with the quality of the
> > results from "Press n Peel" but I'll continue to use it happily (until I
> > finish the last 2 sheets then I might try something new so I have
> something
> > to compare it to) as I was very quickly able to make PCBs adequate to my
> > purposes with minimal initial cost outlay.
> >
> > I hope this is of help.
> >
> > Cheers
> >
> > Dennis
> >
> > "Steve Andrew" <sjandrew@bigpond.net.au> wrote in message
> > news:MUOs9.8759$DP6.28662@news-server.bigpond.net.au...
> > >
> > > Ms Jillian Fryer <fryer@melbpc.org.au> wrote in message
> > > news:aorguibeu1@possum.melbpc.org.au...
> > > > I have just bought the techniks "press n peel"kit for making PCB'S
my
> > > > question concerns the directions ,the first step, where you
photocopy
> > the
> > > > circuit image onto the dull side of the emulsion. Not being used to
> > > > photocopiers,which way faces up as it is loaded into photocopier the
> > shiny
> > > > side or the dull side,I've only got a few sheets and don't want to
> waste
> > > > them,.
> > > > Mark.

> > >
> > > If anybody has had any experience with press-n-peel, either good or
bad,
> > > please let me know. I'm interested in using it for one-off 'quickies'
> but
> > > would like to get some feedback first.
> > >
> > > TIA
> > >
> > > Steve
> > >
> > >
> > >
> >
> >
>
>

3273. WTB 4500vdc 32mf oil can cap

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-22 15:37:57 UTC
From: pscortino@aol.com
Message-ID: <20021022113757.03278.00001192@mb-fo.aol.com>
Source record: 40486

need to buy 4500 vdc 32mf oil can.please email at pscortino@aol.com

thanks bruce

3274. Re: PCB design software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-22 15:48:14 UTC
From: ronayling@hotmail.com
Message-ID: <3db57167.28620669@news.freeserve.co.uk>
Source record: 40487

Not quite sure what you mean? you have the option
of printing larger? though to print smaller would be
pointless as even with a really good printer you can't
get a good clear print on smd devices in real size.
you do have an enlargement facility when you are
drawing the board of course on screen so to speak
There are lots of options for downloading your design
to various pcb making equipment such as these new
cutting systems but beyond my pocket I'm afraid..

On Tue, 22 Oct 2002 08:24:26 +0100, Philip de Cadenet
<Philstheboss@thebbc.fslife.co.uk> wrote:

>Ron,
>
>>Eagle is ace, though its a pig when you first start as the
>>docs are rubbish, I didn't bother with the circuit conversion
>>though it is very clever, I've just finished an smd board for
>>ctcss encoder/decoder using an fx355 chip, I like being
>>able to print out x2 as well
>>The componant library is extensive, and the freebie is
>>FULLY working, just a limit on the board size, not like
>>these other cripples floating around...
>I have only had the time to browse over the Eagle software.
>
>Does it offer the facility to 'automatic board size reduce'?
>
>(((73)))

3275. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-22 17:15:58 UTC
From: lc <larryc@northwest.com>
Message-ID: <3DB587CE.B02F78C6@northwest.com>
Source record: 40488

but they show up in a radio shack...
<snicker>

larryc
=======

Roy Lewallen wrote:

> rhaub wrote:
> >. . .
> > that was it, no more. It has nothing to do with 911 or radioactivity
> > (which 1N34s are not, although like most elements there are radioactive
> > germanium isotopes) . . .
>
> The _Handbook of Chemistry and Physics_ (59th Ed.) lists 13 different
> radioactive isotopes of germanium. None occur naturally.
>
> Roy Lewallen, W7EL

--
Welcome to Oregon - "The Food Stamp State"

3276. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-22 17:41:47 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0210220941.49fec5a7@posting.google.com>
Source record: 40489

rhaub <rhaub@itc.com> wrote in message news:<3DB4D228.45299CAA@itc.com>...
> I have had a close professional and personal relationship with my local
> Rat Shack for about 10 years now and they stopped carrying 1N34s long
> before 911. You could still get them until the your local store was out
> of them (And considering how few packs they were selling they lasted a
> long time, I was able to buy the last pack at my local store almost a
> year after they stopped carrying them.) but after the stock was gone
> that was it, no more. It has nothing to do with 911 or radioactivity
> (which 1N34s are not, although like most elements there are radioactive
> germanium isotopes) and more to do with the fact that no one except us
> homebrewers, who seem to be a dying breed, buy them. I design embedded
> controllers for a living and in 15 years as a designer I have yet to
> spec in a germanium diode.
>
That's the point. Except for a handful of applications, nobody is
using germanium diodes anymore. 40 years ago, they were common, because
germanium semiconductors were more prominent than silicon. Once the
latter took over, the only reason for using germanium diodes was when
you needed the low forward voltage drop. Even then, schottky diodes
have taken over some of the uses that germanium diodes were used for,
and there are probably good reasons to use them instead of germanium.

I keep saying that when someone sees "1N34" most of the time someone
is specifying a generic germanium small signal diode (or more
specifically, a diode with a small forward voltage drop), so pretty
much any small signal germanium diode will work. The number was
specificied because it was being specified, meaning that the suppliers
would all stock something that they labelled that. If someone isn't
finding a "1N34" they may have problems finding a germanium diode,
because any germanium diodes may require tracking down.

Places that deal with the sort of people who do want germanium diodes,
ie people building "crystal radios", are likely to be the places where
one can get one. There isn't reason for the average supplier to stock
the thing, because who needs them?

In another newsgroup, brought on by the periodic "where can I get a 1N34
diode?" thread, someone pointed out the odd package of a real 1N34. I'm
not sure if I'm picturing it right, but I do remember noticing a
distinctive package years ago when I had some diodes that were definitely
germanium. With that in mind, during some recent circuit board stripping,
I pulled off some germanium diodes. Certainly those thirty year old AM/FM
radio boards (they were used in the am and fm detectors, but also in the
FM IF strip, presumably for limiting purposes) had germanium diodes. Cost
and age help to define them. But I found some diodes of the same sort of

package in some older cellphones (and I thought something else). The latter may not be germanium, their presence does seem odd, but they did have a lower voltage drop.

One can differentiate diodes with lower voltage drop from the common silicon diodes. Use a DVM with a diode function, and the silicon diodes will have a higher reading. Some small signal silicon diodes I just pulled out at random read .550 on my meter, while the ones I've defined as germanium read .2 to .250. Germanium diodes will also have a lower resistance in the reverse bias position from silicon diodes.

Obviously the older the scrap equipment, the more likely one will find germanium diodes. I have a stock pulled off scrap logic boards from about thirty years ago. Those cellphone ones are a mystery at the moment; if they are schottky (I don't have any known schottky to compare them with), at least they have a lower forward voltage drop than the common silicon diode.

Old UHF tuners are also a place for germanium diodes. The transistor ones (with continuous tuning), used a simple diode mixer, and those were germanium; at least some I pulled out recently had a lower forward voltage drop.

Someone might also use a base-emitter junction of a germanium diode. I'm not sure those would be any more available than a germanium diode, but at least this is an alternative.

Michael VE2BVW

3277. Audiometer/Tone Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-22 18:12:08 UTC
From: cycleguy56@yahoo.com
Message-ID: <b5820319.0210221012.3496cc15@posting.google.com>
Source record: 40490
Cross-posted to: alt.med.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.misc

Listed for auction is an Eckstein Audiometer, hearing tester.
Generates sine waves at specific frequencies with step attenuator. To
see more, go to:

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1778940030&rd=1

Thanks for looking.

3278. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-22 20:30:34 UTC
From: "John S. Dyson" <dyson@iquest.net>
Message-ID: <Ctit9.428$S4.84972@news.iquest.net>
Source record: 40491

"Michael Black" <blackm00@cam.org> wrote in message
news:6447bcd3.0210220941.49fec5a7@posting.google.com...
>
> Places that deal with the sort of people who do want germanium diodes,
> ie people building "crystal radios", are likely to be the places where
> one can get one. There isn't reason for the average supplier to stock
> the thing, because who needs them?
>
It would probably be a 'good thing' for a hobby mag (or an advocate) to
design a simple 'crystal radio' with an inexpensive schottky. I'd think
that a schottky would work just as well, and a special schottky could
do significantly better???

John

3279. Re: TS-430---->RTTY/SSTV

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-22 21:23:20 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <j-2dnd2M74XjTCigXTWc2Q@ctc.net>
Source record: 40492

My fault it was only 10 down on my search. Look here for what you should have found.

http://www.packetradio.com/psk31.htm

"Robban" <sm0xod@hotmail.com> wrote in message news:sO7t9.783$1r1.26410@newsc.telia.net...
> Ok and what should i look for?
> its well over 140.000 search results!
> "Ralph Mowery" <rmowery@ctc.net> skrev i meddelandet
> news:H5GcnbZ5MIkAGymgXTWc3w@ctc.net...
> > Do a Google search for RASCAL.
> >
> >
> > "Robban" <sm0xod@hotmail.com> wrote in message
> > news:Z%Zs9.658$h%5.19149@newsb.telia.net...
> > > Hello im looking for a cable i can use with my TS-430 so i can
> > send/recieve
> > > RTTY/SSTV with

3280. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-23 00:39:44 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <urbrugkebm6kbb@corp.supernews.com>
Source record: 40493

All you have to do is enter "1n34" in an Internet search engine and you'll end up with several places that sell them. Dan's small parts is one that pops up.

3281. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-23 02:08:25 UTC
From: Wayne <mookie56@hotmail.com>
Message-ID: <Xwnt9.116936$48.111446@fe04>
Source record: 40494

I don't know about the Bristol store, but they charge an arm and a leg for parts here in Knoxville. There is a long-running joke amongst some of us in the commercial biz that you cannot shop there unless someone else is paying. Nowadays I try to mail order just about all my parts. By getting together a large order, you can save some pretty good money. Hamfests are also a nice place to get parts, although they are getting pretty scarce there as well. It may sound morbid, but if you run across a silent key's estate, you can usually get the junkbox for free if you will haul it off. The hams helping sell the equipment usually concentrate on the gear and don't know enough about the parts to want to bother with them.

Wayne

Joe S. wrote:

> I am very lucky to live in Bristol, TN, home of Shields Electronics.
> Shields is, literally, a mom-and-pop operation -- although now it's run by
> the son. They have stores in Bristol, Knoxville, and Chattanooga.
>
> Most of their sales are to commercial folks -- huge spools of wire and
> cable, connectors by the case, and the like. However, they committed long
> ago to keeping a stock of small parts -- transistors, diodes, ICs; full
> stock of resistors from 1/4 watt to 10 watt; toroid cores; printed circuit
> board; ceramic, mica, poly, and tantalum capacitors; potentiometers of
> every value and design; aluminum boxes, cases, panels; hook-up wire;
> Shields is
> like lots of places used to be. Don't know how long they can keep it up
> -- visit their website and if you are within range, visit.
>
> http://www.shieldselectronics.com/ Look at the left side of the screen
> and click on Shields History.
>
> --
>
> ------
> Regards,
> Joe S.
>

3282. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-23 02:48:36 UTC
From: Bill M <exray@no>
Message-ID: <urc3caeghl8188@corp.supernews.com>
Source record: 40495

"John S. Dyson" wrote:
>
> "Michael Black" <blackm00@cam.org> wrote in message
news:6447bcd3.0210220941.49fec5a7@posting.google.com...
> >
> > Places that deal with the sort of people who do want germanium diodes,
> > ie people building "crystal radios", are likely to be the places where
> > one can get one. There isn't reason for the average supplier to stock
> > the thing, because who needs them?
> >
> It would probably be a 'good thing' for a hobby mag (or an advocate) to
> design a simple 'crystal radio' with an inexpensive schottky. I'd think
> that a schottky would work just as well, and a special schottky could
> do significantly better???
>
> John

Its hardly a design consideration but it has been shown that many diodes
are 'better' than the trusty ole 1N34. When discussions like this go
on, I wonder if the term "1N34" hasn't entered the lexicon as the
generic crystal radio diode that now is intended to be substituted with
your diode/razor blade of choice?
-Bill

3283. Re: WTB 4500vdc 32mf oil can cap

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-23 03:52:53 UTC
From: w4pqwhs@aol.com
Message-ID: <20021022235253.00197.00011164@mb-ce.aol.com>
Source record: 40496

>
>need to buy 4500 vdc 32mf oil can.please email at pscortino@aol.com
>

Bruce I can sell you one for $35.00 shipped in lower 48 states ...73 Harold
W4PQW

3284. Re: questions about desoldering system

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-23 03:57:50 UTC
From: w4pqwhs@aol.com
Message-ID: <20021022235750.00197.00011167@mb-ce.aol.com>
Source record: 40498

have used many de-soldering stations,never knew of one using compressed air ..I thought they all used a vacuum source..what brand and model is it? Harold W4PQW

3285. Re: questions about desoldering system

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-23 04:22:37 UTC
From: Anthony Jons <ajjhns@noemail.com>
Message-ID: <ap587qsak1@slb6.atl.mindspring.net>
Source record: 40499

> have used many de-soldering stations,never knew of one using compressed air ..I
> thought they all used a vacuum source..what brand and model is it? Harold W4PQW

The model I have is an Air-Vac DVM4ESS Vacuum module. On the side it says that the "vacuum transducer pump" produces 28" Hg. Internally, there are filters and a solenoid/valve/etc. that produces vacuum when high pressure is applied. The valve is opened and closed by a foot pedal.

3286. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-23 06:51:27 UTC
From: Mike Monett <Die@Spam.Bots>
Message-ID: <3DB646EF.5D30@Spam.Bots>
Source record: 40497

Larry Gagnon wrote:
>
> I need to measure a 20mV 1440 MHz oscillator signal. Is it possible to
> do so with a homebrew RF probe that can measure into this UHF range?
> If so, can anyone recommend a suitable design? Any help greatly
> appreciated.
>
> Larry VE6MK

There's some good examples of low-level diode detectors at

http://engphys.mcmaster.ca/~elmer101/

See the articles on square law detectors at

http://engphys.mcmaster.ca/~elmer101/sqlaw/sqlaw.html
http://engphys.mcmaster.ca/~elmer101/sqlaw/sqlplots.html

Follow Tom Bruhn's excellent advice on short leads and signal levels, and
you should get good results!

Mike

3287. Re: questions about desoldering system

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-23 12:33:17 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <MIwt9.1052$yK6.77777@newsfep1-win.server.ntli.net>
Source record: 40500

> have used many de-soldering stations,never knew of one using compressed
air ..I
> thought they all used a vacuum source..what brand and model is it? Harold
W4PQW
================
A useful pressure below that of atmospheric pressure (vacuum if you wish)
can be created by means of a venturi tube , basically a piece of pipe with a
(narrow) throat .
When blowing air through the venturi tube ,due to increase of air velocity
in the throat the static pressure will drop.

In laboratories a well known venturi type vacuum device is connected to a
water tap . With the water drained or collected at atmospheric pressure ,the
under-pressure (vacuum) which exists at the throat connection can be set by
adjusting the water flowrate.

If such a device would be used for desoldering ,one would probably have to
fit an intermediate enclosed pot with a dip pipe to almost the bottom . With
the dip pipe externally connected to the solder sucker and the venturi
device vacuum connection connected to the top of the pot , any solder would
be left inside the pot rather then clogging the venturi vacuum device.

Perhaps someone on this NG could locate a source for such a 'vacuum' device
to assist potential users.

Frank gm0csz.kn6wh@ntlworld.com

3288. WTB:TR-7 ACCESSORIES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-23 12:41:47 UTC
From: Joe Hargis <joehargis@worldnet.att.net>
Message-ID: <fOwt9.19596$Mb3.722633@bgtnsc04-news.ops.worldnet.att.net>
Source record: 40501

Looking for Aux-7, filters, xtal cal. Cash paid but I have lots of 'stuff'
to trade if interested: tubes, transformers, chokes, sockets (older), fil
transformers.
I'm also at WS0E via hotmail and arrl
tnx Joe in MO
(GONE TO CO WED-SUN)

3289. Re: questions about desoldering system

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-23 13:15:19 UTC
From: Idontwantspam@net
Message-ID: <3db69fca.1486717@news.bellatlantic.net>
Source record: 40502

On Wed, 23 Oct 2002 13:33:17 +0100, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>A useful pressure below that of atmospheric pressure (vacuum if you wish)
>can be created by means of a venturi tube , basically a piece of pipe with a
>(narrow) throat .
>When blowing air through the venturi tube ,due to increase of air velocity
>in the throat the static pressure will drop.
>
Just as a heads up, many of the venturi type vacuum generators can be
noisy in operation. Usually not a problem in a lab or production
facility, but could be in a home situation. Give it a listen before
buying, if you can.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3290. 1EP1 CRT Data?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-23 16:59:49 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3DB6D585.A3AB60D6@ix.netcom.com>
Source record: 40503

Does anyone have any information or a data sheet on the RCA 1EP1 CRT?
1977 Vintage.
Thanks
Dan
ac6ao

3291. Re: questions about desoldering system

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-23 17:05:38 UTC
From: gaschafer@attbi.com
Message-ID: <3db6d716.7483145@netnews.attbi.com>
Source record: 40504

Pace makes a compressed air vacuum desoldering unit. They are commonly used in plants.
They are cheaper than the units that have individual vacuum pumps in them.
They have all the same components in them that a regular Pace unit has except that instead of a
vacuum pump there is the compressed air vacuum generator.

73
Gary K4FMX

3292. MANUALS U MAY NEED

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-23 19:39:55 UTC
From: joeee1621@aol.com
Message-ID: <20021023153955.04487.00005285@mb-fi.aol.com>
Source record: 40505

OVER 835 TITLES TO CHOOSE FROM..WE PROBABLY HAVE THE ONE YOU NEED ..ALL MANUALS
$16 SHIPPED TO THE LOWER 48 STATES UNLESS OTHERWISE NOTED.. PLEASE TAKE A LOOK
AT OUR LIST- http://hometown.aol.com/joeee1621/myhomepage/business.html -AND
LET US KNOW WHAT YOU WOULD LIKE-WE GLADLY SHIP WORLDWIDE-..NEW MANUALS
DAILY..ORDER TODAY..SHIP TOMORROW.

3293. WTB Heathkit SB-104 power cable or plug

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-23 22:41:28 UTC
From: Wayne Faris <wfaris@inebraska.com>
Message-ID: <3DB72598.B209FAF6@inebraska.com>
Source record: 40506

Recently picked up an SB-104 from an SK estate sale, however no one could find the power cable. I need either a complete power cable or at least the plug. The plug looks like an 11 pin tube socket (about 1.25" across) with a metal cover with cable clamp on the back side. Thanks for the bandwidth.

Wayne L. Faris, KEï¿½BZ

3294. Antenna Basics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-23 23:19:54 UTC
From: tayl0rr@yahoo.com
Message-ID: <FB3639F275CA9379.055C3188FF6E0ACE.4F7042862919DCD4@lp.airnews.net>
Source record: 40378

I would like to build my own multiband antenna. I have about 30 feet of 1" aluminum tubing. I would like the antenna to function from 10m to 80m if possible. I can go approximately 30 horizontally or vertically due to space/neighbors restrictions. My questions are as follows.

I would like the setup that gives me the most rf out best receiving of course.

If I build a vertical, would it be best to mount it around 10' off the ground with limited radials around 6', or ground level with radials running a little longer maybe 12'-15'. What about with no radials at all?

Is a tapped coil at the base hand switched better than traps, or would it be best to just make the antenna one long piece of aluminum with no coil? I know the last method requires an antenna tuner but what about the tapped coil method and trap method?

Is there a difference between an antenna tuner in line with a plain vertical, and a vertical tapped with no antenna tuner, other than the fact that the antenna tuner would provide wider coverage?

What about a 30' dipole about 10' off the ground, or a beverage?

Sorry I know these questions are basic, but I've been reading up online and I haven't figured out all the basics yet. I'm space restricted and to some extent height restricted although a single pole sticking up wouldn't be a problem.

Thanks
Robert

3295. Re: making pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-24 01:14:15 UTC
From: Paul N3EOP <n3eop@arrl.or.callsign.net>
Message-ID: <Xns92B0B9859E077n3eophotmailcom@64.164.98.6>
Source record: 40507
Cross-posted to: aus.electronics,rec.radio.amateur,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.repair

"Steve Andrew" <sjandrew@bigpond.net.au> wrote:

> If anybody has had any experience with press-n-peel, either good or
> bad, please let me know. I'm interested in using it for one-off
> 'quickies' but would like to get some feedback first.

I've used it with mediocre results. As others have said, it's good for big stuff, but forget anything surface mount. (I prefer surface mount, as then you don't need to drill all those holes... <G>)

Honestly, I really prefer to use the presensitized PCB method. You don't need a darkroom to do it; I work on the bathroom counter with the bathroom lights off and the hall lights on. I've done surface mount as fine as 0.5mm (20 mil) pitch; that takes some care and strict attention to timing. (Haven't had to do anything finer.)

The only extra steps involved are exposing the board and developing the exposure. Everything else is the same.

3296. New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-24 02:46:04 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ap7mtb$g3o$3@sparta.btinternet.com>
Source record: 40508

NOW AVAILABLE ** New Program "OSCTRACK.exe"

Tracking of RF signal and local oscillator tuned circuits in superhet radio receivers.

The program calculates all L and C component values and then checks tracking error as the two-(or more)-gang tuning capacitor is varied from the keyboard from one end of the band to the other. Covers all signal frequencies from VLF to UHF for any Intermediate Frequency (IF).

Ideal for receiver home-brewers.

Download in a few seconds from website below and run immediately.

========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================

3297. Re: 1EP1 CRT Data?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-24 03:48:07 UTC
From: bob <k6rtm@mypants.attbi.com>
Message-ID: <2310200220480739 57%k6rtm@mypants.attbi.com>
Source record: 40509

[[This message was both posted and mailed: see
the "To," "Cc," and "Newsgroups" headers for details.]]

In article <3DB6D585.A3AB60D6@ix.netcom.com>, Dan Rae
<rae4@ix.netcom.com> wrote:

> Does anyone have any information or a data sheet on the RCA 1EP1 CRT?
> 1977 Vintage.
> Thanks
> Dan
> ac6ao

My *cough* 1973 ARRL handbook has the pinout --

the heater voltage is 6.3v, the other voltages you're going to have to
guess at, but I seem to remember nothing was in excess of 1.5kV...

1 h
2 h
3 d1 (deflection)
4 k
5 g3
6 d4
7 d3
8 g24 (grids 2 and 4)
9 d2
10 d1
11 nc/internal connection

Hope this helps!

3298. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-24 10:06:48 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <ap8lirfbp2@newsg1.svr.pol.co.uk>
Source record: 40510

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:ap7mtb$g3o$3@sparta.btinternet.com...
> NOW AVAILABLE ** New Program "OSCTRACK.exe"
>
> Tracking of RF signal and local oscillator tuned circuits in superhet
radio
> receivers.

Does anyone still design this type of radio?

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

3299. FS: TUBES, 1000's @ very low prices

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-24 14:05:22 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <C6Tt9.124343$o.626051@news1.west.cox.net>
Source record: 40511
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.swap

Please email w6krc@arrl.net for a detailed list of receiving, special purpose & TV tubes.

3300. Re: 1EP1 CRT Data?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-24 14:15:54 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3DB8009A.804CB2F2@ix.netcom.com>
Source record: 40512

Thanks to all who helped, I'm all set now
dr

3301. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-24 14:29:17 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ap903t$79$1@helle.btinternet.com>
Source record: 40513

> Does anyone still design this type of radio?
==========
Yeah, there hasn't been a TRF receiver made and sold for the last 60 years.
Well before you were born.

Supersonic Heterodyne receivers rule the roost. Some have two, even three
intermediate frequencies.

There's been a tendency lately to sell the RF preselector as an add-on extra
which loses much of the operating convenience.

In comparison with the complete version a receiver without a preselector is
a load of junk.

Reg G4FGQ

3302. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-24 15:37:32 UTC
From: kb9olm@yahoo.com
Message-ID: <cba55a41.0210240737.82ede71@posting.google.com>
Source record: 40514

Larry,

I would suggest to try Linear Technology RF Power Detector IC,
LTC5505-1 or LTC5505-2 :

http://www.linear-tech.com/

You can also buy these ICs from Digi-Key:
http://www.digikey.com/scripts/us/dksus.dll?Detail?Ref=68342&Row=217504

The LTC5505-1 and LTC5505-2 are RF Power detectors for frequencies 300
to 3000 MHz. 5-pin SOT-23 package. Very easy to use.

73,
vlad
kb9olm

lagagnon@fakesprint.ca (Larry Gagnon) wrote in message
news:<3db1e430.1824590@news.sprint.ca>...
> I need to measure a 20mV 1440 MHz oscillator signal. Is it possible to
> do so with a homebrew RF probe that can measure into this UHF range?
> If so, can anyone recommend a suitable design? Any help greatly
> appreciated.
>
> Larry VE6MK
> **********************
> to send direct email remove "fake" from address

3303. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-24 15:54:01 UTC
From: Bob Liesenfeld <robert.liesenfeld@neicoltech.org>
Message-ID: <3DB81799.70D968F6@neicoltech.org>
Source record: 40515

Leon Heller wrote:

> "Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
> news:ap7mtb$g3o$3@sparta.btinternet.com...
> > NOW AVAILABLE ** New Program "OSCTRACK.exe"
> >
> > Tracking of RF signal and local oscillator tuned circuits in superhet
> radio
> > receivers.
>
> Does anyone still design this type of radio?

Yup.

Bob. WB0POQ

3304. Wanted: Tek 2465b service manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-24 16:28:52 UTC
From: douglasfir@charter.net
Message-ID: <urg7u46e47s9aa@corp.supernews.com>
Source record: 40516
Cross-posted to: sci.electronics.design,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hi,

I need the service manual for the Tektronix 2465b Oscilloscope.

thanks,

Dennis

3305. FS 900 mhz 8 cavity duplexer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-24 18:29:16 UTC
From: Mike Kulyk <mkulyk@optonline.net>
Message-ID: <0_Wt9.5280$D63.5212@news4.srv.hcvlny.cv.net>
Source record: 40518
Cross-posted to: rec.radio.swap,rec.radio.amateur.equipment,rec.radio.amateur,rec.radio.amateur.homebrew,alt.ham-radio.vhf-uhf,alt.ham-radio.marketplace

900 MHz 8 Cavity Duplexer
Compact Duplexer with Circulator

This Duplexer came from an older 900 MHz linking radio system. It is presently tuned for 895.90 MHz TX and 934.70 RX, making it very suitable for the 900 MHz Ham band. It came out of service, so should be working fine, but it comes AS-IS.

$150 plus shipping

3306. Good Z-Match ATU Circuit diagram

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-24 20:14:45 UTC
From: Mick Gorman <mgorman@eircom.net>
Message-ID: <rtYt9.23951$zX3.63689@news.indigo.ie>
Source record: 40517

Would anyone have a circuit diagram for a Z Match ATU for the Amateur bands
Regards EI4JL
mgorman@eircom.net

3307. Re: Good Z-Match ATU Circuit diagram

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-24 21:22:51 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <urgp6ecsvgde91@corp.supernews.com>
Source record: 40519

I would have sworn I saw one grazing through the NJ QRP Clubs "QHB Extra" on
their web site (www.njqrp.org) but A quick look didn't turn it up.

However, a google search revealed:
http://www4.tpgi.com.au/users/ldbutler/SingleCoilZMatch.htm
http://www.seboldt.net/k0jd/z-match.html
http://www.g3ycc.karoo.net/zmatch.htm
http://www.g3vgr.co.uk/zmatch.htm
http://hamradio.online.ru/zm.htm
http://www.njqrp.org/mbrproj/zmatch.html
http://www.dl-qrp-ag.de/pdf/z_matchNorCal.pdf

and on and on and on....

..

"Mick Gorman" <mgorman@eircom.net> wrote in message
news:rtYt9.23951$zX3.63689@news.indigo.ie...
> Would anyone have a circuit diagram for a Z Match ATU for the Amateur
bands
> Regards EI4JL
> mgorman@eircom.net
>
>

3308. Re: Good Z-Match ATU Circuit diagram

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-24 23:45:04 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <apa0lvljj1@helle.btinternet.com>
Source record: 40520

"Mick Gorman" wrote -
> Would anyone have a circuit diagram for a Z Match ATU for the Amateur
bands
> Regards EI4JL

==========

Mick and others,

Get a reel of some 20 or 18 or 16 gauge enamelled copper wire, two or three empty toilet or kitchen roll tubes, plus a 35mm film container, a dozen small crocodile or alligator clips on the ends of a few inches of flexible stranded plastic-insulated wires, and two 350 or 500 pF receiving-type tuning condensers with knobs on the ends of the shafts. Capacitor vanes should not be too closely spaced.

Wind two or three close-wound coils One with about 40 or 50 turns. Another with around 10 or 15 turns. Leave three or four small loops in the turns to allow coil tapping. You can also wind two close-coupled coils with different numbers of turns on the same former.

The fewer the number of turns the higher the frequency bands.

You should then be in a position to match almost anything to anything using an L-network. If that occasionally fails then try a T-network. Always try the most simple circuits first - just a coil or a capacitor in series or in shunt with the antenna.

It is impossible for circuits to become complicated. At most, in any matching network, there are only 2 or 3, L and C components.

You can get something working much sooner than shopping around with a cheque book, one grasping dealer after another, searching for a black box it is very likely you will not be satisfied with because the coil doesn't have the right number of turns.

I often leave the bits and pieces on the window ledge to greet the antenna wire as it comes indoors through the window. Any sort of gap or slot or tiny hole in the window will do fine. If its through the kitchen window then you will find an excellent convenient ground connection via a jumbo clip on the domestic plumbing. Prefer a cold water pipe because it's nearer to the incoming main.. The ground is as important as the aerial wire.

Draw your own free-hand circuits with pencil and paper. Keep a record. It helps to remember long after you have mislaid them.

If you don't dislike using numbers, get an idea of what to expect with simple aerial wires by using easy-to-use program ENDFEED. Download in a few

seconds and run immediately. You won't need a college training course of instruction.

The foregoing is thoroughly recommended even if you have won the Irish Sweep and are rich enough to buy an all-singing, all dancing, bells and whistles black box with knobs on.

I have never had a commercial tuner nor ever run out of coil formers or enamelled copper wire in 60 years.

Enjoy yourself !

==========
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
==========

3309. special DSB detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-25 00:33:20 UTC
From: ghldbrd@ccp.com
Message-ID: <598dc4be.0210241633.79955db0@posting.google.com>
Source record: 40521

In one of the older QST handbooks, or other ARRL publication, was an article on building a DSB demodulator that required both sidebands present, and would reject off-frequency QRM very well.

Now I have a CE100V and would like to play with the circuit, but I can't remember where I saw it. Anybody have any reccolection of that, and knows where to find it???

Your assistance would be greatly appreciated. Please replay directly on e-mail.

Gary Hildbrand WA7KKP

3310. RADAIR 10S diagram

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-25 11:34:20 UTC
From: TPJPACT <pj-thomas@wanadoo.fr>
Message-ID: <apba8h$611$1@news-reader11.wanadoo.fr>
Source record: 40522

I'm looking for the diagram of a old RADAIR 10S (airplane band)
73' qro

F6HSW

3311. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-25 12:09:16 UTC
From: n2ey@aol.com
Message-ID: <20021025080916.00112.00000013@mb-fz.aol.com>
Source record: 40523

In article <ap8lirfbp2@newsg1.svr.pol.co.uk>, "Leon Heller"
<leon@heller123.freeserve.co.uk> writes:

>"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
>news:ap7mtb$g3o$3@sparta.btinternet.com...
>> NOW AVAILABLE ** New Program "OSCTRACK.exe"
>>
>> Tracking of RF signal and local oscillator tuned circuits in superhet
>radio
>> receivers.
>
>Does anyone still design this type of radio?
>
Yes.

Old does not mean bad, useless or obsolete.

73 de Jim, N2EY

3312. Re: 1EP1 CRT Data?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-25 14:26:52 UTC
From: Hector Peraza <peraza@mitac13.uia.ac.be>
Message-ID: <3db954ac@news.uia.ac.be>
Source record: 40524

Dan Rae <rae4@ix.netcom.com> wrote:
: Does anyone have any information or a data sheet on the RCA 1EP1 CRT?
: 1977 Vintage.
: Thanks
: Dan
: ac6ao

http://www.wps.com/archives/tube-datasheets/Indices/1EP1.html

Regards,
Hector.

3313. Re: CORDLESS PHONE & ANSWERING MACHINE REPAIR-PARTS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-25 15:21:37 UTC
From: READING <Respnd_VIA_News@news.Groups>
Message-ID: <5kdu9.25294$Mb3.961893@bgtnsc04-news.ops.worldnet.att.net>
Source record: 40525

THANKS!

> http://cordless.00home.com/index.html
>
>

3314. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-25 18:08:37 UTC
From: k7itm@aol.com
Message-ID: <3200347.0210251008.3893ec4e@posting.google.com>
Source record: 40526

kb9olm@yahoo.com (vlad) wrote in message
news:<cba55a41.0210240737.82ede71@posting.google.com>...
> Larry,
>
> I would suggest to try Linear Technology RF Power Detector IC,
> LTC5505-1 or LTC5505-2 :
... etc

You might also check out Analog Devices' offerings for RF power and RF logarithmic amplifier-detectors.

Also, further to the simple diode detector ideas...although I (and someone else) recommended "zero-bias detector diodes," you can for sure use other diodes. Germanium junction and point-contact diodes and Schottky signal diodes not specifically intended for zero-bias work are all candidates.

Cheers,
Tom

3315. Heathkit GR-78 Battery

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-25 19:41:30 UTC
From: "Gary \"Joe\" Mayfield" <gary_mayfield@hotmail.com>
Message-ID: <urj7l02nlme929@corp.supernews.com>
Source record: 40527

I'm restoring a GR-78. Fortunatly someone removed the battery years ago. I know the original battery was a NiCad (I plan to use one too). I can also tell the battery is "split" in other words charged as two batteries, then used as one battery. Does anyone know how many cells this battery has? A first guess looks like 4 cells on each side. In other words an 8 cell / 10 Volt battery. This sounds odd so I thought I would ask if anyone knows for sure.

Thanks,
Gary

3316. Looking for an Article "One Tube All Bander"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-25 20:21:59 UTC
From: Ken <kslimmer@lycos.com>
Message-ID: <nq9jru4oe06dscqohe42s32qsn1vavm0n5@comcast>
Source record: 40528

There was an article about a "one tube all bander" in Electronics
Illustrated and Pratical Electronics back in the 70's. Its a 1 tube
Regen Receiver, would anyone happen to have a copy of that article?

Thanks

Ken

3317. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-25 23:15:48 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailnospamorama.com>
Message-ID: <%slu9.14757$Be4.13814@news.bellsouth.net>
Source record: 40534

One of the local (Northwest Tennessee) Radio Shacks still has one or two 10-packs in stock. He has some older components. He has been at that location for over 30 years. As a Radio Shack dealer and a TV/Radio repair shop.

--
73,
Chuck
KE4ETH

"rhaub" <rhaub@itc.com> wrote in message news:3DB4D228.45299CAA@itc.com...

SNIP

> You could still get them until the your local store was out
> of them (And considering how few packs they were selling they lasted a
> long time, I was able to buy the last pack at my local store almost a
> year after they stopped carrying them.) but after the stock was gone
> that was it, no more.

3318. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-25 23:29:01 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <apck3t$v31$1@slb6.atl.mindspring.net>
Source record: 40529

Jim:

Heh, heh:

[snip]
> Old does not mean bad, useless or obsolete.
>
> 73 de Jim, N2EY
[snip]

Well put!

Younger people often want to replace old with something new just because it's old, I always wonder, what are they really trying to do...?

If the new only works as well as the old, then the old is "proven technology" not "obsolete junk"?

--Peter K1PO
Indialantic By-the-Sea, FL.

"N2EY" <n2ey@aol.com> wrote in message news:20021025080916.00112.00000013@mb-fz.aol.com...
> In article <ap8lirfbp2@newsg1.svr.pol.co.uk>, "Leon Heller"
> <leon@heller123.freeserve.co.uk> writes:
>
> >"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
> >news:ap7mtb$g3o$3@sparta.btinternet.com...
> >> NOW AVAILABLE ** New Program "OSCTRACK.exe"
> >>
> >> Tracking of RF signal and local oscillator tuned circuits in superhet
> >radio
> >> receivers.
> >
> >Does anyone still design this type of radio?
> >
> Yes.
>

3319. Re: questions about desoldering system

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 00:37:30 UTC
From: averyfineman@aol.com
Message-ID: <20021025203730.04214.00000078@mb-cc.aol.com>
Source record: 40530

In article <3db6d716.7483145@netnews.attbi.com>, gaschafer@attbi.com (Gary Schafer) writes:

>Pace makes a compressed air vacuum desoldering unit. They are commonly
>used in plants.
>They are cheaper than the units that have individual vacuum pumps in
>them.
>They have all the same components in them that a regular Pace unit has
>except that instead of a
>vacuum pump there is the compressed air vacuum generator.

As an alternate for small workshop use at home, I'd suggest any sort of reciprocating vacuum source. A used airbrush compressor works fine, doesn't pull a great vacuum and is not overly loud.

One problem is trapping solder balls and other detrious picked up from the work. A plastic Skippy peanut butter jar is fairly sturdy as a garbage trap for mild vacuums. One between the work hose and the connection to the vacuum pump can have stiff plastic connections through the peanut butter jar lid (use plenty cement) and the jar itself can unscrew easily for cleaning.

Some jam and preserve jars have stiff, sturdy bodies as physically good as the Skippy peanut butter containers.

Leonard H. Anderson
retired (from regular hours) electronics engineer person

3320. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 00:37:31 UTC
From: averyfineman@aol.com
Message-ID: <20021025203731.04214.00000079@mb-cc.aol.com>
Source record: 40532

In article <3200347.0210251008.3893ec4e@posting.google.com>, k7itm@aol.com (Tom Bruhns) writes:

>kb9olm@yahoo.com (vlad) wrote in message
>news:<cba55a41.0210240737.82ede71@posting.google.com>...
>> Larry,
>>
>> I would suggest to try Linear Technology RF Power Detector IC,
>> LTC5505-1 or LTC5505-2 :
>... etc
>
>You might also check out Analog Devices' offerings for RF power and RF
>logarithmic amplifier-detectors.
>
>Also, further to the simple diode detector ideas...although I (and
>someone else) recommended "zero-bias detector diodes," you can for
>sure use other diodes. Germanium junction and point-contact diodes
>and Schottky signal diodes not specifically intended for zero-bias
>work are all candidates.

The Analog Devices logarithmic ICs would be excellent as 40 to 80 db dynamic range signal indicators. One could make a low-level power meter for CW signals reading out directly in dbm by adding a panel DVM coupled with an op-amp or two. Putting a FET source follower ahead of such a log amp chip would make it a relatively higher-Z probe for old-fashioned signal tracing. A lower frequency output 80 db range IC can be the heart of a spectrum analyzer for a very linear vertical-scale power level indication. It would seem prudent to invest once in slightly more monies and wind up with a lot more measurement capability.

The problem with any such device is just calibration. Without a known-level RF source to check it out, using one would be just guesswork or a something-nothing indicator.

Leonard H. Anderson
retired (from regular hours) electronics engineer person

3321. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 00:37:32 UTC
From: averyfineman@aol.com
Message-ID: <20021025203732.04214.00000080@mb-cc.aol.com>
Source record: 40531

In article <ap903t$79$1@helle.btinternet.com>, "Reg Edwards"
<g4fgq.regp@btinternet.com> writes:

>> Does anyone still design this type of radio?
>=======================
>Yeah, there hasn't been a TRF receiver made and sold for the last 60 years.
>Well before you were born.
>
>Supersonic Heterodyne receivers rule the roost. Some have two, even three
>intermediate frequencies.
>
>There's been a tendency lately to sell the RF preselector as an add-on extra
>which loses much of the operating convenience.
>
>In comparison with the complete version a receiver without a preselector is
>a load of junk.

Reg, you do some nice programs but I have to take some issue with
some of your statements quoted above.

To clarify, a "preselector" in a receiver is some form of bandpass
filtering ahead of the first mixer in a superheterodyne. Given a fairly
common loaded Q of about 40 in a 20m receiver's "preselector,"
the bandpass is roughly 355 KHz for a single-tuned circuit. A two
or three-resonator narrow fixed-tuned bandpass filter can cover a
full 400 KHz bandwidth without problem...and still present enough
skirt selectivity to handle all images as well as any gang-tuned
variable preselector.

Case in point: A Heath SB-310 SW/ham band HF receiver, a variant
of Heath's "SB" series ham receivers designed two decades ago.
The 1st LO is crystal controlled and 8.9 MHz higher than the
selected band's lower edge. The 1st IF is a bandpass filter of about
8.9 to 8.4 MHz. The 2nd LO is variable (the tuning) of 5.5 to 5.0
MHz, linear frequency change, with 2nd IF crystal filtered at about
3.4 MHz center. The image frequency of the 1st IF is 15.9 to 16.4
MHz on the 80m band, far outside any preselector tuned circuits'
response.

The original preselector system was a separate two-gang variable,
each section resonating at the same frequency. This was a PIB
to change after every band change. It was a simple matter to
simply fix-tune the capacitances in the preselector and tune each
band as a staggered-double according to Wallman's chart in the
old MIT Rad Lab books. Except for the 80m band, all other bands
were narrow enough to accept that slight modification without

problem; 80m band was centered on the 'phone portion instead of
the whole band. Far-from-resonance response was still as low as
it was originally (measured with an H-P 606 signal generator).

Ed Armstrong's original 1918 superheterodyne patent described
down-conversion to achieve a constant bandwidth via the IF. That
was fine in 1918 or 1920 (when that patent was granted) when
there were no crystal filters for the IF and crystals for LOs were
very expensive. But, UP-conversion in a first mixer is quite viable
to a higher IF with the first LO crystal controlled. The high 1st IF
can easily be made a fixed-tuned narrow bandpass filter and the
actual tuning done in a variable-frequency 2nd LO. No ganging
of tuning capacitors is required. All receiver tuning is done solely
by the 2nd LO frequency. All other tuning is physically fixed
except by 1st LO crystal and antenna-1st Mixer BPFs selected
for a particular band.

For non-superheterodyne receivers capable of either CW or SSB
reception, I'll point to the so-called "DC" aka "direct conversion"
aka "zero-IF" type. In that version the LO is at the received
frequency. One could make one with only the LO tuneable or
have it track the antenna-RF tuned circuits with no offset. No
tracking problems at all with equal-section tuning caps. :-)

There was considerable work done in Europe on "zero-IF"
receivers a quarter century ago as witness several articles in
RSGB's "Radio Communicaiton" magazine, particularly Pat
Hawker's columns.

Leonard H. Anderson
retired (from regular hours) electronics engineer person

3322. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 00:37:33 UTC
From: averyfineman@aol.com
Message-ID: <20021025203733.04214.00000081@mb-cc.aol.com>
Source record: 40533

In article <20021025080916.00112.00000013@mb-fz.aol.com>, n2ey@aol.com (N2EY)
writes:

>In article <ap8lirfbp2@newsg1.svr.pol.co.uk>, "Leon Heller"
><leon@heller123.freeserve.co.uk> writes:
>
>>"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
>>news:ap7mtb$g3o$3@sparta.btinternet.com...
>>> NOW AVAILABLE ** New Program "OSCTRACK.exe"
>>>
>>> Tracking of RF signal and local oscillator tuned circuits in superhet radio
>>> receivers.
>>
>>Does anyone still design this type of radio?
>>
>Yes.

Incorrect as of about a half century. The "two-point" or "three-point"
tracking problem-solution of single-band (generally the AM BC band)
receivers was required when ganged variable capacitors had equal
capacitance values per section or "gang." In the late 1940s the
common AM BC band receiver had been designed with two-gang
variables having unequal sections. Further, the capacitance change
of the smaller-capacity section (for the LO) could be cut to fit
the resonance frequency of the "antenna" circuit (at the desired
input tuning frequency). This was done until the 1980s and included
the tiny 2-gang plastic film insulated variable tuning capacitors of
Asian design and manufacture.

This "tracking problem" of the RF input versus the LO frequencies
really went away with up-conversion of the first mixer in relatively-
narrow band receivers to a high first IF. The first mixer (and RF
amplifier) could be fixed-tuned as bandpass filters...Q of inductors
at the common HF ham bands resulted in no need to gang-tune
the "preselector" ahead of the first mixer with any LO. Actual
tuning was done in the 2nd LO. The 1st LO could be crystal-
controlled on each band. The Collins Radio 51J series of
receivers did this in 1950 (US military R-388) and this was also
done with the same-era "390 series" military receivers. The
Heath SB series receivers did this a decade-plus later. All of
the modern (designed, built in last three decades) HF receivers
use this architecture scheme. It lends itself well to "reversing
the RF flow" for a transceiver's transmit signal path.

Anyone would be hard-pressed to find ANY receiver for LF to UHF on any market target area that used equal-section ganged tuning capacitors in the last three decades.

>Old does not mean bad, useless or obsolete.

Neither does such a comment mean it is in any way useful to anyone designing/modifying something in relatively-new radio tuning.

The "three-point tracking" problem seems to have hung in texts on radio design from the 1930s on into the 1960s. It is a surprisingly complex mathematical solution to a seemingly-simple problem of adding "padding and trimming" capacitors (series and shunt caps) to a variable section. One reason it is complex is that frequency of resonance is a function of the square-root of capacitance (with fixed inductors). Mathematics of it have long since been worked out and may be easily solved in a small computer program.

What results is an easy-to-use solution for a no-longer-existing application in production receiver design...or at least a very, very rare application in modification of an old boatanchor style receiver circa 1950 or earlier.

Leonard H. Anderson
retired (from regular work hours) electronics engineer person

3323. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 01:12:56 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2510022114040001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40535

In article <20021025203731.04214.00000079@mb-cc.aol.com>,
averyfineman@aol.com (Avery Fineman) wrote:

> In article <3200347.0210251008.3893ec4e@posting.google.com>,
k7itm@aol.com (Tom
> Bruhns) writes:
>
> >kb9olm@yahoo.com (vlad) wrote in message
> >news:<cba55a41.0210240737.82ede71@posting.google.com>...
> >> Larry,
> >>
> >> I would suggest to try Linear Technology RF Power Detector IC,
> >> LTC5505-1 or LTC5505-2 :
> >>... etc
> >>
> >You might also check out Analog Devices' offerings for RF power and RF
> >logarithmic amplifier-detectors.
> >
> >Also, further to the simple diode detector ideas...although I (and
> >someone else) recommended "zero-bias detector diodes," you can for
> >sure use other diodes. Germanium junction and point-contact diodes
> >and Schottky signal diodes not specifically intended for zero-bias
> >work are all candidates.
>
> The Analog Devices logarithmic ICs would be excellent as 40 to 80
> db dynamic range signal indicators. One could make a low-level
> power meter for CW signals reading out directly in dbm by adding a
> panel DVM coupled with an op-amp or two. Putting a FET source
> follower ahead of such a log amp chip would make it a relatively
> higher-Z probe for old-fashioned signal tracing. A lower frequency
> output 80 db range IC can be the heart of a spectrum analyzer for
> a very linear vertical-scale power level indication. It would seem
> prudent to invest once in slightly more monies and wind up with a
> lot more measurement capability.
>
> The problem with any such device is just calibration. Without a
> known-level RF source to check it out, using one would be just
> guesswork or a something-nothing indicator.
>
> Leonard H. Anderson
> retired (from regular hours) electronics engineer person

I'm in complete agreement with Leonard. This is why RF is a pain in the
Democrat. I would guess, however, that the chip may be hard to get if not
available at Digi-Key and is probably expensive. Oh well! This is a

hobby!

Steve WB4CZR
I wish I could retire, burned-out and still working, rf engineer

BTW, anyone know of an easy way to match a GaAs fet on S11 or S22 without
a stub tuner? S11&S22=0.9929 @ 179 deg, give me a break!

3324. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 01:59:16 UTC
From: JD <dyson@jdyson.com>
Message-ID: <Gjmu9.571$S4.106536@news.iquest.net>
Source record: 40536

"carltons" <motsteve@attbi.com> wrote in message
news:motsteve-2510022114040001@c-66-176-144-254.se.client2.attbi.com...
>
> Steve WB4CZR
> I wish I could retire, burned-out and still working, rf engineer
>
> BTW, anyone know of an easy way to match a GaAs fet on S11 or S22 without
> a stub tuner? S11&S22=0.9929 @ 179 deg, give me a break!
>
It all depends upon the FET (as you already know!!!) However, one trick
(depending upon the situation) is to use some negative feedback. It
is often better to match a FET for noise (on a front end), and you can
sometimes push the load on the input closer to the noise match.

If you are really going to try to match the transistor from 50ohms
to S11 of 0.99, you'll likely have a narrow bandwidth circuit. If
the transistor has too high/low an impedance on input or output
(after appropriate load, stabilization resistors, etc), then a little
bit of local negative feedback can sometimes help.

If all you want to do is to push the input/output impedance
downwards, you aren't worrying much about reverse isolation, and
you have some excess gain, you can use the
good ole' feedback resistor/capacitor between gate and drain
on a common source circuit.

The feedback resistor (capacitor for DC block) will load the input and
affect the noise figure, but the decrease in input impedance
will be significantly greater (because of gain) than the resistance.
So, the noise figure will be increased essentially as if the
resistor is in parallel with the input, yet the input impedance
will likely be decreased significantly more, so as to get a
better return loss.

If you are interested in wideband at high frequencies (UHF/SHF),
then a series resistor/inductor combo for the parallel feedback
will sometimes be helpful.

If you need to push the input impedance upwards (for UHF or
higher) so as to come closer to a noise match, then a small
amount of source inductance can be helpful. The source
inductance will tend to reflect as an increased resistance in
the effective input impedance, without alot of noise added
like a real series resistance. You should be careful
with adding too much source inductance, because even though
it can improve stability at low microwave (e.g. 1GHz), it can

sometimes make a circuit less stable at 5GHz or higher.

Now, if you need for your FET to see a higher impedance (for a better noise match at lower frequencies), then you might need to compromise a little. For wideband, balun type transformers can help (perhaps 1:4), and then help to push the transistor towards the right impedance for the output of the transformer: 200ohms or 300ohms. For narrowband, there are more choices.

There are all kinds of ways to maximize return loss, with some negative feedback, transmission line techniques, and other schemes. It can sometimes be trivial, or multiple techniques can be used.

John

3325. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 02:41:30 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2510022242380001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40537

In article <Gjmu9.571$S4.106536@news.iquest.net>, "JD" <dyson@jdyson.com> wrote:

> "carltons" <motsteve@attbi.com> wrote in message
> news:motsteve-2510022114040001@c-66-176-144-254.se.client2.attbi.com...
> >
> > Steve WB4CZR
> > I wish I could retire, burned-out and still working, rf engineer
> >
> > BTW, anyone know of an easy way to match a GaAs fet on S11 or S22 without
> > a stub tuner? S11&S22=0.9929 @ 179 deg, give me a break!
> >
> It all depends upon the FET (as you already know!!!) However, one trick
> (depending upon the situation) is to use some negative feedback. It
> is often better to match a FET for noise (on a front end), and you can
> sometimes push the load on the input closer to the noise match.
>
> If you are really going to try to match the transistor from 50ohms
> to S11 of 0.99, you'll likely have a narrow bandwidth circuit. If
> the transistor has too high/low an impedance on input or output
> (after appropriate load, stabilization resistors, etc), then a little
> bit of local negative feedback can sometimes help.
>
> If all you want to do is to push the input/output impedance
> downwards, you aren't worrying much about reverse isolation, and
> you have some excess gain, you can use the
> good ole' feedback resistor/capacitor between gate and drain
> on a common source circuit.
>
> The feedback resistor (capacitor for DC block) will load the input and
> affect the noise figure, but the decrease in input impedance
> will be significantly greater (because of gain) than the resistance.
> So, the noise figure will be increased essentially as if the
> resistor is in parallel with the input, yet the input impedance
> will likely be decreased significantly more, so as to get a
> better return loss.
>
> If you are interested in wideband at high frequencies (UHF/SHF),
> then a series resistor/inductor combo for the parallel feedback
> will sometimes be helpful.
>
> If you need to push the input impedance upwards (for UHF or
> higher) so as to come closer to a noise match, then a small
> amount of source inductance can be helpful. The source
> inductance will tend to reflect as an increased resistance in

> the effective input impedance, without alot of noise added
> like a real series resistance. You should be careful
> with adding too much source inductance, because even though
> it can improve stability at low microwave (e.g. 1GHz), it can
> sometimes make a circuit less stable at 5GHz or higher.
>
> Now, if you need for your FET to see a higher impedance
> (for a better noise match at lower frequencies), then you
> might need to compromise a little. For wideband, balun
> type transformers can help (perhaps 1:4), and then
> help to push the transistor towards the right impedance
> for the output of the transformer: 200ohms or 300ohms.
> For narrowband, there are more choices.
>
> There are all kinds of ways to maximize return loss, with
> some negative feedback, transmission line techniques,
> and other schemes. It can sometimes be trivial, or multiple
> techniques can be used.
>
> John

Thanks John. I guess I should have qualified the GaAs FET part as being a power part for up to 37 dbm. It is a whole different ball game and not in line with what I implied. Of course we have 4 fempto meters of room to add zero components to, in order to match an infinite loaded Q. I think I'll use a 2C39 tube and use cavities. :-). The only thing that could make this worse is if they required me to do it with a supply of 1V and a drain of 1 uA. Did you ever try to explain the laws of physics to a business major? I wish that I had stayed an astronomy major. I'd be popping tabs on my beers atop Kitt peak or in Hawaii running away from the erupting volancoe instead of getting ulsers from RF design. I'm burned out! I want to dig up Smith, slap his face and put him back in the ground for what he has done to me. (and I'm considered normal for an rf engineer, by many experts :-))

Steve WB4CZR TGIF

Steve

3326. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 03:28:24 UTC
From: JD <dyson@jdyson.com>
Message-ID: <eDnu9.576$S4.107117@news.iquest.net>
Source record: 40538

"carltons" <motsteve@attbi.com> wrote in message
news:motsteve-2510022242380001@c-66-176-144-254.se.client2.attbi.com...
> In article <Gjmu9.571$S4.106536@news.iquest.net>, "JD" <dyson@jdyson.com> wrote:
>
> > "carltons" <motsteve@attbi.com> wrote in message
> > news:motsteve-2510022114040001@c-66-176-144-254.se.client2.attbi.com...
> > >
> > > Steve WB4CZR
> > > I wish I could retire, burned-out and still working, rf engineer
> > >
> > > BTW, anyone know of an easy way to match a GaAs fet on S11 or S22 without
> > > a stub tuner? S11&S22=0.9929 @ 179 deg, give me a break!
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> > It all depends upon the FET (as you already know!!!) However, one trick
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> > sometimes push the load on the input closer to the noise match.
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> > (after appropriate load, stabilization resistors, etc), then a little
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> > good ole' feedback resistor/capacitor between gate and drain
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> > will likely be decreased significantly more, so as to get a
> > better return loss.
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> > then a series resistor/inductor combo for the parallel feedback
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> >
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> > higher) so as to come closer to a noise match, then a small

> > amount of source inductance can be helpful. The source
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> > with adding too much source inductance, because even though
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> > sometimes make a circuit less stable at 5GHz or higher.
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> > (for a better noise match at lower frequencies), then you
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> > type transformers can help (perhaps 1:4), and then
> > help to push the transistor towards the right impedance
> > for the output of the transformer: 200ohms or 300ohms.
> > For narrowband, there are more choices.
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> > There are all kinds of ways to maximize return loss, with
> > some negative feedback, transmission line techniques,
> > and other schemes. It can sometimes be trivial, or multiple
> > techniques can be used.
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> > John
>
> Thanks John. I guess I should have qualified the GaAs FET part as being a
> power part for up to 37 dbm. It is a whole different ball game and not in
> line with what I implied. Of course we have 4 fempto meters of room to
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> I'll use a 2C39 tube and use cavities. :-). The only thing that could
> make this worse is if they required me to do it with a supply of 1V and a
> drain of 1 uA. Did you ever try to explain the laws of physics to a
> business major? I wish that I had stayed an astronomy major. I'd be
> popping tabs on my beers atop Kitt peak or in Hawaii running away from the
> erupting volancoe instead of getting ulsers from RF design. I'm burned
> out! I want to dig up Smith, slap his face and put him back in the ground
> for what he has done to me. (and I'm considered normal for an rf engineer,
> by many experts :-))
>
I only do this stuff for a hobby, but my own bugaboo are the wierd things
associated with analytical equations and the wierd constraints that make
wideband matching work. The wideband matching thing is amazing, and
the various concepts that intimately connect the real and imaginary
parts of a real world impedance are also amazing. I have been an EE
and CompSci person for many years (25+), and when reinvigorating
my EE hobby (playing with low-UHF/UHF stuff), and learning about the
wideband matching stuff, it has been very surprising. I must have forgotten
alot since school!!!

The good thing is that this stuff is one of my many hobbies, where I
become MUCH TOO deeply involved, but when these kinds of hobbies
turn into a real world job, then the fun goes away. So, I do understand

the frustration of doing work that one theoretically enjoys, but doing
it for a living quickly becomes painful and unpleasant. I let my FreeBSD
hobby turn into a job, which made me some money, but caused me
to loose the enjoyment of my hobby :-(.

In a way, I'd enjoy the kind of work that you apparently do, but having
to actually produce the resulting work, with almost impossible
constraints, would quickly ruin the fun. Of course, in my case, it makes
the big assumption that I'd have the skills to do the work in the real world, and
there is a big difference between a motivated hobby and a difficult
and overly challenging job.

Anyway, sounds like you really need to enjoy your weekend!!! :-).

John

John

3327. Wanted: GU-43B socket and chimney

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 05:40:11 UTC
From: Henry Flores <hdflores@*REMOVE*worldnet.att.net>
Message-ID: <%Upu9.26473$Mb3.1044145@bgtnsc04-news.ops.worldnet.att.net>
Source record: 40539

I am looking for one or two GU-43B socket and chimney. Send condition and price delivered to Reno,Nevada US

Henry
KD6UW

3328. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 08:31:30 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <dndkruk9ahj61h0jp15a8c929jjmt8ujsb@4ax.com>
Source record: 40540

On 25 Oct 2002 12:09:16 GMT, n2ey@aol.com (N2EY) wrote:

>In article <ap8lirfbp2@newsg1.svr.pol.co.uk>, "Leon Heller"
><leon@heller123.freeserve.co.uk> writes:
>
>>"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
>>news:ap7mtb$g3o$3@sparta.btinternet.com...
>>> NOW AVAILABLE ** New Program "OSCTRACK.exe"
>>>
>>> Tracking of RF signal and local oscillator tuned circuits in superhet
>>radio
>>> receivers.
>>
>>Does anyone still design this type of radio?
>>
>Yes.
>
>Old does not mean bad, useless or obsolete.

While a TRF is still nice for receiving broadcasts in the LF broadcast band and may have been useful for receiving broadcasts in the sparsely populated MF band in the old days, a loaded Q from 40 to 100 means a (-3 dB bandwidth) of 15 .. 40 kHz at the upper end of the MF broadcast band. This makes such receivers practically useless today, with a lot of high power transmitters at every 9 kHz.

Regarding old VHF/UHF receiver circuits, most of them are more or less useless today, since most of them were designed to minimise the noise figure (which was still very bad according to current standards) at all costs and thus, the strong signal handling completely useless for the situation today, with a lot of services in VHF/UHF.

I was a bit worried when a facsimile of a radio book originally published around 1950 was republished last year. In those old days there was very little activity above 30 MHz (the FM broadcasts started around 1952 and TV in 1955 over here) so the harmonic suppression of these HF transmitters were completely inadequate according to current standards. If someone would build a transmitter according to these designs today, it would create a large number of interference complaints.

When building something from an old design, you really have to consider, is the environment the same as when the circuit was initially designed.

Paul OH3LWR

3329. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 11:05:13 UTC
From: "Phil T." <xyzphil@vaxxine.com>
Message-ID: <3DBA76E9.47A2EB8D@vaxxine.com>
Source record: 40541

Radio Shack in Canada is definitely phasing out all the small electronic discrete components. Bit by bit this stuff goes on sale and when it is gone, it does not get replaced. I bought three packs of 1N34's from RS about 6 months ago - 99 cents for a package of 10 (or maybe it was 20). The guy said they won't be getting anymore in. Same thing with packs of resistors, capacitors, etc.

Phil
--
Phil (VA3UX) REMOVE " xyz" from my e-mail address for direct reply

3330. Re: Good Z-Match ATU Circuit diagram

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 13:16:46 UTC
From: "Sverre Holm (LA3ZA)" <0junk4me@qsl.net>
Message-ID: <2Bwu9.75$Mw2.2457@news4.ulv.nextra.no>
Source record: 40542

The NorCal BLT Tuner works fine. I built it and made a small change to extend its tuning range, in that way it would tune my 75 m horizontal loop on all bands from 80m-10m including WARC.

See my homebrew page on http://www.qsl.net/la3za/Homebrew.html and follow link about antenna tuner from there.

GL & 73

Sverre, LA3ZA
www.qsl.net/la3za

"Mick Gorman" <mgorman@eircom.net> wrote in message news:rtYt9.23951$zX3.63689@news.indigo.ie...
> Would anyone have a circuit diagram for a Z Match ATU for the Amateur bands
> Regards EI4JL
> mgorman@eircom.net
>
>

3331. Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 15:17:21 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2610021118300001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40543

I started at age 13 with an interest in ham radio. At that time, the frequency to be on was 3.5 Mc (that's right, megacycles). After many years of going to schools and being a technician and then an engineer, I'm now doing work at S Band (2400 MHz) and using devices with S11's and S22's (input and output reflection coefficients) which are shorts,basically. The design constraints are no money, no room and no power supply voltage with no current drain. I like challenge, but my name is Steve Carlton and not Don Quixote. I'm really good with rf having a lot of patience and magic fingers for spurs, desense, etc., but I wish I could get the hay out of Dodge. Anyone got a cure for the rf blues? Before anyone tells me to get into antenna design, I have to do that also with only a HP8410 and a few N adapters. BTW, anyone have a cheap rf anechoic chamber out there that's compatible with 2.4GHz? How about a cheap two or three stub tuner for 12 cm?

Steve WB4CZR

3332. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 15:32:33 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2610021133430001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40544

In article <3DBA76E9.47A2EB8D@vaxxine.com>, "Phil T."
<xyzphil@vaxxine.com> wrote:

> Radio Shack in Canada is definitely phasing out all the small electronic
> discrete components. Bit by bit this stuff goes on sale and when it is
gone, it
> does not get replaced. I bought three packs of 1N34's from RS about 6 months
> ago - 99 cents for a package of 10 (or maybe it was 20). The guy said they
> won't be getting anymore in. Same thing with packs of resistors, capacitors,
> etc.
>
> Phil
> --
> Phil (VA3UX) REMOVE " xyz" from my e-mail address for direct reply

I'm probably throwing another wrench into the mechanism here, but I still
miss Allied Electronics before they had Radio Shack. Their catalogs were
gold when I was a kid. They had 1N34's and crystal radio sets in them
using the old xtal and cat whisker detector along with a single ear "can"
headphone. My first radio was the Space Spanner under the Knight Kit
banner. It was a real dog, but I thought it was a Cadillac at the time.
With all the fancy stuff now available, I still feel myself priviledged
over the kids now to have had that opportunity then. It surely brought me
joy even with no money in my pocket to buy an S line or other impossible
dream.

My great memory: 100 N. Western Avenue; Chicago, Ill.

I need to Baker Act myself. :-)

Steve WB4CZR

3333. Re: Good Z-Match ATU Circuit diagram

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 15:44:04 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2610021143320001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40545

In article <2Bwu9.75$Mw2.2457@news4.ulv.nextra.no>, "Sverre Holm
\(LA3ZA\)" <0junk4me@qsl.net> wrote:

> The NorCal BLT Tuner works fine. I built it and made a small change to
> extend its tuning range, in that way it would tune my 75 m horizontal loop
> on all bands from 80m-10m including WARC.
>
> See my homebrew page on http://www.qsl.net/la3za/Homebrew.html and follow
> link about antenna tuner from there.
>
> GL & 73
>
> Sverre, LA3ZA
> www.qsl.net/la3za
>
>
> "Mick Gorman" <mgorman@eircom.net> wrote in message
> news:rtYt9.23951$zX3.63689@news.indigo.ie...
> > Would anyone have a circuit diagram for a Z Match ATU for the Amateur
> bands
> > > Regards EI4JL
> > > mgorman@eircom.net
> > >
> > >

One question: When the final values are set, does the tuner circuit
arrive at an equivalent L network or is it still a pi or T with
significant values of C in the input and output shunts for the pi and a
low value of C for each series C for the T? This addresses the efficiency
of match. An L match will give you minimum circulating currents. Do some
simulations if curious about this.

Steve WB4CZR

3334. Re: Good Z-Match ATU Circuit diagram

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 15:44:05 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2610021145040001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40546

In article <2Bwu9.75$Mw2.2457@news4.ulv.nextra.no>, "Sverre Holm
\(LA3ZA\)" <0junk4me@qsl.net> wrote:

> The NorCal BLT Tuner works fine. I built it and made a small change to
> extend its tuning range, in that way it would tune my 75 m horizontal loop
> on all bands from 80m-10m including WARC.
>
> See my homebrew page on http://www.qsl.net/la3za/Homebrew.html and follow
> link about antenna tuner from there.
>
> GL & 73
>
> Sverre, LA3ZA
> www.qsl.net/la3za
>
>
> "Mick Gorman" <mgorman@eircom.net> wrote in message
> news:rtYt9.23951$zX3.63689@news.indigo.ie...
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> bands
> > > Regards EI4JL
> > > mgorman@eircom.net
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> > >

One question: When the final values are set, does the tuner circuit
arrive at an equivalent L network or is it still a pi or T with
significant values of C in the input and output shunts for the pi and a
low value of C for each series C for the T? This addresses the efficiency
of match. An L match will give you minimum circulating currents. Do some
simulations if curious about this.

Steve WB4CZR

3335. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 16:21:08 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3DBAC0F4.31706042@clifto.com>
Source record: 40397

Michael Black wrote:
> With that in mind, during some recent circuit board stripping,
> I pulled off some germanium diodes. Certainly those thirty year old AM/FM
> radio boards (they were used in the am and fm detectors, but also in the
> FM IF strip, presumably for limiting purposes) had germanium diodes. Cost
> and age help to define them. But I found some diodes of the same sort of
> package in some older cellphones (and I thought something else). The
> latter may not be germanium, their presence does seem odd, but they did
> have a lower voltage drop.

One of the very earliest UHF semiconductor devices I remember seeing was
a germanium UHF diode (1N23?) used in television UHF tuners as a mixer.

--
It is better to light just one little candle than to curse the darkness.
If everyone lit just one little candle, the EPA would outlaw candles.

3336. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 18:08:42 UTC
From: n2ey@aol.com
Message-ID: <20021026140842.27509.00000055@mb-cb.aol.com>
Source record: 40399

In article <apck3t$v31$1@slb6.atl.mindspring.net>, "Peter O. Brackett"
<ab4bc@ix.netcom.com> writes:

>Jim:
>
>Heh, heh:
>
>[snip]
>> Old does not mean bad, useless or obsolete.
>>
>> 73 de Jim, N2EY
>[snip]
>
>Well put!

Thanks!
>
>Younger people often want to replace old with something new just because
>it's old, I always wonder, what are they really trying to do...?

It's not just younger people, either. Some people, of all ages, push "new" as
equivalent to "better". Often they do this without proof, or without
considering all of the measures of what makes something "better".

One motivation for pushing new things is to sell the new things, whether people
need new ones or not.

>If the new only works as well as the old, then the old is "proven
>technology" not "obsolete junk"?

Exactly. Sometimes newer really is better, sometimes it's worse. Often there
are unforeseen consequences to new things - and sometimes unforeseen benefits.

73 de Jim, N2EY

3337. any Wavetek 3001 gurus??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 19:33:36 UTC
From: lagagnon@fakesprint.ca
Message-ID: <3dbaede6.2676132@news.sprint.ca>
Source record: 40400

I have a Wavetek 3001 signal generator with the following symptoms:

- every 40 MHz, for about 8-9 MHz the M34 PLL module unlocks (1-8MHz, 40-49, 80-89,....etc). All other frequency outputs are very good and lock solidly with a good waveform.

- this PLL unlock condition is not associated with the Accuracy unlock light blinking on the front panel, however it can be seen that M34 is unlocked by putting a scope on the Video test point. This 10 MHz waveform is distorted and appears to have a lot of harmonics.

- the M34 leveler voltage does not increase as would be expected, but the Phase Detector Output voltage to the M9W wide oscillator is much higher than normal (>5v, should normally be around 1v).

I have removed M34 and done the basic voltage checks as per the troubleshooting guide and all seems OK. I suspect that perhaps because the leveler circuit and unlock circuit are not sensing a true unlock that the switchable 10/20MHz filter is not being switched in to lock on the correct mixed frequency.

I hope someone out there with a lot of Wavetek 3001 experience might have experienced the same or have some ideas??? Any assistance greatly appreciated.

Larry Gagnon VE6MK

****
to send direct email remove "fake" from address

3338. Program BOTLOAD

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 20:22:41 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <apetihbjv4@knossos.btinternet.com>
Source record: 40401

**NOW AVAILABLE **
Program BOTLOAD2.exe"

An improved version of "Botload" which is now no longer available. This simple program calculates base feedpoint impedance, R+jX, of any vertical antenna height and diameter. Also value of inductive or capacitive bottom loading component. Also, for given length and diameter of loading coil, the number of turns, winding pitch and wire-gauge.

Vary antenna height from keyboard to find heights at which feedpoint resistance matches 50 or 75-ohm coaxial feedlines. Or any other particular Zo. Metric and Imperial dimensions displayed.

Download BOTLOAD in a few seconds. Run immediately.

========================
Regards from Reg G4FGQ
Free Radio Design Software
Go to http://www.g4fgq.com
========================

3339. Re: Looking for an Article "One Tube All Bander"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 21:00:14 UTC
From: Eskay <Nospamve3jua@rac.ca>
Message-ID: <3DBB025E.4EF0B623@rac.ca>
Source record: 40398

I found one article on a tube type receiver EI Sept 1972, (2 pages)..
It is a 3 band design using a battery fed 1U4 tube, (filament 1.5V DC)..
I could copy and E-mail it to you..
Eskay ve3jua@rac.ca

Ken wrote:

> There was an article about a "one tube all bander" in Electronics
> Illustrated and Pratical Electronics back in the 70's. Its a 1 tube
> Regen Receiver, would anyone happen to have a copy of that article?
>
> Thanks
>
> Ken

3340. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 21:47:48 UTC
From: Wayne <mookie56@hotmail.com>
Message-ID: <rUDu9.2972$ab3.1884@fe02>
Source record: 40402

carltons wrote:

> I started at age 13 with an interest in ham radio. At that time, the
> frequency to be on was 3.5 Mc (that's right, megacycles). After many
> years of going to schools and being a technician and then an engineer, I'm
> now doing work at S Band (2400 MHz) and using devices with S11's and S22's
> (input and output reflection coefficients) which are shorts,basically.
> The design constraints are no money, no room and no power supply voltage
> with no current drain. I like challenge, but my name is Steve Carlton and
> not Don Quixote. I'm really good with rf having a lot of patience and
> magic fingers for spurs, desense, etc., but I wish I could get the hay out
> of Dodge. Anyone got a cure for the rf blues? Before anyone tells me to
> get into antenna design, I have to do that also with only a HP8410 and a
> few N adapters. BTW, anyone have a cheap rf anechoic chamber out there
> that's compatible with 2.4GHz? How about a cheap two or three stub tuner
> for 12 cm?
>
>
> Steve WB4CZR

I don't know...maybe a cyanide capsule? If that is not appealing, then I would always vote for EXTENDED ISLAND VACATION. A real island too, not one of those Caribbean Islands but something out in the middle of the Pacific Ocean. One with no lights, no phones, no motor cars... Would be very relaxing not to have to deal with anything for a month or so.

Wayne

3341. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 22:08:49 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0210261408.119f64fc@posting.google.com>
Source record: 40403

"Phil T." <xyzphil@vaxxine.com> wrote in message news:<3DBA76E9.47A2EB8D@vaxxine.com>...
> Radio Shack in Canada is definitely phasing out all the small electronic
> discrete components. Bit by bit this stuff goes on sale and when it is gone, it
> does not get replaced. I bought three packs of 1N34's from RS about 6 months
> ago - 99 cents for a package of 10 (or maybe it was 20). The guy said they
> won't be getting anymore in. Same thing with packs of resistors, capacitors,
> etc.
>
> Phil

The store nearest to me here in Montreal was selling off the parts two
years ago, in the summer. (Actually, I'd picked up some nice boxes,
raw speakers, and other parts maybe six months before that, but at the
time it just seemed like the usual clearing out of old stock. The
kind that always made the parts more reasonable than the regular
Radio Shack price.) It was a "buy 1, get 2 free" offer (if they
weren't the same item, you'd pay for the highest priced one) and
I seemed to stumble on it mid-sale, meaning I missed some of
the items I had been tempted by at full price. I didn't see
a similar sale (or any announcement) at the other stores, but
at some point, there weren't parts at the other stores either.

I've always been a little puzzled by it, since there was no
big announcement of a clearance, and at the time it almost
seemed as if it was one or more stores making their own decision
to dump the parts.

Except for a couple of times when I've been stuck, I've never routinely
bought parts at Radio Shack. It's always been way too expensive, and
there are local stores here that I can get most of the same sort of parts.
The exceptions were a few items each year that Radio Shack had decided
to carry, and it was just easier to get them there. And when they
cleared out old items, and you could pick up those neat ICs and things
for a minimal price.

But nevertheless, it is a shame. Considering what it often costs
to buy mail order (not so much the individual price, but with shipping
and a minimum order, it often requires a chunk of money, and planning)
sometimes it was just worth paying a higher price on one component
for the sake of being able to buy it nearby.

Michael VE2BVW

3342. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 22:09:05 UTC
From: n2ey@aol.com
Message-ID: <20021026180905.04214.00000115@mb-cc.aol.com>
Source record: 40404

In article <dndkruk9ahj61h0jp15a8c929jjmt8ujsb@4ax.com>, Paul Keinanen
<keinanen@sci.fi> writes:

>On 25 Oct 2002 12:09:16 GMT, n2ey@aol.com (N2EY) wrote:
>
>>In article <ap8lirfbp2@newsg1.svr.pol.co.uk>, "Leon Heller"
>><leon@heller123.freeserve.co.uk> writes:
>>
>>>"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
>>>news:ap7mtb$g3o$3@sparta.btinternet.com...
>>>> NOW AVAILABLE ** New Program "OSCTRACK.exe"
>>>>
>>>> Tracking of RF signal and local oscillator tuned circuits in superhet
>>>radio
>>>> receivers.
>>>
>>>Does anyone still design this type of radio?
>>>
>>Yes.
>>
>>Old does not mean bad, useless or obsolete.
>
>While a TRF is still nice for receiving broadcasts in the LF broadcast
>band and may have been useful for receiving broadcasts in the sparsely
>populated MF band in the old days, a loaded Q from 40 to 100 means a
>(-3 dB bandwidth) of 15 .. 40 kHz at the upper end of the MF broadcast
>band. This makes such receivers practically useless today, with a lot
>of high power transmitters at every 9 kHz.

I'm not sure what you're point is, Paul. OSCTRACK is for superhets,
specifically those tuned by ganged variable capacitors. Such superhet receivers
are still being designed today - almost exclusively by amateurs. (This is
rec.radio.amateur.homebrew, of course).

Perhaps your point is that old TRF AM BC receivers are no longer very useful
for reception today, compared to superhets, but that's another issue.
>
>Regarding old VHF/UHF receiver circuits, most of them are more or less
>useless today, since most of them were designed to minimise the noise
>figure (which was still very bad according to current standards) at
>all costs and thus, the strong signal handling completely useless for
>the situation today, with a lot of services in VHF/UHF.

All depends on the situation. In many parts of the USA, such equipment would
still be usable.

But even if that equipment is truly "useless" today, the reason is not because the equipment and its design concepts are old.

Is a simple "crystal" receiver useless today?
>
>I was a bit worried when a facsimile of a radio book originally
>published around 1950 was republished last year.

What book is this?

>In those old days
>there was very little activity above 30 MHz (the FM broadcasts started
>around 1952 and TV in 1955 over here) so the harmonic suppression of
>these HF transmitters were completely inadequate according to current
>standards. If someone would build a transmitter according to these
>designs today, it would create a large number of interference
>complaints.

Quite possible, but not guaranteed. Many old designs had surprisingly clean signals, because the amateur bands are not perfectly related harmonically. Amateur transmitters with high harmonic output would interfere with other services
using HF.
>
>When building something from an old design, you really have to
>consider, is the environment the same as when the circuit was
>initially designed.

I agree 100%. And that is true of designs that are much newer than 1950.

For example, many solid-state HF receiver designs suffer from relatively poor dynamic range performance compared to their vacuum-tube counterparts. This was particularly true of early solid-state designs, and designs where most of the emphasis was placed on certain factors (sensitivity, simplicity, compactness) while others were deemphasized.

As another example, many designs using synthesizers suffer from poor phase-noise performance compared to older designs using LC and crystal oscillators.

End result is that under modern-day HF amateur receiving conditions, some older designs will outperform newer designs of equivalent cost and complexity.

Here's an example:

http://www.arrl.org/tis/info/pdf/020910qex036.pdf

Note that some of the best performers do not use frequency synthesis or up-conversion. In fact, the modified R-4C that appears to be the overall champion
is a design more than 30 years old, using vacuum tubes (!) for most of the stages. The Elecraft K2 is a low-cost single conversion design, yet it compares well with designs costing several times as much.

73 de Jim, N2EY

3343. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 22:21:20 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <urm5b04vlbj387@corp.supernews.com>
Source record: 40405

No money, no room, no power consumption. . . is that what's troublin' you, Bunky? (Where's the Old Philosopher when we need him?) You don't have RF burnout, you've got engineering burnout. Creating something that's *good enough*, given a set of mutually exclusive requirements, is the name of the game. The sign over my desk summarizes it: "Anyone can design a bridge that will stand up. It takes an engineer to design a bridge that will barely stand up."

What I'd do if I were you is to take a long look at the various industries that have need for RF engineers. They run the gamut from ones making radio controlled toys and garage door openers, to smart munitions, satellite and space communications, and test equipment. Design criteria vary a huge amount, and you might find a situation that suits you better. For example, I've worked at a small company that made essentially custom test units. The instrument sold was often hand built. For these, it was better for me to use a $20 part if it would save 15 minutes of design time over using a $5 part. I've also designed the RF section of a motion detector to be mass produced at very low cost. There, it was worthwhile to spend an extra week or two to knock a dollar off the cost. And I've done design for very high speed (up to 50 GHz bandwidth, around 10 ps risetime) oscilloscope sampling systems, where if we could figure out any way to do it all (selected or specially built components, highly skilled assemblers, custom production equipment, whatever), it was ok -- customers would pay if they could get it at all. Each was a challenge -- it's always a challenge, otherwise someone else will do it cheaper or quicker or better and get the business -- but the challenges were very different. Look around, and you might find a set of challenges that suits you better than the ones you're currently being dealt.

RF skills also position you well for EMC work, if that's your bag. I've found, though, that it's often hard to win at that game, since so many companies leave EMC considerations to the very last, when it's impossible to fix the problems except with klugy and expensive methods. There are a few enlightened companies that have the sense to incorporate good EMC practice from the very beginning of a design, and one of those might not be too bad to work for in the EMC field. I've done some consulting in EMC, so was able to turn down the jobs that didn't have much chance of meeting the companies' unrealistic expectations.

Consulting is a good way to go. Once you've built up enough business to keep your stomach full, you can turn down jobs that don't suit you for one reason or another. And there are a lot of companies whose main product isn't RF based so who don't have good in-house RF talent. But watch out! Once you've escaped the cube farm, you'll never want to go back!

Roy Lewallen, W7EL
-- an escapee from the Dilbert cartoon

carltons wrote:
> I started at age 13 with an interest in ham radio. At that time, the
> frequency to be on was 3.5 Mc (that's right, megacycles). After many
> years of going to schools and being a technician and then an engineer, I'm
> now doing work at S Band (2400 MHz) and using devices with S11's and S22's
> (input and output reflection coefficients) which are shorts,basically.
> The design constraints are no money, no room and no power supply voltage
> with no current drain. I like challenge, but my name is Steve Carlton and
> not Don Quixote. I'm really good with rf having a lot of patience and
> magic fingers for spurs, desense, etc., but I wish I could get the hay out
> of Dodge. Anyone got a cure for the rf blues? Before anyone tells me to
> get into antenna design, I have to do that also with only a HP8410 and a
> few N adapters. BTW, anyone have a cheap rf anechoic chamber out there
> that's compatible with 2.4GHz? How about a cheap two or three stub tuner
> for 12 cm?
>
>
> Steve WB4CZR

3344. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 23:44:28 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2610021945390001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40406

In article <urm5b04vlbj387@corp.supernews.com>, Roy Lewallen
<w7el@eznec.com> wrote:

> No money, no room, no power consumption. . . is that what's troublin'
> you, Bunky? (Where's the Old Philosopher when we need him?) You don't
> have RF burnout, you've got engineering burnout. Creating something
> that's *good enough*, given a set of mutually exclusive requirements, is
> the name of the game. The sign over my desk summarizes it: "Anyone can
> design a bridge that will stand up. It takes an engineer to design a
> bridge that will barely stand up."
>
> What I'd do if I were you is to take a long look at the various
> industries that have need for RF engineers. -house RF talent. But
> watch out! Once you've escaped the cube farm, you'll never want to go back!
>
> Roy Lewallen, W7EL
> -- an escapee from the Dilbert cartoon
>
> carltons wrote:
> > I started at age 13 with an interest in ham radio. At that time, the
> > frequency to be on was 3.5 Mc (that's right, megacycles). After many
> > years of going to schools and being a technician and then an engineer, I'm
> > now doing work at S Band (2400 MHz) and using devices with S11's and S22's
> > (input and output reflection coefficients) which are shorts,basically.
> > The design constraints are no money, no room and no power supply voltage
> > with no current drain. I like challenge, but my name is Steve Carlton and
> > not Don Quixote. I'm really good with rf having a lot of patience and
> > magic fingers for spurs, desense, etc., but I wish I could get the hay out
> > of Dodge. Anyone got a cure for the rf blues? Before anyone tells me to
> > get into antenna design, I have to do that also with only a HP8410 and a
> > few N adapters. BTW, anyone have a cheap rf anechoic chamber out there
> > that's compatible with 2.4GHz? How about a cheap two or three stub tuner
> > for 12 cm?
> >
> >
> > Steve WB4CZR

Thanks for the encouragement, Roy. There is a need for rf guys like me,
but not apparently in my age group. The US is changing now and is looking
to putting all its work outside in the "Global" environment, whatever that
is. I guess it means that some young guy in Sri Lanka will design a
circuit and ship it to wherever, where it'll be developed into something
shipable and then that's that. Why would someone need experience? You
find someone young and hungry, give him temporary work, get the job done,
and then go on to find the next one. No benefits, low overhead, no

problem. There is a minor glitch to all of this: How do you get advanced systems and new technology? Answer: don't worry, we'll (CEO's) be retired and won't have to worry. Don't believe me? Look around! It is happening right now.

Steve WB4CZR

3345. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-26 23:49:11 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2610021950210001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40407

In article <3DBAC0F4.31706042@clifto.com>, "Clifton T. Sharp Jr." <clifto@clifto.com> wrote:

> Michael Black wrote:
> > With that in mind, during some recent circuit board stripping,
> > I pulled off some germanium diodes. Certainly those thirty year old AM/FM
> > radio boards (they were used in the am and fm detectors, but also in the
> > FM IF strip, presumably for limiting purposes) had germanium diodes. Cost
> > and age help to define them. But I found some diodes of the same sort of
> > package in some older cellphones (and I thought something else). The
> > latter may not be germanium, their presence does seem odd, but they did
> > have a lower voltage drop.
>
> One of the very earliest UHF semiconductor devices I remember seeing was
> a germanium UHF diode (1N23?) used in television UHF tuners as a mixer.

Hi MIke,

It was probably a 1N21 which was used in all radars since the Flintstones.

Motto of a radar technician: First check the crystal current.

Steve WB4CZR

3346. Re: any Wavetek 3001 gurus??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 00:11:03 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <apfaup$m3q$1@slb4.atl.mindspring.net>
Source record: 40408

I had some 'similar' problems with my wavetek 3000 and it turned out to be the electrolytic capacitors.

As far as I could tell, they had dried out and started to leak current, enough to disturb the circuit module that was failing.

I don't know but you might have a similar problem, the 3001 is also a fairly old model and the capacitors might need replacing in the module that is showing the fault.

Jim Pennell
N6BIU

3347. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 00:39:18 UTC
From: novatech@eskimo.com
Message-ID: <apfcjm$4bv$1@eskinews.eskimo.com>
Source record: 40409

n2ey@aol.com (N2EY) writes:

>In article <ap8lirfbp2@newsg1.svr.pol.co.uk>, "Leon Heller"
><leon@heller123.freeserve.co.uk> writes:

>>"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
>>news:ap7mtb$g3o$3@sparta.btinternet.com...
>>> NOW AVAILABLE ** New Program "OSCTRACK.exe"
>>>
>>> Tracking of RF signal and local oscillator tuned circuits in superhet
>>radio
>>> receivers.
>>
>>Does anyone still design this type of radio?
>>
>Yes.

>Old does not mean bad, useless or obsolete.

>73 de Jim, N2EY

Where is this? I missed the original article.

--
Steven D. Swift, novatech@eskimo.com, http://www.novatech-instr.com
NOVATECH INSTRUMENTS, INC. P.O. Box 55997
206.301.8986, fax 206.363.4367 Seattle, Washington 98155 USA

3348. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 00:39:54 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <urmdeqijuisu83@corp.supernews.com>
Source record: 40410

carltons wrote:

Thanks for the encouragement, Roy. There is a need for rf guys like me, but not apparently in my age group. The US is changing now and is looking to putting all its work outside in the "Global" environment, whatever that is. I guess it means that some young guy in Sri Lanka will design a circuit and ship it to wherever, where it'll be developed into something shipable and then that's that. Why would someone need experience? You find someone young and hungry, give him temporary work, get the job done, and then go on to find the next one. No benefits, low overhead, no problem. There is a minor glitch to all of this: How do you get advanced systems and new technology? Answer: don't worry, we'll (CEO's) be retired and won't have to worry. Don't believe me? Look around! It is happening right now.

Steve WB4CZR

Maybe the problem is one of selling yourself, or maybe geographical area. I've turned down quite a few consulting jobs for RF design -- simply because I prefer to spend my time (at a lot lower pay) running my software business. I see a lot of demand for good RF design. Some of these outfits have already tried the cheap approach and, in fact, I think all the companies I've done RF work for have had RF engineers on staff. They just didn't have ones with enough skill or experience to handle the problem at hand. Admittedly, the market might be mostly for consultantants rather than cube dwellers. But I know at least a couple of people who have made a good living doing full time RF consulting work.

One of several advantages of consulting for companies who do have RF engineers is that they don't waste their money having you do the simple (and boring) stuff. It doesn't bother them a bit to have a high paid engineer spend his time standing in line at the single copy machine, struggle with obsolete computing tools, or spend hours in useless meetings. The engineer's efficiency and productivity don't have a dedicated cell in the CEO's spreadsheet, so it's not something they consider important or know how to deal with. On the other hand, the hours that a consultant spends, the work that's accomplished, and the amount that's paid are all very visible, so clients tend to want to get their money's worth. And most are astounded how much they get for their money -- it never occurs to them that it might not be how good you are, but the fact that your time isn't being squandered on non-productive tasks.

Good luck!

Roy Lewallen, W7EL

3349. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 01:00:56 UTC
From: averyfineman@aol.com
Message-ID: <20021026210056.14538.00000027@mb-cl.aol.com>
Source record: 40411

In article <motsteve-2510022114040001@c-66-176-144-254.se.client2.attbi.com>,
motsteve@attbi.com (carltons) writes:

>> The Analog Devices logarithmic ICs would be excellent as 40 to 80
>> db dynamic range signal indicators. One could make a low-level
>> power meter for CW signals reading out directly in dbm by adding a
>> panel DVM coupled with an op-amp or two. Putting a FET source
>> follower ahead of such a log amp chip would make it a relatively
>> higher-Z probe for old-fashioned signal tracing. A lower frequency
>> output 80 db range IC can be the heart of a spectrum analyzer for
>> a very linear vertical-scale power level indication. It would seem
>> prudent to invest once in slightly more monies and wind up with a
>> lot more measurement capability.
>>
>> The problem with any such device is just calibration. Without a
>> known-level RF source to check it out, using one would be just
>> guesswork or a something-nothing indicator.
>>
>> Leonard H. Anderson
>> retired (from regular hours) electronics engineer person
>
>I'm in complete agreement with Leonard. This is why RF is a pain in the
>Democrat. I would guess, however, that the chip may be hard to get if not
>available at Digi-Key and is probably expensive. Oh well! This is a
>hobby!

You can buy small quantities of Analog Devices parts over their website
at www.analog.com. They have good appnotes available for download
on all their products there.

There are several different logarithmic devices available, all with
wide dynamic range and good log accuracy.

>Steve WB4CZR
>I wish I could retire, burned-out and still working, rf engineer

Been there, done that, have my TS card punch re-oiled and
working. Stand in line. :-)

>BTW, anyone know of an easy way to match a GaAs fet on S11 or S22 without
>a stub tuner? S11&S22=0.9929 @ 179 deg, give me a break!

OK, OK, "stub tuners" means you are probably working at the
low end of S-band. That's just out of "never-never land" of L-band
or the transition from lumpy to distributed components. Difficult
area to play in. Here's a suggestion on problem solution that has

worked for others:

1. Stop the project for a while...take a break doing something
entirely different. If at work, make creative excuses on
doing something "important," using "approved PC speak"
to managers, etc. Acting lessons at a local little theater
group may help in that effort...even in interpersonal relations
with spouse, family, pets, etc.

2. Return to the project by VERY carefully examining your test
setup, check the test equipment as thoroughly as possible.
We are all human beans and may have overlooked something
while concentrating hard on a specific problem detail.

3. Concentrate on the paper equivalent of the circuit/system and
consider possible alternatives. A translator experienced in
PGMTT-speak might be handy...even one surnamed "Smith."

4. Get device back on bench in setup and power up. May the
Great Bird of the Galaxy not do anything on your fine outFET.

5. Maalox doesn't cure GaAs but Xanax might help. Reading
"Dilbert" strips at breakfast improves personal S12.

...click, click, click...sound of a TS card punch in operation... :-)

Len Anderson

3350. Re: Looking for an Article "One Tube All Bander"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 02:18:46 UTC
From: Bill M <exray@no>
Message-ID: <urmj42rjqsrvd2@corp.supernews.com>
Source record: 40412

Ken wrote:
>
> There was an article about a "one tube all bander" in Electronics
> Illustrated and Pratical Electronics back in the 70's. Its a 1 tube
> Regen Receiver, would anyone happen to have a copy of that article?
>
> Thanks
>
> Ken

This one is using a Compactron and a bit more elaborate.
http://www.jvgavila.com/compac.htm
-Bill M

3351. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 03:50:43 UTC
From: k7itm@aol.com
Message-ID: <3200347.0210261950.1ff6987@posting.google.com>
Source record: 40413

motsteve@attbi.com (carltons) wrote in message
news:<motsteve-2610021118300001@c-66-176-144-254.se.client2.attbi.com>...
> I started at age 13 with an interest in ham radio. At that time, the
> frequency to be on was 3.5 Mc (that's right, megacycles). After many
> years of going to schools and being a technician and then an engineer, I'm
> now doing work at S Band (2400 MHz) and using devices with S11's and S22's
> (input and output reflection coefficients) which are shorts,basically.
> The design constraints are no money, no room and no power supply voltage
> with no current drain. I like challenge, but my name is Steve Carlton and
> not Don Quixote. I'm really good with rf having a lot of patience and
> magic fingers for spurs, desense, etc., but I wish I could get the hay out
> of Dodge. Anyone got a cure for the rf blues? Before anyone tells me to
> get into antenna design, I have to do that also with only a HP8410 and a
> few N adapters. BTW, anyone have a cheap rf anechoic chamber out there
> that's compatible with 2.4GHz? How about a cheap two or three stub tuner
> for 12 cm?

Gee, Steve, my feeling is that, as with most blues, it's mostly in the head. I've noticed in some of your past postings that you say that working with RF is a pain, or something of the sort. Personally, I enjoy it; I think I wouldn't be in it as a hobby if I didn't. And it happens to be nice to get paid to do work I like to do, too. Is it a challenge? Sure! Do we find all the answers we'd like? Of course not. But we manage to make the successes outnumber the failures, and in fact it's kinda fun fixing the problems overlooked the first time through. It may take some time to figure out what's going on sometimes, but in the end it never seems to be black magic, and we always manage to get the required processes under control.

Perhaps, as with other causes of the blues, a cure might be to get away from it for a while. Of course, if you gotta make a living at it, right now might not be such a wonderful time to make a change. On the other hand, right now might well be a great time to look for a chamber. We're about to make a move to smaller quarters, and I can only hope "they" heed our plea to make room for the screen room/anechoic chamber we now have. If not, someone will get it pretty cheap.

Now, can you tell me where to get a DC-90MHz (or at least down to 10kHz) amplifier with less than 5dB NF, about +60dBm output TOI (and correspondingly good SOI), capable of about +10dBm output, capable of flat, stable gains from perhaps 10dB to 30dB? Oh, and its power dissipation should be less than 5 watts for sure.

Cheers,
Tom

3352. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 04:21:36 UTC
From: k7itm@aol.com
Message-ID: <3200347.0210262021.4f8fa251@posting.google.com>
Source record: 40414

averyfineman@aol.com (Avery Fineman) wrote in message
news:<20021025203731.04214.00000079@mb-cc.aol.com>...
...
(re: a power meter or other instrument based on an Analog Devices or
similar detector IC)
> The problem with any such device is just calibration. Without a
> known-level RF source to check it out, using one would be just
> guesswork or a something-nothing indicator.

I think there are ways a serious homebrewer can handle this, if you can trust the IC to be linear (behave according to spec) down below some reasonable level. If you don't have access to a calibrated power meter, you can still build something that will work pretty darned well, with some care and patience.

One specific way to do this, but not the only way for sure, is to build a thermal-based sensor. You make a matched pair of 50 ohm loads, using, say, 0805 SMT resistors (49.9ohms; you can get 0.1% parts from Mouser if you need that accuracy at low freq, else just use 1% parts). Etch a board carefully so that the two are in identical environments. If you want to use this up into UHF (or above), you'll want to make sure that they are on good RF circuit board material, and fed through 50 ohm microstrip or stripline. An alternative would be to use small semirigid cable to feed them. On each, mount a tiny thermistor. Put the thermistors in a bridge circuit which is self-balancing by feeding DC to one of the loads, while you feed RF to the other. Calibrate with DC to the input; surely measuring DC power accurately for a serious homebrewer won't be a problem. If the two loads are identical, they should have identical DC feeding them; if not, look very carefully at why they aren't. The construction should be shielded from unequal ambient effects, of course. When you are satisfied that they are matched, you should be ready to measure RF...if you are confident that the return loss is low enough on your input port. (If not, spend some time building a return-loss bridge...another useful piece of equipment!) (If I spent less time on the internet, maybe I could write up a construction article on this...while I have access to some very good equipment to verify its operation.)

What is the sensitivity of such a simple device? I believe that a careful builder should be able to measure well below a milliwatt with it, likely down to 0.01mW resolution. It would be good for max 0.1W input. And I know for sure you can get better than 30dB return loss with an 0805 resistor out past 1GHz...quite useful (better than 20dB return loss) to 6GHz...though you may have difficulty verifying this

unless you invest in a precision load and a lot of time bootstrapping your measurements.

Also...I haven't looked at it for quite a while, but I know that Linear Technology used to make an IC which does just about all of what I described above. It's worth a look, for sure.

As for Analog Devices parts, I believe they've make it much easier to get small quantities these days through a web ordering service on their site.

It might be fun to start a list of recommended test equipment, and how key pieces can be homebrewed, and how to have reasonable confidence in the calibration.

Cheers,
Tom

3353. Re: Looking for an Article "One Tube All Bander"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 06:05:14 UTC
From: snarflewood@yahoo.com
Message-ID: <13ff88d3.0210262205.65ca1433@posting.google.com>
Source record: 40415

Ken <kslimmer@lycos.com> wrote in message
news:<nq9jru4oe06dscqohe42s32qsn1vavm0n5@comcast>...
> There was an article about a "one tube all bander" in Electronics
> Illustrated and Pratical Electronics back in the 70's. Its a 1 tube
> Regen Receiver, would anyone happen to have a copy of that article?

I think there was a 12AT7 receiver fitting that bill from the mid-late
'60s. I've got the article around here somewhere. Are you sure the
one you're looking for is from the '70s?

73,
Mike, KK6GM

3354. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 07:01:07 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0210262301.772be81a@posting.google.com>
Source record: 40416

Roy Lewallen <w7el@eznec.com> wrote in message news:<urm5b04vlbj387@corp.supernews.com>...
> No money, no room, no power consumption. . . is that what's troublin'
> you, Bunky? (Where's the Old Philosopher when we need him?) You don't
> have RF burnout, you've got engineering burnout.

> carltons wrote:
> > I started at age 13 with an interest in ham radio. At that time, the
> > frequency to be on was 3.5 Mc (that's right, megacycles). After many
> > years of going to schools and being a technician and then an engineer, I'm
> > now doing work at S Band (2400 MHz) and using devices with S11's and S22's
> > (input and output reflection coefficients) which are shorts,basically.
> > The design constraints are no money, no room and no power supply voltage
> > with no current drain. I like challenge, but my name is Steve Carlton and
> > not Don Quixote. I'm really good with rf having a lot of patience and
> > magic fingers for spurs, desense, etc., but I wish I could get the hay out
> > of Dodge. Anyone got a cure for the rf blues? Before anyone tells me to
> > get into antenna design, I have to do that also with only a HP8410 and a
> > few N adapters. BTW, anyone have a cheap rf anechoic chamber out there
> > that's compatible with 2.4GHz? How about a cheap two or three stub tuner
> > for 12 cm?
> >
> >
> > Steve WB4CZR

You are burnt out (or pissed off, as we say here in VK) and its part
of what engineering types do - do you think you could handle a brain
dead job that was just easy repetition - I doubt it. If the customer
has given you an impossible job, tell them - if they cant accept that,
then why bother getting stressed over someone elses inadequacies?

This time will pass (it always does) and sometimes its as simple as
stepping back, closing the workshop door, and "going fishing" for a
few days. The alternative is to stay stuck in the doldrums so your no
good to man or beast until the situation gets so bad you wind up doing
something stupid in desperation (Sort of like saying really stupid
things (own experience) on these groups and regretting it later - like
a speeding bullet, the "post" key cant be called back.)

Slow down, step back, seek the counsel of those close to you, and let
time pass.

Hope this helps.

Andrew VK3BFA

3355. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 10:10:04 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2710020511110001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40417

In article <3200347.0210261950.1ff6987@posting.google.com>, k7itm@aol.com
(Tom Bruhns) wrote:

> motsteve@attbi.com (carltons) wrote in message
news:<motsteve-2610021118300001@c-66-176-144-254.se.client2.attbi.com>...
> > I started at age 13 with an interest in ham radio. At that time, the
> > frequency to be on was 3.5 Mc (that's right, megacycles). After many
> > years of going to schools and being a technician and then an engineer, I'm
> > now doing work at S Band (2400 MHz) and using devices with S11's and S22's
> > (input and output reflection coefficients) which are shorts,basically.
> > The design constraints are no money, no room and no power supply voltage
> > with no current drain. I like challenge, but my name is Steve Carlton and
> > not Don Quixote. I'm really good with rf having a lot of patience and
> > magic fingers for spurs, desense, etc., but I wish I could get the hay out
> > of Dodge. Anyone got a cure for the rf blues? Before anyone tells me to
> > get into antenna design, I have to do that also with only a HP8410 and a
> > few N adapters. BTW, anyone have a cheap rf anechoic chamber out there
> > that's compatible with 2.4GHz? How about a cheap two or three stub tuner
> > for 12 cm?
>
> Gee, Steve, my feeling is that, as with most blues, it's mostly in the
> head. I've noticed in some of your past postings that you say that
> working with RF is a pain, or something of the sort. Personally, I
> enjoy it; I think I wouldn't be in it as a hobby if I didn't. And it
> happens to be nice to get paid to do work I like to do, too. Is it a
> challenge? Sure! Do we find all the answers we'd like? Of course
> not. But we manage to make the successes outnumber the failures, and
> in fact it's kinda fun fixing the problems overlooked the first time
> through. It may take some time to figure out what's going on
> sometimes, but in the end it never seems to be black magic, and we
> always manage to get the required processes under control.
>
> Perhaps, as with other causes of the blues, a cure might be to get
> away from it for a while. Of course, if you gotta make a living at
> it, right now might not be such a wonderful time to make a change. On
> the other hand, right now might well be a great time to look for a
> chamber. We're about to make a move to smaller quarters, and I can
> only hope "they" heed our plea to make room for the screen
> room/anechoic chamber we now have. If not, someone will get it
> pretty cheap.
>
> Now, can you tell me where to get a DC-90MHz (or at least down to
> 10kHz) amplifier with less than 5dB NF, about +60dBm output TOI (and
> correspondingly good SOI), capable of about +10dBm output, capable of

> flat, stable gains from perhaps 10dB to 30dB? Oh, and its power
> dissipation should be less than 5 watts for sure.
>
> Cheers,
> Tom

Hey,

The last part sounds like a real gung ho manager trying to inspire his troops. Afterall, all the engineers do all day is lie around collecting their pay. MBA's do come in handy at times and keep people inspired.

Steve

3356. Re: any Wavetek 3001 gurus??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 10:27:22 UTC
From: la8ak.xnd@online.no
Message-ID: <3dbbcc34.46261510@news.online.no>
Source record: 40418

On Sat, 26 Oct 2002 17:11:03 -0700, "Jim Pennell"
<NoSpam@killspam.com> wrote:

> I had some 'similar' problems with my wavetek 3000 and it turned out to
>be the electrolytic capacitors.
>
> As far as I could tell, they had dried out and started to leak current,
>enough to disturb the circuit module that was failing.
>
> I don't know but you might have a similar problem, the 3001 is also a
>fairly old model and the capacitors might need replacing in the module that
>is showing the fault.
>
>
>
> Jim Pennell
> N6BIU
>
>
Didn't see the original poster, but I still make wonders on my 3001 -
for the last 10 years - with a hammer or dropping it down 10cm
towards the table when it is UNLOCK or UNLEVELLED

Suppose all those semi-rigid with SMA just makes it worse to tighten
the connectors properly!

LA8AK
--
remove ,xnd to reply

3357. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 10:49:54 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <278nru43nui215lgllsaq1fqqh13gtcfrk@4ax.com>
Source record: 40419

On 26 Oct 2002 22:09:05 GMT, n2ey@aol.com (N2EY) wrote:

>>>Old does not mean bad, useless or obsolete.
>>
>>While a TRF is still nice for receiving broadcasts in the LF broadcast
>>band and may have been useful for receiving broadcasts in the sparsely
>>populated MF band in the old days, a loaded Q from 40 to 100 means a
>>(-3 dB bandwidth) of 15 .. 40 kHz at the upper end of the MF broadcast
>>band. This makes such receivers practically useless today, with a lot
>>of high power transmitters at every 9 kHz.
>
>I'm not sure what you're point is, Paul.

I was referring to the TRF receiver, which was used in this thread as
an example of old technology.

>Perhaps your point is that old TRF AM BC receivers are no longer very useful
>for reception today, compared to superhets, but that's another issue.

TRF is an example of obsolete technology, which is not very practical
these days.

>>Regarding old VHF/UHF receiver circuits, most of them are more or less
>>useless today, since most of them were designed to minimise the noise
>>figure (which was still very bad according to current standards) at
>>all costs and thus, the strong signal handling completely useless for
>>the situation today, with a lot of services in VHF/UHF.
>
>All depends on the situation. In many parts of the USA, such equipment would
>still be usable.

Then you must be referring to sparsely populated areas such as Alaska
and some states west of the Mississippi.

>
>But even if that equipment is truly "useless" today, the reason is not because
>the equipment and its design concepts are old.
>
>Is a simple "crystal" receiver useless today?

I would consider it useless if you can not recover any useable audio
signal from it. Here in Finland, there are only two medium wave
transmitters (both used mainly by the Foreign Service), one on the
west cost (targeting Scandinavia) and the other on the south cost
(targeting Russia and Estonia). The ground wave field strength from
these transmitters falls off quite rapidly within the country due to
the low ground conductivity. I very much doubt that a crystal receiver

would give any usable signal in most part of the country from these transmitters.

However, night time sky wave long wave signal from Central Europe or Russia might give a usable signal with a tall antenna and the selectivity in the 150.. 290 kHz range may be sufficient.

>>
>>I was a bit worried when a facsimile of a radio book originally
>>published around 1950 was republished last year.
>
>What book is this?

It is a book written in Finnish by Wiio and Somerikko called "Harrastelijan Radiokirja" (A radio book for the amateurs) containing basic electronics, BC receivers, audio amplifiers and radio amateur receivers and transmitters for HF and 2 m.

>>In those old days
>>there was very little activity above 30 MHz (the FM broadcasts started
>>around 1952 and TV in 1955 over here) so the harmonic suppression of
>>these HF transmitters were completely inadequate according to current
>>standards. If someone would build a transmitter according to these
>>designs today, it would create a large number of interference
>>complaints.
>
>Quite possible, but not guaranteed. Many old designs had surprisingly clean
>signals, because the amateur bands are not perfectly related harmonically.
>Amateur transmitters with high harmonic output would interfere with other
>services
>using HF.

One 50 W transmitter design from the year 1950 expects a crystal or VFO signal at around 7 MHz with the first 6V6 working as an amplifier and the second as an amplifier (7 MHz), doubler (14 Mhz), tripler (21 MHz) and doubler (28 MHz). For 28 MHz, the final 807 was used as a doubler (possibly by amplitude modulation applied to the anode) and as an amplifier on all other bands. Thus, on 28 MHz, only the tank circuit was resonant on the final frequency. I guess that the amount of harmonics in the VHF range has been quite high, not to mention subharmonic leakage in the 7-7.5 MHz, 14-15 MHz area, which were partly out of the lower amateur bands.

If such transmitter would be built today, it would definitively not meet the 40 dB HF and 60 dB VHF/UHF harmonic suppression requirement of current regulations.

>>When building something from an old design, you really have to
>>consider, is the environment the same as when the circuit was
>>initially designed.
>
>I agree 100%. And that is true of designs that are much newer than 1950.

>
>For example, many solid-state HF receiver designs suffer from relatively poor
>dynamic range performance compared to their vacuum-tube counterparts. This was
>particularly true of early solid-state designs, and designs where most of the
>emphasis was placed on certain factors (sensitivity, simplicity, compactness)
>while others were deemphasized.

This stupidity started with the desire to build battery operated
general coverage receivers. The battery consumption considerations
prevented the use of strong mixers and preamplifiers, so the IP3
intercept figures are often inadequate.

The situation got worse when the front end typically only contains
some octave wide bandpass filtering in front of the mixer (to prevent
harmonic mixing) so in addition to the desired ham band at least one
or two broadcast bands will also enter the mixer at full strength.
With dozens of strong BC signals at least in Europe entering the
mixer, the number of possible 2nd, 3rd and higher order
intermodulation frequency combinations will be huge, creating a
continuous noise floor of intermodulation products, if the various
intercept point power values are inadequate.

>As another example, many designs using synthesizers suffer from poor
>phase-noise performance compared to older designs using LC and crystal
>oscillators.
>
>End result is that under modern-day HF amateur receiving conditions, some older
>designs will outperform newer designs of equivalent cost and complexity.
>
>Here's an example:
>
>http://www.arrl.org/tis/info/pdf/020910qex036.pdf
>
>Note that some of the best performers do not use frequency synthesis or
>up-conversion. In fact, the modified R-4C that appears to be the overall
>champion
>is a design more than 30 years old, using vacuum tubes (!) for most of the
>stages. The Elecraft K2 is a low-cost single conversion design, yet it compares
>well with designs costing several times as much.

Adequate front end selectivity in front of the mixer will reduce the
amount of intermodulation products generated between the RF signals
(fewer combinations for intermodulation and crossmodulation) as well
as reduce the problems of reciprocal mixing of the LO phase noise
(especially keeping the strong broadcast signals out of the mixer).

Paul OH3LWR

3358. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 11:05:17 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2710020606250001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40420

In article <1fc7b362.0210262301.772be81a@posting.google.com>,
ablight@alphalink.com.au (Andrew VK3BFA) wrote:

> Roy Lewallen <w7el@eznec.com> wrote in message
news:<urm5b04vlbj387@corp.supernews.com>...
> > No money, no room, no power consumption. . . is that what's troublin'
> > you, Bunky? (Where's the Old Philosopher when we need him?) You don't
> > have RF burnout, you've got engineering burnout.
>
> > carltons wrote:
> > > I started at age 13 with an interest in ham radio. At that time, the
> > > frequency to be on was 3.5 Mc (that's right, megacycles). After many
> > > years of going to schools and being a technician and then an engineer, I'm
> > > now doing work at S Band (2400 MHz) and using devices with S11's and S22's
> > > (input and output reflection coefficients) which are shorts,basically.
> > > The design constraints are no money, no room and no power supply voltage
> > > with no current drain. I like challenge, but my name is Steve Carlton and
> > > not Don Quixote. I'm really good with rf having a lot of patience and
> > > magic fingers for spurs, desense, etc., but I wish I could get the hay out
> > > of Dodge. Anyone got a cure for the rf blues? Before anyone tells me to
> > > get into antenna design, I have to do that also with only a HP8410 and a
> > > few N adapters. BTW, anyone have a cheap rf anechoic chamber out there
> > > that's compatible with 2.4GHz? How about a cheap two or three stub tuner
> > > for 12 cm?
> > >
> > >
> > > Steve WB4CZR
>
>
> You are burnt out (or pissed off, as we say here in VK) and its part
> of what engineering types do - do you think you could handle a brain
> dead job that was just easy repetition - I doubt it. If the customer
> has given you an impossible job, tell them - if they cant accept that,
> then why bother getting stressed over someone elses inadequacies?
>
> This time will pass (it always does) and sometimes its as simple as
> stepping back, closing the workshop door, and "going fishing" for a
> few days. The alternative is to stay stuck in the doldrums so your no
> good to man or beast until the situation gets so bad you wind up doing
> something stupid in desperation (Sort of like saying really stupid
> things (own experience) on these groups and regretting it later - like
> a speeding bullet, the "post" key cant be called back.)
>
> Slow down, step back, seek the counsel of those close to you, and let

> time pass.
>
> Hope this helps.
>
> Andrew VK3BFA

I do appreciate all the input that I've received so far. It is all constructive and very positive. I would agree with all of it, had I not been exposed to what I've been exposed to in the last few years. During the 1990's I, like everyone else, was excited when things were going so well. The sky seemed to be the limit, but it kept getting better than good, that's when I started getting nervous. My employer at the time kept having "town hall" meetings saying everything was fine, but I was looking at what was going out the shipping dock and how many jobs were being eliminated here in the US and things didn't seem to match with the glowing words of the meeting. The stock price of the company was going up up up, but nothing was going out out the shipping door. The only thing I could do for myself was to move my 401K funds for stocks into the general fund. At that time, I was ridiculed by the other employees, but when good ol' XXXX took a dive and the stock fund went in the dust bin along with the 401k's of my fellow employees, somebody was singing a different tune and I wasn't feeling good about being right. I still have that "sinking feeling" and it won't go away. My generation is now in charge of the government and a major portion of corporate America. They all need to get out of the Hippy days of thinking and grow up. Sending our labour off shore along with everything else will not build a strong US, it'll only line the pockets of a few senior officers in the company. The rest of us will be standing by looking bedraggled and forlorn. I'm at a complete loss as to what to do at this point. I can control none of this.

Doesn't my message bring a breathe of sunshine into your day! ;-)

Steve WB4CZR

3359. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 11:13:04 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2710020614130001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40421

In article <20021026210056.14538.00000027@mb-cl.aol.com>,
averyfineman@aol.com (Avery Fineman) wrote:
...
> 5. Maalox doesn't cure GaAs but Xanax might help. Reading
> "Dilbert" strips at breakfast improves personal S12.
>
> ...click, click, click...sound of a TS card punch in operation... :-)
>
> Len Anderson

Len,

Got the Xanax years ago and also got a case of hives. Miller Lite works a whole lot better, doesn't cost as much and tastes great. :-)

BTW, if you think working at the low end of S band is bad, try 136-172 MHz. This band is for people who want to bang their head on the wall and even enjoy it.

Steve

3360. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 12:32:26 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <$MsJqEDaz9u9EA6c@ifwtech.co.uk>
Source record: 40423

Paul Keinanen wrote:

>>Note that some of the best performers do not use frequency synthesis or
>>up-conversion. In fact, the modified R-4C that appears to be the overall
>>champion
>>is a design more than 30 years old, using vacuum tubes (!) for most of the
>>stages. The Elecraft K2 is a low-cost single conversion design, yet it compares
>>well with designs costing several times as much.

The original topic was about RF/oscillator tracking, which is only relevant to even older single-conversion designs with a 455kHz IF. These went out of fashion because the image rejection at the high end of the short-wave band is very poor. As soon as HF xtal filters were introduced, single conversion to 455kHz became obsolete technology for HF receivers.

It's still valid for MF/LF receivers, though, so OSCTRACK does have its uses. If you're into retro and restoration, OSCTRACK would also be an interesting way to check the original design calculations that were done with charts and slide-rules... but not if your restoration ethic forbids you to improve the original design ;-)

>
>Adequate front end selectivity in front of the mixer will reduce the
>amount of intermodulation products generated between the RF signals
>(fewer combinations for intermodulation and crossmodulation) as well as
>reduce the problems of reciprocal mixing of the LO phase noise
>(especially keeping the strong broadcast signals out of the mixer).
>
Front-end preselection will help, up to a point, but when you're using the European 7.0-7.1MHz band it won't do anything much to keep out the one-hop megawatt broadcast signals - they start right in at 7.1MHz. There have been designs for helical filters that will help, but at HF they may be as big as the rest of the receiver.

Even a super-sharp preselector is no substitute for a strong (= robust / bomb-proof / high-IP3) mixer. Ideally you need both, but the mixer comes first because it needs to resist IMD between close-in signals that no LC filter can possibly separate.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3361. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 13:15:07 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <apgtap$gk2$1@news7.svr.pol.co.uk>
Source record: 40424

"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0210262021.4f8fa251@posting.google.com...
> averyfineman@aol.com (Avery Fineman) wrote in message
news:<20021025203731.04214.00000079@mb-cc.aol.com>...
> ...

[deleted]

>
> As for Analog Devices parts, I believe they've make it much easier to
> get small quantities these days through a web ordering service on
> their site.

They also supply free samples (two max) of most of their devices, via their
web site. They require some sort of business name, but it shouldn't be
difficult to make one up, or get them sent to your place of work.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

3362. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 13:24:46 UTC
From: la8ak.xnd@online.no
Message-ID: <3dbbf4b9.2170409@news.online.no>
Source record: 40422
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

On Sun, 20 Oct 2002 18:20:49 +0300, Paul Keinanen <keinanen@sci.fi>
wrote:

>Yes, you are right, the grounding losses can be quite large, unless
>you live at the shoreline of the Dead Sea :-). The Q might be a few
>hundred with Litz wire, so the feed point impedance is over 10 ohms in
>nearly all cases and thus, not too difficult to match to 50 ohms.
>
>But anyway, I don't think that the original idea of using huge
>variable capacitors to achieve this matching would be very practical
>at these frequencies, while other alternative methods (tapped loading
>coils and variometers) are available.
>
>Paul OH3LWR
>
Thanks for all the replies, I chose the word 'condenser' instead or
capacitor, because it sometimes has better effect to use the
inaccurate words, and also for fun

I maybe wrong in this matter, but believe that even for HF it is no
advantage to use 50 ohm feeder system for high impedance antennas, and
G3LDO mention that he worked 80m DX from his car using halfwave (40m
long) verticals, then the ground losses were very much reduced

The reason for choosing capacitors is to build a different antenna
tuner, where impedance is transformed down to a lower impedance to
suit the RX and TX, but the antenna is fed from a high impedance line.
For an antenna impedance of several thousands ohms, even 50 ohm ground
losses shouldn't add much to the total loss

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

3363. FS: VHF and UHF 400 Watt Amplifier..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 14:55:30 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <C7Tu9.36692$vq2.1212316@news1.east.cox.net>
Source record: 40425
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

AM-6155/GRT-22
Linear power amp, 225-400MHz, 50W out (conservative) 10W in, Eimac X651Z/8930 final, extensive metering, can be converted to 116-150MHz, rack mount 7" high, 80 lbs, ITT (model 3212), Part of AN/GRT-22.

This Amp uses Emiac X651Z/8930 in silver-plated cavity-drawer; 175-turn TUNE counter dial. Main chassis has solid-state power supply and buffer amp/mulitplier; panel meter monitors voltages. Requires 105/120/210/240 VAC 50-400 Hz and +20 V req 60 ma. +20 V keyed; 7x19x18.5, 80 lbs shipping weight.

The HV Supply from AM-6155 is Loaded with GREAT parts to include a 1752V at 270ma transformer, 8HY 300ma choke, 100K ohm 95 watt resistor, 2x5mfd 3KVDC capacitor, & rectifier circuits card.

One ham has used a 4CX400A (available from Svetlana)to raise the output power to 450 Watts. Others have reported that you can run the 8930 (electrically identical to 4CX250R/7850W) at about 400 watts on 432 Mhz...

a quick search kicked out plans to use the amp on 144, 220, and 431 MHz as well as other mods..

Used - Excellent Condition (NOT TESTED) $295.00 plus shipping from zip 31088.

Email if you have any questions or would like to make an offer!

73,

Larry Keith, KQ4BY

3364. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 15:08:55 UTC
From: n2ey@aol.com
Message-ID: <20021027100855.27509.00000078@mb-cb.aol.com>
Source record: 40426

In article <278nru43nui215lgllsaq1fqqh13gtcfrk@4ax.com>, Paul Keinanen
<keinanen@sci.fi> writes:

>On 26 Oct 2002 22:09:05 GMT, n2ey@aol.com (N2EY) wrote:

>>>>Old does not mean bad, useless or obsolete.
>>>
>>>While a TRF is still nice for receiving broadcasts in the LF broadcast
>>>band and may have been useful for receiving broadcasts in the sparsely
>>>populated MF band in the old days, a loaded Q from 40 to 100 means a
>>>(-3 dB bandwidth) of 15 .. 40 kHz at the upper end of the MF broadcast
>>>band. This makes such receivers practically useless today, with a lot
>>>of high power transmitters at every 9 kHz.

>>I'm not sure what you're point is, Paul.

>I was referring to the TRF receiver, which was used in this thread as
>an example of old technology.

OK

But my answer to "does anyone design this type of receiver" was about
capacitor-tuned superhet receivers.
>
>>Perhaps your point is that old TRF AM BC receivers are no longer very useful
>>for reception today, compared to superhets, but that's another issue.
>
>TRF is an example of obsolete technology, which is not very practical
>these days.

I don't think TRF is obsolete ate all - at least not for some applications,
such as MF/LF work. In fact, new components like high Q inductors make TRF
designs more attractive for some applications.
>
>>>Regarding old VHF/UHF receiver circuits, most of them are more or less
>>>useless today, since most of them were designed to minimise the noise
>>>figure (which was still very bad according to current standards) at
>>>all costs and thus, the strong signal handling completely useless for
>>>the situation today, with a lot of services in VHF/UHF.
>>
>>All depends on the situation. In many parts of the USA, such equipment would
>>still be usable.
>
>Then you must be referring to sparsely populated areas such as Alaska
>and some states west of the Mississippi.

Actually, it refers to much of the USA outside the major cities.

>>But even if that equipment is truly "useless" today, the reason is not
>>because
>>the equipment and its design concepts are old.

This is the main point. Merely being an old technology does not make something inferior, useless or obsolete. And merely beng new does not make something superior.
>>
>>Is a simple "crystal" receiver useless today?
>
>I would consider it useless if you can not recover any useable audio
>signal from it. Here in Finland, there are only two medium wave
>transmitters (both used mainly by the Foreign Service), one on the
>west cost (targeting Scandinavia) and the other on the south cost
>(targeting Russia and Estonia). The ground wave field strength from
>these transmitters falls off quite rapidly within the country due to
>the low ground conductivity. I very much doubt that a crystal receiver
>would give any usable signal in most part of the country from these
>transmitters.

>However, night time sky wave long wave signal from Central Europe or
>Russia might give a usable signal with a tall antenna and the
>selectivity in the 150.. 290 kHz range may be sufficient.

So with an adequate antenna, it's not useless at all, despite being truly ancient technology.

>>>I was a bit worried when a facsimile of a radio book originally
>>>published around 1950 was republished last year.
>>
>>What book is this?
>
>It is a book written in Finnish by Wiio and Somerikko called
>"Harrastelijan Radiokirja" (A radio book for the amateurs) containing
>basic electronics, BC receivers, audio amplifiers and radio amateur
>receivers and transmitters for HF and 2 m.

OK.

Here in the USA, there used to be a magazine called "Ham Radio", which is now defunct. Publication of new issues stopped in the 1980s, as I recall. Although it was a small magazine of limited circulation, it was well regarded by US hams because of its focus on technical issues and homebrew projects. many US hams still miss it. Recently the entire series of magazines became available on CD-ROM, priced at $150.

>>>In those old days
>>>there was very little activity above 30 MHz (the FM broadcasts started
>>>around 1952 and TV in 1955 over here) so the harmonic suppression of
>>>these HF transmitters were completely inadequate according to current
>>>standards. If someone would build a transmitter according to these
>>>designs today, it would create a large number of interference
>>>complaints.

>>
>>Quite possible, but not guaranteed. Many old designs had surprisingly clean
>>signals, because the amateur bands are not perfectly related harmonically.
>>Amateur transmitters with high harmonic output would interfere with other
>>services
>>using HF.
>
>One 50 W transmitter design from the year 1950 expects a crystal or
>VFO signal at around 7 MHz with the first 6V6 working as an amplifier
>and the second as an amplifier (7 MHz), doubler (14 Mhz), tripler (21
>MHz) and doubler (28 MHz). For 28 MHz, the final 807 was used as a
>doubler (possibly by amplitude modulation applied to the anode) and as
>an amplifier on all other bands. Thus, on 28 MHz, only the tank
>circuit was resonant on the final frequency. I guess that the amount
>of harmonics in the VHF range has been quite high, not to mention
>subharmonic leakage in the 7-7.5 MHz, 14-15 MHz area, which were
>partly out of the lower amateur bands.

Possibly, but without measurement it's not certain.

>If such transmitter would be built today, it would definitively not
>meet the 40 dB HF and 60 dB VHF/UHF harmonic suppression requirement
>of current regulations.

It probably would not meet those specifications on 10 meters, if used without
any additional filtering. But on the other bands, it may meet those
specifications, or exceed them. It all depends on the exact design, and how it
is applied.

Do you think that all of the transmitter designs published in "Ham Radio" would
meet the modern -40 and -60 dB specifications, on all bands?
>
>>>When building something from an old design, you really have to
>>>consider, is the environment the same as when the circuit was
>>>initially designed.
>>
>>I agree 100%. And that is true of designs that are much newer than 1950.
>>
>>For example, many solid-state HF receiver designs suffer from relatively
>>poor
>>dynamic range performance compared to their vacuum-tube counterparts. This
>was
>>particularly true of early solid-state designs, and designs where most of
>the
>>emphasis was placed on certain factors (sensitivity, simplicity,
>compactness)
>>while others were deemphasized.
>
>This stupidity started with the desire to build battery operated
>general coverage receivers. The battery consumption considerations
>prevented the use of strong mixers and preamplifiers, so the IP3

>intercept figures are often inadequate.

But the experts and professionals of the time told us that these new solid state designs were superior to the old vacuum tube designs. They said tubes were "obsolete" and "useless".
>
>The situation got worse when the front end typically only contains
>some octave wide bandpass filtering in front of the mixer (to prevent
>harmonic mixing) so in addition to the desired ham band at least one
>or two broadcast bands will also enter the mixer at full strength.
>With dozens of strong BC signals at least in Europe entering the
>mixer, the number of possible 2nd, 3rd and higher order
>intermodulation frequency combinations will be huge, creating a
>continuous noise floor of intermodulation products, if the various
>intercept point power values are inadequate.

Agreed - but again the experts and professionals of the time told us that these new designs were superior to the old LC manually tuned designs. They said we were living in the past when some of us wanted narrow filtering before the mixer.
>
>>As another example, many designs using synthesizers suffer from poor
>>phase-noise performance compared to older designs using LC and crystal
>>oscillators.
>>
>>End result is that under modern-day HF amateur receiving conditions, some
>older
>>designs will outperform newer designs of equivalent cost and complexity.
>>
>>Here's an example:
>>
>>http://www.arrl.org/tis/info/pdf/020910qex036.pdf
>>
>>Note that some of the best performers do not use frequency synthesis or
>>up-conversion. In fact, the modified R-4C that appears to be the overall
>>champion
>>is a design more than 30 years old, using vacuum tubes (!) for most of the
>>stages. The Elecraft K2 is a low-cost single conversion design, yet it
>compares
>>well with designs costing several times as much.
>
>Adequate front end selectivity in front of the mixer will reduce the
>amount of intermodulation products generated between the RF signals
>(fewer combinations for intermodulation and crossmodulation) as well
>as reduce the problems of reciprocal mixing of the LO phase noise
>(especially keeping the strong broadcast signals out of the mixer).

That's only true for signals far removed from the desired one. When trying to receive a weak signal closely surrounded by strong ones, you need a high-performance front end.

73 de Jim, N2EY
>
>

3365. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 18:22:22 UTC
From: garigue <garigue@attbi.com>
Message-ID: <y9Wu9.99241$Hj7.51728@rwcrnsc53>
Source record: 40427

"Wayne" <mookie56@hotmail.com> wrote in message
news:rUDu9.2972$ab3.1884@fe02...
> carltons wrote:

snip ...

Refrigerator magnet prayer ... regarding the things that can and can't be changed and the wisdom to know the difference.

Good advice. Wayne the story about the work situation is interesting as years ago I gave a talk to a group of Scouts about my profession in health care. I then visited a popular "watering hole" where business types gathered. The overheard conversations made me sick ....they dealt with how the competition was going to get screwed by really devious means. Thank God I was in the noble health care profession and above this crap. Our patients came first not screwing the fellows in the hospital down the block. Fast forward 15 years. Hospitals started to advertise .... HMO's were starting at the bid of our "noble" government. "Suits" started walking about with greater regularity. Budgets were cut ....workloads increased and our product was not one of improved patient function but one of fancy advertised programs and beautifully bounded and organized "Quality assurance" manuals. Fast forward 15 years ... the circle is complete. Health care is in the hands of the big guns who routinely screw the competition. There is precious little I can do about this save direct my energies to my patients.

I am going out to run my 6 mile loop now. It is a crisp Sunday afternoon and my thoughts will go the sights of the fall foliage and how good life is once some of the crap is flushed away.

73 God Bless Tom nr Pittsburgh

3366. QST June 64 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 19:18:49 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <urof48agg8daa3@corp.supernews.com>
Source record: 40429

Anyone out there that can scan or copy the article by W0VTP titled "An Electronic Storm Finder" pages 23 thru 26 in the June 1964 QST?
tnx
hank wd5jfr

3367. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 19:18:50 UTC
From: "Mike G." <nospam@my.email.address>
Message-ID: <6leorustrafto98k5h9ncia18ve576fmia@4ax.com>
Source record: 40428

On Sat, 26 Oct 2002 15:17:21 GMT, motsteve@attbi.com (carltons) wrote:

>I started at age 13 with an interest in ham radio. At that time, the
>frequency to be on was 3.5 Mc (that's right, megacycles). After many
>years of going to schools and being a technician and then an engineer, I'm
>now doing work at S Band (2400 MHz) and using devices with S11's and S22's
>(input and output reflection coefficients) which are shorts,basically.
>The design constraints are no money, no room and no power supply voltage
>with no current drain. I like challenge, but my name is Steve Carlton and
>not Don Quixote. I'm really good with rf having a lot of patience and
>magic fingers for spurs, desense, etc., but I wish I could get the hay out
>of Dodge. Anyone got a cure for the rf blues? Before anyone tells me to
>get into antenna design, I have to do that also with only a HP8410 and a
>few N adapters. BTW, anyone have a cheap rf anechoic chamber out there
>that's compatible with 2.4GHz? How about a cheap two or three stub tuner
>for 12 cm?
>
>
>Steve WB4CZR

Steve,

I know what you need! Ask your manager if you could get laid off for oh,
let's just say 6 months or so. It's amazing how fast your attitude can
change. I would almost do anything to get back into another engineering
job right now. I don't care how un-exciting it is. Give me a bench, a
task, a tight deadline, and watch what I can do with it!

Mike KD6PKJ

3368. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 19:32:50 UTC
From: averyfineman@aol.com
Message-ID: <20021027143250.19280.00000021@mb-bh.aol.com>
Source record: 40430

In article <278nru43nui215lgllsaq1fqqh13gtcfrk@4ax.com>, Paul Keinanen
<keinanen@sci.fi> writes:

>On 26 Oct 2002 22:09:05 GMT, n2ey@aol.com (N2EY) wrote:
>
>>>>Old does not mean bad, useless or obsolete.
>>>
>>>While a TRF is still nice for receiving broadcasts in the LF broadcast
>>>band and may have been useful for receiving broadcasts in the sparsely
>>>populated MF band in the old days, a loaded Q from 40 to 100 means a
>>>(-3 dB bandwidth) of 15 .. 40 kHz at the upper end of the MF broadcast
>>>band. This makes such receivers practically useless today, with a lot
>>>of high power transmitters at every 9 kHz.
>>
>>I'm not sure what you're point is, Paul.
>
>I was referring to the TRF receiver, which was used in this thread as
>an example of old technology.

To clear up a point, "TRF receiver" refers to a tuned detector with
a tuned RF amplifier ahead of it. Technically, any superhet with
a gang-tuned RF amplifier and LO is also a TRF. :-)

Reg Edwards' nice little program is well-executed. [anyone who
has actually done program writing will understand that] The thing
about it is that it is a good, quick solution for a problem that is
rapidly disappearing.

>>Perhaps your point is that old TRF AM BC receivers are no longer very useful
>>for reception today, compared to superhets, but that's another issue.
>
>TRF is an example of obsolete technology, which is not very practical
>these days.

Offhand, I'd say an old (non-superhet) TRF receiver was impractical
a half century ago! :-)

>>All depends on the situation. In many parts of the USA, such equipment would
>>still be usable.
>
>Then you must be referring to sparsely populated areas such as Alaska
>and some states west of the Mississippi.

Irrelevant to LO tracking of RF in superhets, especially so in the most
populous state in the USA, California, quite west of the Mississippi.
:-)

>>Is a simple "crystal" receiver useless today?
>
>I would consider it useless if you can not recover any useable audio
>signal from it. Here in Finland, there are only two medium wave
>transmitters (both used mainly by the Foreign Service), one on the
>west cost (targeting Scandinavia) and the other on the south cost
>(targeting Russia and Estonia). The ground wave field strength from
>these transmitters falls off quite rapidly within the country due to
>the low ground conductivity. I very much doubt that a crystal receiver
>would give any usable signal in most part of the country from these
>transmitters.

A "crystal set" is good for one practical application: A field-strength
indicator at a home station. It is just an unamplified diode detector
good for checking AM or RF carrier presence. Some folks carry so
much emotional baggage from their first personal experiments in
radio with "crystal sets" that they lose all rational connections to its
technical facts.

>>>I was a bit worried when a facsimile of a radio book originally
>>>published around 1950 was republished last year.
>>
>>What book is this?
>
>It is a book written in Finnish by Wiio and Somerikko called
>"Harrastelijan Radiokirja" (A radio book for the amateurs) containing
>basic electronics, BC receivers, audio amplifiers and radio amateur
>receivers and transmitters for HF and 2 m.

A small reminder: F. Langford Smith's "Radiotron Designer's
Handbook" has been reproduced on CD by Audio Amateur
Publications, Inc., Peterborough, New Hampshire, USA. This
PDF collection seems to come from one of the last of that
excellent Australian handbook printed on paper in the 1950s.
It is strictly for vacuum-state enthusiasts (or for memorabilia
as in my case). Yes, it does have the LO-RF tracking equations.
:-)

>>I agree 100%. And that is true of designs that are much newer than 1950.
>>
>>For example, many solid-state HF receiver designs suffer from relatively poor
>>dynamic range performance compared to their vacuum-tube counterparts. This
>was
>>particularly true of early solid-state designs, and designs where most of the
>>emphasis was placed on certain factors (sensitivity, simplicity, compactness)
>>while others were deemphasized.
>
>This stupidity started with the desire to build battery operated
>general coverage receivers. The battery consumption considerations
>prevented the use of strong mixers and preamplifiers, so the IP3
>intercept figures are often inadequate.

Some broad, careless sweeping generalizations going on here!

Every single piece of electronics ever built for any reason contains COMPROMISES. Once that is accepted (it should be since it is reality) then one can talk about technical considerations and design problems. "Homebrewed" radios have all kinds of compromises...not always for technical reasons.

With some effort, any designer can put together a receiver front-end with an IP3 of at least +30 dbm, using Schottky mixer diodes and a very high level local oscillator injection (I've done it at work). The same designer can also go to the food market in a 2 tonne truck to bring back six bags of groceries that would fit into a little Opel City hatchback. The choice is personal, not technical.

>The situation got worse when the front end typically only contains
>some octave wide bandpass filtering in front of the mixer (to prevent
>harmonic mixing) so in addition to the desired ham band at least one
>or two broadcast bands will also enter the mixer at full strength.
>With dozens of strong BC signals at least in Europe entering the
>mixer, the number of possible 2nd, 3rd and higher order
>intermodulation frequency combinations will be huge, creating a
>continuous noise floor of intermodulation products, if the various
>intercept point power values are inadequate.

Okay, then here's a chance for the amateur radio designer-homebrewer to roll their own using sharp-enough skirt selectivity front-end bandpass filters (per band) to attenuate the adjacent bands. Make the first mixer with a high IP3 and watch stage gains and levels to the second mixer to avoid adding to the intermodulation problem. Tuning is done with the second LO, the first LO being fixed per band. No tracking of LO with front-end RF stages needed at all. HF bands are all narrow enough to allow that, even 10m. That principle has been around and working well for over four decades. Details are in the individual stage gain values and individual intermod capability of those stages.

In US Army service in Japan in the 50s I acquired a nice Hallicrafters portable general coverage receiver using "battery tubes" (1T4, 1R5, etc.). Trying to use it for DX at the corner of a 2 KM x 1 KM antenna field radiating about 300 KW total over the 4 to 18 MHz HF spectrum was not a good thing. :-)
At a 10 KM distance the receiver worked reasonably well.

>>As another example, many designs using synthesizers suffer from poor
>>phase-noise performance compared to older designs using LC and crystal
>>oscillators.

A nonsense generality. In order to make that generality true, the "LC and crystal oscillator" (of older designs) phase noise has to be MEASURED and used in comparison. Phase noise measurement and quantification is a relatively recent thing and was rarely, if ever, done with tube architecture radios. Phase noise affects QAM signals' demodulation and modulation far more than CW or SSB signals. It is

the hunt for minimum BER in these digital times using various
constellations of QAM with minimum RF levels at the transmitters.

Any reasonably-good PLL design of a synthesizer will exhibit RF
output purity as good for amateur radio use as any "older" LC or
crystal oscillator. "Reasonably good" refers to proper loop filter
calculation and normal attention to supply rail decoupling. The
advantage to PLL is the ability to produce hundreds of individual
frequencies, all crystal-locked, without buying the same number
of individual quartz crystal units.

Direct digital synthesis (DDS) has various forms, including the
"fractional-N" type, all of which may be subject to greater spurious
output than the simpler PLL. There's been a lot of work on that in
the last decade and enough body of knowledge to steer the
designer in better ways to implement them.

>>End result is that under modern-day HF amateur receiving conditions, some
older
>>designs will outperform newer designs of equivalent cost and complexity.

The "end result" of that statement seems to be that some don't
want to give up their cherished notions of old equipment. :-) :-) :-)

>Adequate front end selectivity in front of the mixer will reduce the
>amount of intermodulation products generated between the RF signals
>(fewer combinations for intermodulation and crossmodulation) as well
>as reduce the problems of reciprocal mixing of the LO phase noise
>(especially keeping the strong broadcast signals out of the mixer).

Ulrich Rhode pretty well summed up receiver performance and design
criteria over a dozen years ago. See his book on the subject and the
special issues in the last issues of Ham Radio magazine. You need:

1. High IP3 in the mixer...which means a higher than normal LO level.
2. High IP3-equivalent in any RF amplifier ahead of the mixer (if used),
something that is not too swift with variable-gain tubes but better
with Gilbert Cell ICs...presuming AGC is applied to that stage.
3. Be careful with stage gain values to avoid overdriving following
stages and having them create intermod problems.
4. Distance from in-band SW BC transmitters. There just isn't any
way out but distance for the strong, local in-band 40m stations,
unless you want to build high-Q tuned cavities the size of a room.
A large room. Very large.

Len Anderson
retired (from regular hours) electronic engineer person

3369. How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 20:03:55 UTC
From: Dave <local_42remove@hotmail.com>
Message-ID: <LEXu9.131629$zE6.459703@rwcrnsc51.ops.asp.att.net>
Source record: 40431

Subject line says it all. Finally broke down and bought myself a decent soldering station and figured I'd whip up a dummy load for my first project. What can be more simple than a chaises mount UHF connector, a couple pieces of scrap copper board, and a hand full of resistors?

Cut the board into two pieces 2" x 2 1/2"

Soldered each of the resistors to the boards. Used (20) 2W flame proof carbon resistors rated at 1KOhm 2%.

I read 47 Ohms on the board. By eliminating 2 of the resistors I have 49 Ohms.

Great I say, I'm with in 2% of my target resistance. Plug her into my meter and calibrate the meter to read SWR and I read a whopping 10!!!!

What am I not understanding about the simplest piece of equipment in my shack? Anyone out there give me a clue as to what I might have done wrong? I know the standard carbon resistors aren't the best for a dummy load (something about inductance right?) But from what I've read they should work fine for my purpose, and with my limited knowledge of electronics I need a push in the right direction. Very few web sites seem to talk about dummy loads (can't blame them, how much do you need to know about a bank of resistors?)

Dave

3370. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 20:21:42 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <uroimo4tmhngc0@corp.supernews.com>
Source record: 40433

carltons wrote:
> . . .
> The stock price of the company was going up up up,
> but nothing was going out out the shipping door. . .

There's a big part of your problem. You need to find a company that makes actual products, not one having stock as its main product. Believe it or not, there are a lot of companies out there that really do make money by building and shipping products.

Looks to me like your world view has gotten distorted by being in that environment. You need to get out of it.

Roy Lewallen, W7EL

3371. Re: Heathkit GR-78 Battery

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 20:22:30 UTC
From: RONALD NORRIS <rnorris@wwdc.com>
Message-ID: <3DBC4B06.3010503@wwdc.com>
Source record: 40432

Hi Gary:

I have the GR-78 and a manual but no battery. According to the
schematic each side of the battery has 4 cells and the output is 9.6 V.
One can make up an 10.8V external supply. D-503 in the receiver will
drop the 10.8V to 10.1v for proper operation. Let me know if you get
your GR-78 up and running. May have a go later this winter to get my
GR-78 going.

I'm sure one could you D cell rechargable batteries to put the receiver
back to it's orginal state. As far as I can find out the Heathkit cell
used is no longer manufacutred by anyone.

Ron
VE3FXX

==========

Gary \"Joe\" Mayfield wrote:
> I'm restoring a GR-78. Fortunatly someone removed the battery years ago. I
> know the original battery was a NiCad (I plan to use one too). I can also
> tell the battery is "split" in other words charged as two batteries, then
> used as one battery. Does anyone know how many cells this battery has? A
> first guess looks like 4 cells on each side. In other words an 8 cell / 10
> Volt battery. This sounds odd so I thought I would ask if anyone knows for
> sure.
>
>
> Thanks,
> Gary
>
>

3372. Re: where did all the 1N34's go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 21:03:21 UTC
From: Walter AG5P <waltercw@accessus.net>
Message-ID: <gU-dnf8wC9TFySGgXTWc3w@accessus.net>
Source record: 40434

Hi Phil and everyone, well I still miss B&A, Burstein-Applebee
Electronics from Kansas City. If you had their
catalog and Allied's, and Lafayette's catalogs then you
were at the top of the parts bin.

73...Walter, AG5P
((REMOVE the 'cw' from my email for direct reply))

"carltons" <motsteve@attbi.com> wrote in message
news:motsteve-2610021133430001@c-66-176-144-254.se.client2.attbi.com..
.
> In article <3DBA76E9.47A2EB8D@vaxxine.com>, "Phil T."
> <xyzphil@vaxxine.com> wrote:
>
> > Radio Shack in Canada is definitely phasing out all the small
electronic
> > discrete components. Bit by bit this stuff goes on sale and when
it is
> gone, it
> > does not get replaced. I bought three packs of 1N34's from RS
about 6 months
> > ago - 99 cents for a package of 10 (or maybe it was 20). The guy
said they
> > won't be getting anymore in. Same thing with packs of resistors,
capacitors,
> > etc.
> >
> > Phil
> > --
> > Phil (VA3UX) REMOVE " xyz" from my e-mail address for direct
reply
>
>
> I'm probably throwing another wrench into the mechanism here, but I
still
> miss Allied Electronics before they had Radio Shack. Their catalogs
were
> gold when I was a kid. They had 1N34's and crystal radio sets in
them
> using the old xtal and cat whisker detector along with a single ear
"can"
> headphone. My first radio was the Space Spanner under the Knight
Kit
> banner. It was a real dog, but I thought it was a Cadillac at the
time.

> With all the fancy stuff now available, I still feel myself
priviledged
> over the kids now to have had that opportunity then. It surely
brought me
> joy even with no money in my pocket to buy an S line or other
impossible
> dream.
>
> My great memory: 100 N. Western Avenue; Chicago, Ill.
>
>
> I need to Baker Act myself. :-)
>
>
> Steve WB4CZR

3373. Parts ID

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 21:15:22 UTC
From: Robert Offer <robert@g1zjp.freeserve.co.uk>
Message-ID: <aphl14$4u1$1@newsg1.svr.pol.co.uk>
Source record: 40435

Hi all,
I am collecting parts for a homebrew amplifier and have 2 encapsulated diode rectifier "blocks".
They are labelled as:
STC (manufacturer?)
484 LFU 30 D
EHT 1500 B
and hand written in a panel they both carry "A66"
They appear to be of the "doubler" design carrying a "+", "C" and "-" each.
Both are mounted on ceramic stand-offs onto a plate. Each encapsulation measures (approx) - 200mm long x 32mm wide x 30mm high. The stand-offs lift the bottom of the encapsulation approx 25mm + an integral 5mm mounting post (?) = 30mm plate to bottom of encapsulation.
I believe them to be from a fairly old piece of army equipment.
Does anybody have an clue as to their true ID and or ratings, please?
Thanks for any help you are able to give.
73
Bob
G1ZJP

3374. Simple Circuits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 21:38:22 UTC
From: geoffrey brown <geoff@spontaflex.freeserve.co.uk>
Message-ID: <aphmbo$5kp$1@newsg1.svr.pol.co.uk>
Source record: 40436
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.shortwave,uk.radio.amateur

Several variants of G.W.Shorts excellent 2 transistor receiver and a
Homodyne Receiver from "The Radio Constructor" have been added to the files
section of the Radioconstructors group.
http://groups.yahoo.com/group/radioconstructors/

1990 - 1999 updates to Sir Douglas halls circuits from "Radio Bygones"
added to the website.
http://www.spontaflex.freeserve.co.uk/

Geoff

3375. FS: BA1404 FM Stereo Transmitter Chips For Sale (not auction!)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 21:42:30 UTC
From: googlejeff@radiochips.com
Message-ID: <98eb23eb.0210271342.55de558b@posting.google.com>
Source record: 40437
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap,alt.radio.pirate

I'm selling BA1404 chips for $5/ea ppd. These chips are the heart of many low-powered FM transmitter kits. There are a number of plans available online, as well as on the data sheet, to build your own low-power radio station. It'd be great for a weekend project or science-fair/Boy Scout-type project. I built a transmitter and use it to send MP3s and "internet radio" from my PC to the radios in the living room and bedroom (MP3s and foreign stations on a clock radio -- nice!).

Please visit: http://www.radiochips.com for details and ordering information.

Thanks!
Jeff

3376. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 21:44:41 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <SE5C4ZBJ5Fv9EA30@ifwtech.co.uk>
Source record: 40441

Dave wrote:
>Subject line says it all. Finally broke down and bought myself a decent
>soldering station and figured I'd whip up a dummy load for my first project.
>What can be more simple than a chaises mount UHF connector, a couple pieces
>of scrap copper board, and a hand full of resistors?
>
>Cut the board into two pieces 2" x 2 1/2"
>
>Soldered each of the resistors to the boards. Used (20) 2W flame proof
>carbon resistors rated at 1KOhm 2%.
>
>I read 47 Ohms on the board. By eliminating 2 of the resistors I have 49
>Ohms.
>
>Great I say, I'm with in 2% of my target resistance. Plug her into my meter
>and calibrate the meter to read SWR and I read a whopping 10!!!!
>
>What am I not understanding about the simplest piece of equipment in my
>shack? Anyone out there give me a clue as to what I might have done wrong? I
>know the standard carbon resistors aren't the best for a dummy load
>(something about inductance right?) But from what I've read they should work
>fine for my purpose, and with my limited knowledge of electronics I need a
>push in the right direction. Very few web sites seem to talk about dummy
>loads (can't blame them, how much do you need to know about a bank of
>resistors?)

Quite so... which implies that something you said above is actually not
correct.

For a start, are you sure that the resistors really are carbon, of
reasonably low-inductive construction? File one open and check.

You don't mention the frequency, but it's hard to imagine that any
reasonably low-inductance construction could give you and SWR so high at
any frequency below UHF... not with 18 resistors (and inductances) in
parallel.

Next stop is the SWR meter. Does it read a low SWR with your antenna, or
any other known good load? Check it again.

It pretty much has to be one of those three.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3377. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 21:44:42 UTC
From: keep-it-clean <keep-it-clean@worldnet.att.net>
Message-ID: <e7Zu9.8941$VJ5.530071@bgtnsc05-news.ops.worldnet.att.net>
Source record: 40438

What frequency is being used for the SWR measurement ?

=========

"Dave" <local_42remove@hotmail.com> wrote in message
news:LEXu9.131629$zE6.459703@rwcrnsc51.ops.asp.att.net...
> Subject line says it all. Finally broke down and bought myself a decent
> soldering station and figured I'd whip up a dummy load for my first
project.
> What can be more simple than a chaises mount UHF connector, a couple
pieces
> of scrap copper board, and a hand full of resistors?
>
> Cut the board into two pieces 2" x 2 1/2"
>
> Soldered each of the resistors to the boards. Used (20) 2W flame proof
> carbon resistors rated at 1KOhm 2%.
>
> I read 47 Ohms on the board. By eliminating 2 of the resistors I have 49
> Ohms.
>
> Great I say, I'm with in 2% of my target resistance. Plug her into my
meter
> and calibrate the meter to read SWR and I read a whopping 10!!!!
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> What am I not understanding about the simplest piece of equipment in my
> shack? Anyone out there give me a clue as to what I might have done wrong?
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> know the standard carbon resistors aren't the best for a dummy load
> (something about inductance right?) But from what I've read they should
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> fine for my purpose, and with my limited knowledge of electronics I need a
> push in the right direction. Very few web sites seem to talk about dummy
> loads (can't blame them, how much do you need to know about a bank of
> resistors?)
>
> Dave
>
>

3378. Re: QST June 64 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 21:53:48 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <uroo3epfjrud13@corp.supernews.com>
Source record: 40439

thanks to K6HME I now have the article...
now to see if I can make it without tubes..
73
hank wd5jfr
"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:urof48agg8daa3@corp.supernews.com...
> Anyone out there that can scan or copy the article by W0VTP titled "An
> Electronic Storm Finder" pages 23 thru 26 in the June 1964 QST?
> tnx
> hank wd5jfr
>
>

3379. Re: QST June 64 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 22:10:07 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <urop21rtunc736@corp.supernews.com>
Source record: 40440

thanks to K6HME I now have the article...
now to see if I can make it without tubes..
73
hank wd5jfr
"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:urof48agg8daa3@corp.supernews.com...
> Anyone out there that can scan or copy the article by W0VTP titled "An
> Electronic Storm Finder" pages 23 thru 26 in the June 1964 QST?
> tnx
> hank wd5jfr
>
>

3380. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 22:47:42 UTC
From: Bill M <exray@no>
Message-ID: <uror45eo94e2aa@corp.supernews.com>
Source record: 40442

keep-it-clean wrote:
>
> What frequency is being used for the SWR measurement ?
>

> > Soldered each of the resistors to the boards. Used (20) 2W flame proof
> > carbon resistors rated at 1KOhm 2%.
> >

> > know the standard carbon resistors aren't the best for a dummy load
> > (something about inductance right?) But from what I've read they should
> work

Actually carbon composition resistors are what would be desireable. Not
carbon-film, though. They are the ones that have some inductance.
I think those 2w, 2% flame-proof guys might be carbon film. If you're
in doubt you can dissect one.

-BM

3381. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 23:11:50 UTC
From: k9sqg@aol.com
Message-ID: <20021027181150.04333.00000831@mb-mo.aol.com>
Source record: 40443

Dave,

If you could send me your valid email I'd be happy to discuss the matter.

73s,

Evan

3382. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 23:53:03 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <z%_u9.6456$jE1.22366@news-server.bigpond.net.au>
Source record: 40444

Dave <local_42remove@hotmail.com> wrote in message
news:LEXu9.131629$zE6.459703@rwcrnsc51.ops.asp.att.net...
> Subject line says it all. Finally broke down and bought myself a decent
> soldering station and figured I'd whip up a dummy load for my first
project.
> What can be more simple than a chaises mount UHF connector, a couple
pieces
> of scrap copper board, and a hand full of resistors?
>
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>
> Soldered each of the resistors to the boards. Used (20) 2W flame proof
> carbon resistors rated at 1KOhm 2%.
>
> I read 47 Ohms on the board. By eliminating 2 of the resistors I have 49
> Ohms.
>
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meter
> and calibrate the meter to read SWR and I read a whopping 10!!!!
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> (something about inductance right?) But from what I've read they should
work
> fine for my purpose, and with my limited knowledge of electronics I need a
> push in the right direction. Very few web sites seem to talk about dummy
> loads (can't blame them, how much do you need to know about a bank of
> resistors?)
>
> Dave
>
What frequency were you using ? - It might work for HF but I wouldn't like
to try it on VHF.

Steve

3383. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-27 23:55:28 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <5E-dnZGbapcE4yGgXTWc3w@ctc.net>
Source record: 40351

I hate it when people ask for help and don't post their valid email.. I just went to all the trouble of looking up a schematic for an antenna rotator, scanned it in and sent a reply back to someone. Got back a bounced mail. I don't feel like taking all the time to go back to about 20 news groups and looking for who wanted it. One shot is all I give those turkeys.

"K9SQG" <k9sqg@aol.com> wrote in message
news:20021027181150.04333.00000831@mb-mo.aol.com...
> Dave,
>
> If you could send me your valid email I'd be happy to discuss the matter.
>
> 73s,
>
> Evan

3384. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 00:25:03 UTC
From: Dave <local_42remove@hotmail.com>
Message-ID: <zt%u9.101746$Hj7.54382@rwcrnsc53>
Source record: 40445

After reading your replies here are the answers to questions asked of me and ultimately what appears to be the little problem I overlooked.

1q)For a start, are you sure that the resistors really are carbon, of reasonably low-inductive construction?

1a)You know to be honest when I picked them up I made an assumption. I'll double check the resistors first thing.

2q)You don't mention the frequency, but it's hard to imagine that any reasonably low-inductance construction could give you and SWR so high at any frequency below UHF... not with 18 resistors (and inductance's) in parallel.

2a)Well OK, 10/1 was an exaggeration. Just put her back on and I'm reading a little under 5. Still WAY too high.

3q)Next stop is the SWR meter. Does it read a low SWR with your antenna, or any other known good load? Check it again.

3a)I read 1.2/1 with my antenna hooked up. Double checked and everything reads just as it always has. I have a known BAD meter and it reads 1.5 with the dummy load.....Then again it would read 1.5 if you dunked it in a pail of gasoline.

4q)What frequency is being used for the SWR measurement ?

4a) 27.275

5q) Actually carbon composition resistors are what would be desirable. Not carbon-film, though. They are the ones that have some inductance.
I think those 2w, 2% flame-proof guys might be carbon film. If you're in doubt you can dissect one.

5a) Doh! Metal film not carbon. I suppose I should look more closely at what I pick up. Like a kid in a candy store I walked outta there with duplicates of some parts and equipment and now I see I didn't grab the resistors I thought I did.

6q) If you could send me your valid email I'd be happy to discuss the matter.

6a) I can be reached at local_42@hotmail.com Feel free to write me despite the fact I think I've found the culprit. It's always nice to hear from good people about interesting things.

7q)What frequency were you using ? - It might work for HF but I wouldn't like

to try it on VHF.

7a) See 4a. Please refrain from commenting on the band. It is hard enough not to randomly defend my status for no apparent reason. I am enjoying my self though!

It appears I was in such a daze grabbing components and equipment, giddy even, that I wasn't paying close attention to what I bought. This would also explain why I walked out of the shop with multiples of the same iron tip and a few for the wrong style iron. Been a long time since I was so excited about home projects. Now that I know what the next step for my dummy load is, I can start putting together my antenna switch and from there I have a giant list of "must build" projects. Thank you for the nudge in the right direction. We'll see what happens when I put some real carbon resistors on my board, sure to be a much more pleasant result.

Dave

3385. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 00:42:07 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <urp1uul9qi1cb7@corp.supernews.com>
Source record: 40446

My experience is that carbon film resistors have negligble inductance (i.e., very much less than the resistance) up to a frequency where the physical length becomes the limiting factor. Does anyone have measurements that demonstrate otherwise?

Roy Lewallen, W7EL

Bill M wrote:
>
> Actually carbon composition resistors are what would be desireable. Not
> carbon-film, though. They are the ones that have some inductance.
> I think those 2w, 2% flame-proof guys might be carbon film. If you're
> in doubt you can dissect one.
>
> -BM

3386. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 01:44:14 UTC
From: n2ey@aol.com
Message-ID: <20021027204414.27509.00000081@mb-cb.aol.com>
Source record: 40347

In article <$MsJqEDaz9u9EA6c@ifwtech.co.uk>, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> writes:

>Paul Keinanen wrote:

Actually, N2EY wrote the following paragraph:

>>>Note that some of the best performers do not use frequency synthesis or
>>>up-conversion. In fact, the modified R-4C that appears to be the overall
>>>champion
>>>is a design more than 30 years old, using vacuum tubes (!) for most of the
>>>stages. The Elecraft K2 is a low-cost single conversion design, yet it
>>>compares well with designs costing several times as much.
>
>The original topic was about RF/oscillator tracking, which is only
>relevant to even older single-conversion designs with a 455kHz IF. These
>went out of fashion because the image rejection at the high end of the
>short-wave band is very poor.

How about HF receiver designs with higher IFs? For example, the HBR receivers and many Hallicrafters designs use first IFs around 1600 kHz. The National NC-300 and -303 use a first IF of 2215 kHz. All use ganged variable capacitors in the front end, and the high, fixed first IF for improved image rejection.

>As soon as HF xtal filters were
>introduced, single conversion to 455kHz became obsolete technology for
>HF receivers.

I wouldn't say "obsolete". For frequencies up to about 10 MHz, a single-conversion 455 kHz IF design has adequate image rejection in most cases if an RF stage with high quality tuned circuits is used.

I have a pair of Hycon Eastern filters (2215KA and 2215KB), acquired in a trade some time back. Center frequency 2215 kHz, 6/50 kHz (not a typo - they are spec'd that way) bandwidths 250/1000 and 2800/8000 Hz. They are commercially-made filters aimed at the amateur market, and are NO - about 40 years old. They cost $44.50 each back then - and you needed a different filter for each bandwidth desired!

>It's still valid for MF/LF receivers, though, so OSCTRACK does have its
>uses. If you're into retro and restoration, OSCTRACK would also be an
>interesting way to check the original design calculations that were done
>with charts and slide-rules... but not if your restoration ethic forbids
>you to improve the original design ;-)

HAW! That's a good one!

Perhaps OSCTRACK would help in my design of an HF receiver using the Hycon Eastern filters. To cover 3.5-4 Mhz, the VFO would need to tune 5.715 - 6.215 MHz.
>
>>Adequate front end selectivity in front of the mixer will reduce the
>>amount of intermodulation products generated between the RF signals
>>(fewer combinations for intermodulation and crossmodulation) as well as
>>reduce the problems of reciprocal mixing of the LO phase noise
>>(especially keeping the strong broadcast signals out of the mixer).
>>
>Front-end preselection will help, up to a point, but when you're using
>the European 7.0-7.1MHz band it won't do anything much to keep out the
>one-hop megawatt broadcast signals - they start right in at 7.1MHz.
>There have been designs for helical filters that will help, but at HF
>they may be as big as the rest of the receiver.

'zactly.

On this side of the pond, things can be quite challenging, too. The US power limit is 1500 W peak output, and with some antenna gain a high power local can make quite a bit of noise. During contests, hams in high population density areas find it's not unusual to encounter several very strong local signals only a few kHz away from the weak desired signals. Front end preselection capable of rejecting all but the desired signal just isn't practical. What's needed is a front end that has both a low noise figure and high dynamic range, followed by an IF that has as much selectivity as possible right after the first mixer.
>
>Even a super-sharp preselector is no substitute for a strong (= robust
>/ bomb-proof / high-IP3) mixer. Ideally you need both, but the mixer
>comes first because it needs to resist IMD between close-in signals that
>no LC filter can possibly separate.

Exactly! And the selectivity (in the form of an HF xtal filter no wider than the mode in use requires) should be right after that mixer. Dual conversion designs that upconvert to a wide filter at VHF (most "modern" HF ham transceivers), or that use a tunable first IF (most vintage HF ham transceivers, such as Heath SB series, Yaesu FT-101 family, etc.) are simply second-rate by comparison. That's why the Ten Tec Omni, Elecraft K2 and Drake R-4C perform so well in the QEX analysis cited earlier. They are all designs that put excellent selectivity right after the first mixer.

73 de Jim, N2EY

3387. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 01:47:45 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2710022048550001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40348

In article <6leorustrafto98k5h9ncia18ve576fmia@4ax.com>, Mike G.
<nospam@my.email.address> wrote:

> On Sat, 26 Oct 2002 15:17:21 GMT, motsteve@attbi.com (carltons) wrote:
>
> >I started at age 13 with an interest in ham radio. At that time, the
> >frequency to be on was 3.5 Mc (that's right, megacycles). After many
> >years of going to schools and being a technician and then an engineer, I'm
> >now doing work at S Band (2400 MHz) and using devices with S11's and S22's
> >(input and output reflection coefficients) which are shorts,basically.
> >The design constraints are no money, no room and no power supply voltage
> >with no current drain. I like challenge, but my name is Steve Carlton and
> >not Don Quixote. I'm really good with rf having a lot of patience and
> >magic fingers for spurs, desense, etc., but I wish I could get the hay out
> >of Dodge. Anyone got a cure for the rf blues? Before anyone tells me to
> >get into antenna design, I have to do that also with only a HP8410 and a
> >few N adapters. BTW, anyone have a cheap rf anechoic chamber out there
> >that's compatible with 2.4GHz? How about a cheap two or three stub tuner
> >for 12 cm?
> >
> >
> >Steve WB4CZR
>
>
> Steve,
>
> I know what you need! Ask your manager if you could get laid off for oh,
> let's just say 6 months or so. It's amazing how fast your attitude can
> change. I would almost do anything to get back into another engineering
> job right now. I don't care how un-exciting it is. Give me a bench, a
> task, a tight deadline, and watch what I can do with it!
>
> Mike KD6PKJ

Mike,

I got laid off by Moto for 1.5 years. I was ready to go backto work. I
just wonder how long this will last. I wish you would start looking
around and tell me where I'm going wrong. I don't think that rf jobs will
be here for native born engineers in the 48 state US for much longer.

Steve

3388. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 02:01:04 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3dbc9a5f$1@news.netacc.net>
Source record: 40349

"Dave" <local_42remove@hotmail.com> wrote in message news:LEXu9.131629> I read 47 Ohms on the board. By eliminating 2 of the resistors I have 49
> Ohms.
>
> Great I say, I'm with in 2% of my target resistance. Plug her into my meter
> and calibrate the meter to read SWR and I read a whopping 10!!!!
>
> What am I not understanding about the simplest piece of equipment in my
> shack?

Your impedance is not all resistive. There is a reactive component as well. This can not be measured at dc with an ohmeter. You do not mention what frequency your transmitter is on. There could be enough inductance in the resistance bank to be a factor. Try at your absolute minimum frequency and see if results are the same. (Have a 160 mtr rig?).

Also, dont overlook the connector cable and it's connections. A piece of braid across the line can wreak havoc.

Steve

3389. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 02:06:20 UTC
From: Bill M <exray@no>
Message-ID: <urp6oke9dro41a@corp.supernews.com>
Source record: 40350

Roy Lewallen wrote:
>
> My experience is that carbon film resistors have negligble inductance
> (i.e., very much less than the resistance) up to a frequency where the
> physical length becomes the limiting factor. Does anyone have
> measurements that demonstrate otherwise?
>
> Roy Lewallen, W7EL

I did some physical calculations once on a regular carbon film 1 watter at about 10k and yes indeed the inductance is in the .0xx uh range, substantially less than what might be considered normal lead dressing. How this may or may not factor into the bad dummy load mystery is still unknown as I'm waiting to hear what freq range was used. If its HF I wouldn't blame the resistor inductance (unless they are in fact wirewounds).

-BM

3390. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 03:01:33 UTC
From: w4pqwhs@aol.com
Message-ID: <20021027220133.03702.00000874@mb-cj.aol.com>
Source record: 40352

What meter are you using? W4PQW

3391. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 04:15:17 UTC
From: Bill M <exray@no>
Message-ID: <urpeafsvcesf56@corp.supernews.com>
Source record: 40353

Dave wrote:
>

> It appears I was in such a daze grabbing components and equipment, giddy
> even, that I wasn't paying close attention to what I bought. This would also
> explain why I walked out of the shop with multiples of the same iron tip and
> a few for the wrong style iron. Been a long time since I was so excited
> about home projects. Now that I know what the next step for my dummy load
> is, I can start putting together my antenna switch and from there I have a
> giant list of "must build" projects. Thank you for the nudge in the right
> direction. We'll see what happens when I put some real carbon resistors on
> my board, sure to be a much more pleasant result.
>
> Dave

Good old 2 watt carbon composition resistors can be a bit tricky to
locate these days but this site claims to have 'em. Since they are NOS
they may have drifted upwards in value...maybe not.
http://hometown.aol.com/maryann003/page6.html
Let us know how this turns out. I'm a little amazed that the resistors
you used would screw it up as bad as it seems they did on an HF freq.
-Bill M

3392. Re: QST June 64 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 04:26:45 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0210272026.25d61d6e@posting.google.com>
Source record: 40354

"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:<uroo3epfjrud13@corp.supernews.com>...
> thanks to K6HME I now have the article...
> now to see if I can make it without tubes..
> 73
> hank wd5jfr
I don't have the QST article handy, but there was an article
about a solid-state weather warning system in 73 for September 1974.
At a glance, it seems similar to the QST article, but since I haven't
looked at the latter recently, I can't say how similar a scheme the
two articles use.

Michael VE2BVW

> "Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
> news:urof48agg8daa3@corp.supernews.com...
> > Anyone out there that can scan or copy the article by W0VTP titled "An
> > Electronic Storm Finder" pages 23 thru 26 in the June 1964 QST?
> > tnx
> > hank wd5jfr
> >
> >

3393. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 05:14:50 UTC
From: Dave <local_42remove@hotmail.com>
Message-ID: <eJ3v9.132038$qM2.42801@sccrnsc02>
Source record: 40355

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:SE5C4ZBJ5Fv9EA30@ifwtech.co.uk...
>
> Quite so... which implies that something you said above is actually not
> correct.
>
> For a start, are you sure that the resistors really are carbon, of
> reasonably low-inductive construction? File one open and check

I grabbed the wrong stack in my haste. Had to turn to the manufactures site
to see they were Metal film. Not even carbon film let alone carbon.

> You don't mention the frequency, but it's hard to imagine that any
> reasonably low-inductance construction could give you and SWR so high at
> any frequency below UHF... not with 18 resistors (and inductance's) in
> parallel.

IT was tested on 27.275

>
> Next stop is the SWR meter. Does it read a low SWR with your antenna, or
> any other known good load? Check it again.

Meter reads 1.2 on the Antenna. I'm sure the meter is accurate. At this
point I definitely rule out the meter as a possible cause. My follow up post
below says all this stuff. I'm picking up the right resistors tomorrow and
I'm sure this will solve my problem.

I appreciate the response. I should be a bit more careful when picking up
parts. I act first and think second some times, hehe.

Dave

> It pretty much has to be one of those three.
>
> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek

3394. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 05:14:53 UTC
From: Dave <local_42@hotmail.com>
Message-ID: <hJ3v9.128601$md1.27031@sccrnsc03>
Source record: 40356

I took the remove out of my email address. This isn't the first time some one hasn't noticed it and of course it bounces. I feel your pain. Sucks to take time out to help someone and then find they didn't provide a way to contact them.

Dave

"Ralph Mowery" <rmowery@ctc.net> wrote in message news:5E-dnZGbapcE4yGgXTWc3w@ctc.net...
> I hate it when people ask for help and don't post their valid email.. I
> just went to all the trouble of looking up a schematic for an antenna
> rotator, scanned it in and sent a reply back to someone. Got back a bounced
> mail. I don't feel like taking all the time to go back to about 20 news
> groups and looking for who wanted it. One shot is all I give those turkeys.
>
>
> "K9SQG" <k9sqg@aol.com> wrote in message
> news:20021027181150.04333.00000831@mb-mo.aol.com...
> > Dave,
> >
> > If you could send me your valid email I'd be happy to discuss the matter.
> >
> > 73s,
> >
> > Evan
>
>

3395. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 05:14:55 UTC
From: Dave <local_42@hotmail.com>
Message-ID: <jJ3v9.132040$qM2.42729@sccrnsc02>
Source record: 40357

I'm using a Diamond Antenna SX-200

Dave

"W4pqw HS" <w4pqwhs@aol.com> wrote in message
news:20021027220133.03702.00000874@mb-cj.aol.com...
> What meter are you using? W4PQW

3396. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 05:21:29 UTC
From: "Mike G." <nospam@my.email.address>
Message-ID: <s4hprucv0assuli5r1tknnfivd1fnblj2m@4ax.com>
Source record: 40358

On Mon, 28 Oct 2002 01:47:45 GMT, motsteve@attbi.com (carltons) wrote:

>In article <6leorustrafto98k5h9ncia18ve576fmia@4ax.com>, Mike G.
><nospam@my.email.address> wrote:
>
>> On Sat, 26 Oct 2002 15:17:21 GMT, motsteve@attbi.com (carltons) wrote:
>>
>> >I started at age 13 with an interest in ham radio. At that time, the
>> >frequency to be on was 3.5 Mc (that's right, megacycles). After many
>> >years of going to schools and being a technician and then an engineer, I'm
>> >now doing work at S Band (2400 MHz) and using devices with S11's and S22's
>> >(input and output reflection coefficients) which are shorts,basically.
>> >The design constraints are no money, no room and no power supply voltage
>> >with no current drain. I like challenge, but my name is Steve Carlton and
>> >not Don Quixote. I'm really good with rf having a lot of patience and
>> >magic fingers for spurs, desense, etc., but I wish I could get the hay out
>> >of Dodge. Anyone got a cure for the rf blues? Before anyone tells me to
>> >get into antenna design, I have to do that also with only a HP8410 and a
>> >few N adapters. BTW, anyone have a cheap rf anechoic chamber out there
>> >that's compatible with 2.4GHz? How about a cheap two or three stub tuner
>> >for 12 cm?
>> >
>> >
>> >Steve WB4CZR
>>
>>
>> Steve,
>>
>> I know what you need! Ask your manager if you could get laid off for oh,
>> let's just say 6 months or so. It's amazing how fast your attitude can
>> change. I would almost do anything to get back into another engineering
>> job right now. I don't care how un-exciting it is. Give me a bench, a
>> task, a tight deadline, and watch what I can do with it!
>>
>> Mike KD6PKJ
>
>Mike,
>
>I got laid off by Moto for 1.5 years. I was ready to go backto work. I
>just wonder how long this will last. I wish you would start looking
>around and tell me where I'm going wrong. I don't think that rf jobs will
>be here for native born engineers in the 48 state US for much longer.
>
>Steve

Are you implying that the only reason our colleges and universities teach much in the way of RF/Microwave fundamentals is so a student can better understand things like standing waves and mutual inductance for his/her digital circuit boards to reach 3-6GHz clock rates?

Mike G.

3397. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 05:31:05 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3DBCCB98.70F3D26E@nettally.com>
Source record: 40359

I think he works for a fortune 500 company that has been a leader in it's industry for 60+ years, not an "ENRON".But an: "/\/\" .When I read about the "town hall meetings" my "dilbert" alert came right on. Been there, seen that!

Roy Lewallen wrote:

> carltons wrote:
> > . . .
> > The stock price of the company was going up up up,
> > but nothing was going out out the shipping door. . .
>
> There's a big part of your problem. You need to find a company that
> makes actual products, not one having stock as its main product. Believe
> it or not, there are a lot of companies out there that really do make
> money by building and shipping products.
>
> Looks to me like your world view has gotten distorted by being in that
> environment. You need to get out of it.
>
> Roy Lewallen, W7EL

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

3398. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 07:46:59 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <hvH+SGDztOv9EACu@ifwtech.co.uk>
Source record: 40360

Roy Lewallen wrote:
>My experience is that carbon film resistors have negligble inductance
>(i.e., very much less than the resistance) up to a frequency where the
>physical length becomes the limiting factor. Does anyone have
>measurements that demonstrate otherwise?

The inductance can be calculated by scraping the paint off and measuring-up the diameter, length and number of turns in the helix. No great accuracy is required because, as Roy says, the inductive reactance is usually negligible compared with the resistance.

For 50 ohm dummy loads made by connecting several higher-value resistors in parallel (to increase the power rating and reduce the effects of the inductance) I've found that 1k 2W metal film resistors give about the best combination of resistance, inductance and power dissipation.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3399. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 08:52:18 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2810020353270001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40361

In article <3DBCCB98.70F3D26E@nettally.com>, Joe Leikhim
<jleikhim@nettally.com> wrote:

> I think he works for a fortune 500 company that has been a leader in it's
> industry for 60+ years, not an "ENRON".But an: "/\/\" .When I read about the
> "town hall meetings" my "dilbert" alert came right on. Been there, seen
> that!
>
> Roy Lewallen wrote:
>
> > carltons wrote:
> > > . . .
> > > The stock price of the company was going up up up,
> > > but nothing was going out out the shipping door. . .
> >
> > There's a big part of your problem. You need to find a company that
> > makes actual products, not one having stock as its main product. Believe
> > it or not, there are a lot of companies out there that really do make
> > money by building and shipping products.
> >
> > Looks to me like your world view has gotten distorted by being in that
> > environment. You need to get out of it.
> >
> > Roy Lewallen, W7EL
>
> --
> Joe Leikhim K4SAT
> Jleikhim@nettally.com
>
> "Jazz is not dead. It just smells funny." -F.Z.

I now work for a small company. They are going off shore also. I believe
now the colleges are just trying to keep going until they can find
something new to do.

No one will identify with Dilbert in about ten years. The ex Fortune 500
types will all be retired or dead. The only companies will be the Midget
100e6. ;-)

Steve

3400. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 09:27:50 UTC
From: Dave <local_42@hotmail.com>
Message-ID: <qq7v9.140472$%d2.51280@sccrnsc01>
Source record: 40362

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:hvH+SGDztOv9EACu@ifwtech.co.uk...
> Roy Lewallen wrote:
> >My experience is that carbon film resistors have negligble inductance
> >(i.e., very much less than the resistance) up to a frequency where the
> >physical length becomes the limiting factor. Does anyone have
> >measurements that demonstrate otherwise?
>
> The inductance can be calculated by scraping the paint off and
> measuring-up the diameter, length and number of turns in the helix. No
> great accuracy is required because, as Roy says, the inductive reactance
> is usually negligible compared with the resistance.
>
> For 50 ohm dummy loads made by connecting several higher-value resistors
> in parallel (to increase the power rating and reduce the effects of the
> inductance) I've found that 1k 2W metal film resistors give about the
> best combination of resistance, inductance and power dissipation.
>
> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek

That worries me. I assumed my problem was the Metal Film resistors. Leave it to me to screw up the single easiest project on earth. There must be something really stupid I'm overlooking. I'll just whip up another on Tues. and this time pay very close attention to construction technique and materials, I guess.

Dave

3401. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 11:04:05 UTC
From: ON5MJ <on5mjREMOVE@skynet.be>
Message-ID: <3dbd19a7$0$4256$ba620e4c@news.skynet.be>
Source record: 40363

Borrow another SWRmeter and check. Maybe a Bird.

73 de ON5MJ - Jacques.

3402. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 11:37:44 UTC
From: Ricardo Martins <ricardo.martins@pt.uu.net>
Message-ID: <3DBD2188.A80E774C@pt.uu.net>
Source record: 40364

Hello Dave,

Got same problem here, dummy load not useful above 30Mhz (because of
resistor's type I think)
Also problem with SWR meter (home made and not precise/balanced)
Another problem was a big mess with cables and for some time I was
reading the SWR on the antenna not on load :)
Now is ok, I connect an "calibrated SWR meter" and I don't use the load
above 30Mhz.
Some photos here: http://www.qsl.net/ct2gqv/dummy.html

73,
--
Ricardo Martins / CT2GQV

3403. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 12:11:21 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3DBD2969.64DA35CB@mfi.net>
Source record: 40365

Bill M wrote:
>
> Dave wrote:
> >
>
> > It appears I was in such a daze grabbing components and equipment, giddy
> > even, that I wasn't paying close attention to what I bought. This would also
> > explain why I walked out of the shop with multiples of the same iron tip and
> > a few for the wrong style iron. Been a long time since I was so excited
> > about home projects. Now that I know what the next step for my dummy load
> > is, I can start putting together my antenna switch and from there I have a
> > giant list of "must build" projects. Thank you for the nudge in the right
> > direction. We'll see what happens when I put some real carbon resistors on
> > my board, sure to be a much more pleasant result.
> >
> > Dave
>
> Good old 2 watt carbon composition resistors can be a bit tricky to
> locate these days but this site claims to have 'em. Since they are NOS
> they may have drifted upwards in value...maybe not.
> http://hometown.aol.com/maryann003/page6.html
> Let us know how this turns out. I'm a little amazed that the resistors
> you used would screw it up as bad as it seems they did on an HF freq.
> -Bill M

I have 990 200 Ohm 2 Watt A-B carbon composition resistors in my
stock.
--

Michael A. Terrell
Central Florida

3404. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 13:51:42 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3dbd40ed$1@news.netacc.net>
Source record: 40366

"Dave" <local_42@hotmail.com> wrote in message
news:hJ3v9.128601$md1.27031@sccrnsc03...
> I took the remove out of my email address. This isn't the first time some
> one hasn't noticed it and of course it bounces.

Using a mangled email address is a good prevention from becoming the target of the spambots but it is always a good idea to end your message with "Remove the obvious for valid email address" if you are expecting a direct reply.

On the other hand, if I go to reply to a posting and see an address suich as abcSpammersShouldBurnInHellWithTheirMothers@xyz.com..... I can usually figure out what to do. :-)

Steve

3405. silk screening

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 14:18:22 UTC
From: GaryH <garyh@bellsouth.net>
Message-ID: <IQbv9.7869$wZ2.5830@news.bellsouth.net>
Source record: 40367

Anyone have any ideas on how to do your own
silk screening of homebrew projects and even
more on restoration of older equipment. Dry
transfers don't make it and it is many times
impossible to find the fonts and sizes required.

Anyone have any experience with this that you can
share with those of use who are in the dark on this issue?

Thanks

3406. Re: Invalid address for the poster.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 14:56:58 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <_ecv9.41750$C53.1809645@news2.west.cox.net>
Source record: 40368

That has happened to me dozens and dozens of times. So hopefully a response to the newsgroup will get thru. But then folks complain I should have responded to the poster only. Whatta Ya Gonna do?

Instead of an invalid or a remove the "I hate spam, bigtime" in the address -- get an alias from your provider and change it periodically.

Too easy I suppose.

And the headers that have nothing to do with the body because the poster was too lazy to change the subject. Yuk - another time waster. Like the Header "For Sale" hey whats for sale so I don't have to open it to find your selling a regency TV set !!!!

Whine whine

--
I Whine, Therefore I Am
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com
"Ralph Mowery" <rmowery@ctc.net> wrote in message
news:5E-dnZGbapcE4yGgXTWc3w@ctc.net...
> I hate it when people ask for help and don't post their valid email.. I
> just went to all the trouble of looking up a schematic for an antenna
> rotator, scanned it in and sent a reply back to someone. Got back a
bounced
> mail. I don't feel like taking all the time to go back to about 20 news
> groups and looking for who wanted it. One shot is all I give those
turkeys.
>
>
> "K9SQG" <k9sqg@aol.com> wrote in message
> news:20021027181150.04333.00000831@mb-mo.aol.com...
> > Dave,
> >
> > If you could send me your valid email I'd be happy to discuss the
matter.
> >
> > 73s,
> >
> > Evan
>
>

3407. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 15:10:00 UTC
From: troglodite@aol.com
Message-ID: <20021028101000.06440.00001059@mb-ch.aol.com>
Source record: 40369

Steve,

I suggest you cover yourself with ferrite tiles, then have someone wrap you in aluminum foil.

Doug KB9TMY

3408. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 15:15:59 UTC
From: chrisdot muriel <muriel@analogdot.com>
Message-ID: <7bgqru0fi6kajlvdfcjun09np3f683copv@4ax.com>
Source record: 40370

On Sun, 27 Oct 2002 13:15:07 -0000, "Leon Heller"
<leon@heller123.freeserve.co.uk> wrote:

>
>"Tom Bruhns" <k7itm@aol.com> wrote in message
>news:3200347.0210262021.4f8fa251@posting.google.com...
>> averyfineman@aol.com (Avery Fineman) wrote in message
>news:<20021025203731.04214.00000079@mb-cc.aol.com>...
>> ...
>
>
>[deleted]
>
>>
>> As for Analog Devices parts, I believe they've make it much easier to
>> get small quantities these days through a web ordering service on
>> their site.
>
>They also supply free samples (two max) of most of their devices, via their
>web site. They require some sort of business name, but it shouldn't be
>difficult to make one up, or get them sent to your place of work.
>
>73, Leon
Indeed - I work for Analog.
You do not have to invent a company name as such - the facility is
deliberately designed to also support home constuction. I confirmed
this over a year ago on behalf of an amateur who was writing up a
homebrew project for a magazine.
Also , once you have filled in all the online details, you do not have
to fill them all in again on a future visit when you want (up to 2 of)
another IC - so it's easier on subsequent occasions.
A good part of the website to check is www.analog.com/RF as well as
www.analog.com/DDS . I believe " /logamps" works as well.

Chris Muriel, (G3ZDM)

3409. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 15:37:58 UTC
From: aruder@pipeline.com
Message-ID: <apjp1daqf1@slb2.atl.mindspring.net>
Source record: 40371

"Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net> wrote:

>Your impedance is not all resistive. There is a reactive component as well.
>This can not be measured at dc with an ohmeter.

http://www.aade.com IIRC. They have a meter for this stuff.
Radio Sh** have a book on using your VOM for many things,
including inductance.

I got both, the book first, and the meter when I couldn't
get the book straight. Then after I used the meter, I understood
the book better, and was able to use a VOM for inductance in
heavy stuff.

I heartily reccommend the meter. You can get it in a kit, but I
got it ready to work, because of my own time constraints.
Mine paid for itself the first evening I used it on a RCX I built.

You might try to get one of something like that, and see if the
reactance of your load is too high. You might have cap trouble
between the coppere plates.

And in future, you will then be able to test each element and
module of the project. Much improve your chances of success
on any project.

FWIW

3410. Re: Parts ID

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 16:46:12 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <g2Odndxk1KmB9iCgXTWcow@cnmnetwork.com>
Source record: 40373

STC would be Silicon Transistor Corporation. They made rectifiers. They have been defunct or acquired a long time ago. I believe they were in New England, probably Massachusetts.

3411. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 16:52:32 UTC
From: Bill M <exray@no>
Message-ID: <urqqm12763jsfc@corp.supernews.com>
Source record: 40372

"Stephen C. Robbins" wrote:
>
> "Dave" <local_42@hotmail.com> wrote in message
> news:hJ3v9.128601$md1.27031@sccrnsc03...
> > I took the remove out of my email address. This isn't the first time some
> > one hasn't noticed it and of course it bounces.
>
> Using a mangled email address is a good prevention from becoming the target
> of the spambots but it is always a good idea to end your message with
> "Remove the obvious for valid email address" if you are expecting a direct
> reply.

Seeing the word 'remove' in the address is also a pretty good clue. But
some folks don't have their news reader set up to actually see the email
address when they hit reply.

-BM

3412. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 17:08:04 UTC
From: fred bartoli <toto@hotmail.toto>
Message-ID: <3dbd6e9c$0$1360$626a54ce@news.free.fr>
Source record: 40374

Bill M <"exray"@no spam-caribe.net> a crit dans le message :
urqqm12763jsfc@corp.supernews.com...
> "Stephen C. Robbins" wrote:
> >
> > "Dave" <local_42@hotmail.com> wrote in message
> > news:hJ3v9.128601$md1.27031@sccrnsc03...
> > > I took the remove out of my email address. This isn't the first time
some
> > > one hasn't noticed it and of course it bounces.
> >
> > Using a mangled email address is a good prevention from becoming the
target
> > of the spambots but it is always a good idea to end your message with
> > "Remove the obvious for valid email address" if you are expecting a
direct
> > reply.
>
> Seeing the word 'remove' in the address is also a pretty good clue. But
> some folks don't have their news reader set up to actually see the email
> address when they hit reply.
>
> -BM

So they get it bounce and see the address.

Fred.

3413. Re: silk screening

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 19:24:46 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <oj3rrucb4eme24umv4eglf5re7dh28gb10@4ax.com>
Source record: 40376

And if you DO have ideas, would you please post them here for everybody to see? I've been trying to figure out a cheap and dirty method of doing this for years and other than "buy the screen, buy the frame, buy the photo gear, buy the paint, buy the squeegee...etc." I've come up dry.

Suggestions REALLY appreciated, especially those dealing with ways of doing one-offs without all the attendent setup mess.

Jim

"GaryH" <garyh@bellsouth.net>
shared these priceless pearls of wisdom:

->Anyone have any ideas on how to do your own
->silk screening of homebrew projects
Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

3414. PCB software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 20:02:43 UTC
From: p.mooney2@ntlworld.com
Message-ID: <3dbd967e.4873528@news.cytanet.com.cy>
Source record: 40375

There was a request about a week back asking about PCB software,
unfortunatly I just acciudently deleted it.

PCB (currently v1.6.3) is a program for designing PCBs (surprise)
under the X-window system (e.g. Unix (including Linux, Hp, Solaris,
etc. but NOT M$ Windows) and is issued with no charge under the GPL
licence.

Home page is at:

http://bach.ece.jhu.edu/~haceaton/pcb/

taken from home page is:

FEATURES

Multi-Layer: Up to 8 layers plus silkscreen
Parts Libraries:
TTL 74xx
connectors
crystals
linear series
voltage regulators
resistors: discrete and arrayed
capacitors
transistors
PALs
LEDs
RAM ICs
easy to generate user-defined parts
Output formats:
PostScript
Color for design checking
B/W for mask generation
Gerber (RS-274X)
Output layers:
up to 8 routing layers
component mask
solder mask
silkscreen(s)
drill file(s)
solder paste
Design Rule Checking (DRC)
Complex ground/power planes
Show electrical connectivity
Netlist comparison

Drill report

Hope this is of help,

Paul M.

3415. Re: silk screening

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 20:58:24 UTC
From: Idontwantspam@net
Message-ID: <3dbda3db.33753535@news.bellatlantic.net>
Source record: 40377

On Mon, 28 Oct 2002 11:24:46 -0800, Jim Weir <jim@rst-engr.com> wrote:

>
>And if you DO have ideas, would you please post them here for everybody to see?
>I've been trying to figure out a cheap and dirty method of doing this for years
>and other than "buy the screen, buy the frame, buy the photo gear, buy the
>paint, buy the squeegee...etc." I've come up dry.
>
>Suggestions REALLY appreciated, especially those dealing with ways of doing
>one-offs without all the attendent setup mess.
>
>Jim

>"GaryH" <garyh@bellsouth.net>
>shared these priceless pearls of wisdom:
>
>->Anyone have any ideas on how to do your own
>->silk screening of homebrew projects
>Jim Weir, VP Eng. RST Eng. WX6RST
>A&P, CFI, and other good alphabet soup

I have not tried this yet, but could you try laser printing everything
onto clear plastic (like for an overhead projector), and securing it
to the panel. You would then use an Exacto to cut out any holes
needed.

An advantage of this would be being able to work through revisions on
paper until you get it right, and that it would be one piece.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3416. Voltage drop across Selenium rectifier bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 23:12:48 UTC
From: la8ak.xnd@online.no
Message-ID: <3dbdc0b7.123550682@news.online.no>
Source record: 40379

Saved a transformer from old BC-radio, it had 262V DC output from the
bridge with a selenium graetz bridge, wonder what is typical voltage
drop for a selenium rectifier? Will use 4x 1N4006 in the new supply

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

3417. Re: silk screening

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-28 23:49:01 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <N1kv9.11161$jE1.37934@news-server.bigpond.net.au>
Source record: 40380

Jim Weir <jim@rst-engr.com> wrote in message
news:oj3rrucb4eme24umv4eglf5re7dh28gb10@4ax.com...
>
> And if you DO have ideas, would you please post them here for everybody to
see?
> I've been trying to figure out a cheap and dirty method of doing this for
years
> and other than "buy the screen, buy the frame, buy the photo gear, buy the
> paint, buy the squeegee...etc." I've come up dry.
>
> Suggestions REALLY appreciated, especially those dealing with ways of
doing
> one-offs without all the attendent setup mess.
>
> Jim

I'd be more than interested in a good, no-mess silk-screening set-up. Using
etch-resistant ink would be a great way for making small runs of PCBs, as
well as being able to print component overlays.

Steve

3418. WTB:TR-7 ITEMS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 02:43:15 UTC
From: Joe Hargis <joehargis@worldnet.att.net>
Message-ID: <7Bmv9.11293$VJ5.682227@bgtnsc05-news.ops.worldnet.att.net>
Source record: 40381

Still looking for accessories: Aux-7, Digital Control board, filters,
calibrator.
Tell condition and price. Tnx -Joe in MO

3419. Re: Voltage drop across Selenium rectifier bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 03:43:19 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3DBE03D8.D2A917CB@rica.net>
Source record: 40382

J M Noeding wrote:
>
> Saved a transformer from old BC-radio, it had 262V DC output from the
> bridge with a selenium graetz bridge, wonder what is typical voltage
> drop for a selenium rectifier? Will use 4x 1N4006 in the new supply
>
> 73
> Jan-Martin
> LA8AK
> --
> remove ,xnd to reply

My old Reference Data for Radio Engineers 5th edition has a table that
compares various rectifiers. It lists a typical forward drop of 1
volt per cell (plate) for selenium rectifiers.
--
John Popelish

3420. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 03:49:18 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3DBE053E.C4BBA851@nettally.com>
Source record: 40383

At least you got to keep your sense of humor!

carltons wrote:

> (snip)
> I now work for a small company. They are going off shore also. I believe
> now the colleges are just trying to keep going until they can find
> something new to do.
> No one will identify with Dilbert in about ten years. The ex Fortune 500
> types will all be retired or dead. The only companies will be the Midget
> 100e6. ;-)
>
> Steve

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

3421. Re: Voltage drop across Selenium rectifier bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 03:58:50 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <urs1rq9c1847a8@corp.supernews.com>
Source record: 40384

Hm, I remember that when replacing a selenium stack with a modern diode, a resistor was put in series with the modern diode. The value of the resistor, as I recall, was determined by the number and area of the plates in the selenium rectifier. If no one recalls how to determine the resistor value, someone can probably find it in a handbook from somewhere in the '60s, or one of the books on converting World War II surplus equipment that were common around that time. The resistor value and an estimate of the radio's current drain will get you the drop.

Roy Lewallen, W7EL

J M Noeding wrote:
> Saved a transformer from old BC-radio, it had 262V DC output from the
> bridge with a selenium graetz bridge, wonder what is typical voltage
> drop for a selenium rectifier? Will use 4x 1N4006 in the new supply
>
> 73
> Jan-Martin
> LA8AK
> --
> remove ,xnd to reply

3422. Re: Antenna Basics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 04:11:03 UTC
From: Mike Coslo <mcoslo@adelphia.net>
Message-ID: <3DBE0A6F.6010304@adelphia.net>
Source record: 40385

Hi Rob,

What I would suggest for a first antenna is.......

The general dipole as long as you can make it, and as high as you can make it, using twin lead and a tuner.

This is a simple setup, works on multiple bands, and in fact works pretty well.

You'll probably gets lot's of different answers on this, but I doubt you'll get much better an antenna.

Later, if you want to make something for one particular band, or want to chase DX, you might think of installing a band-cut dipole, or a vertical. But in the meantime, you still have a very good antenna, and can experiment with the others in leisure.

- Mike KB3EIA -

3423. Re: Voltage drop across Selenium rectifier bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 04:42:25 UTC
From: Bill M <exray@no>
Message-ID: <urs496rhhe2742@corp.supernews.com>
Source record: 40386

Roy Lewallen wrote:
>
> Hm, I remember that when replacing a selenium stack with a modern diode,
> a resistor was put in series with the modern diode. The value of the
> resistor, as I recall, was determined by the number and area of the
> plates in the selenium rectifier. If no one recalls how to determine the
> resistor value, someone can probably find it in a handbook from
> somewhere in the '60s, or one of the books on converting World War II
> surplus equipment that were common around that time. The resistor value
> and an estimate of the radio's current drain will get you the drop.
>
> Roy Lewallen, W7EL

I recall 2-3 volts PER SECTION being typical of a selenium rectifier.
As Roy says, it might be easier just to estimate the current and choose
the resistor accordingly since the 1N400* are predictable.
-BM

3424. Re: Voltage drop across Selenium rectifier bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 05:46:14 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <apl7b5$5j2$1@sparta.btinternet.com>
Source record: 40387

"J M Noeding" wrote -
> Saved a transformer from old BC-radio, it had 262V DC output from the
> bridge with a selenium graetz bridge, wonder what is typical voltage
> drop for a selenium rectifier? Will use 4x 1N4006 in the new supply

==========

A little arithmetic will tell you what the volts-drop is across your particular rectifier sample. You already have the DC output voltage. Now measure the AC input volts to the circuit . . . .

It's the peak AC volts you are interested in.

Peak Volts = Sqrt(2) * RMS volts, as measured on your AC voltmeter.

There will be 2 volts or less across the silicon bridge. You can forget it.

There will be far more volts drop in the transformer windings. For a guide measure the DC winding resistance and multiply by the peak current. And don't forget the primary winding. Peak transformer currents may be as high as 5 or 6 times the DC load current at full load.

You will find an appreciably higher DC output voltage using silicon diodes. With a large smoothing capacitor and a 250 V RMS transformer winding it may soar to 250 * Sqrt(2) = 350 VDC. Less volts drop in the transformer at peak current.

What I remember most about selenium rectifiers was the horrible smell when one burnt out - which they often did ! The smoke could have been used as a nerve gas - a weapon of mass-destruction.

Reg G4FGQ

3425. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 06:18:20 UTC
From: Bill M <exray@no>
Message-ID: <urs9t3he4l0810@corp.supernews.com>
Source record: 40388

Joe Leikhim wrote:
>
> At least you got to keep your sense of humor!

Yeah, its funny because the same feeling made itself known 10 years agos, 20 years ago, etc.
Crappy business owners, offshore operations, wank universities are nothing new.
Neither are the office secretary and the little red sports car. And geez, we now have Viagra!
I'm not picking on the poster, but this is the classic "male menopause". You work your butt off for 20 years and get savvy, your employer (who was the greatest when you were hired in 1987) turns out to be a 'player' and now you walk around unemployed (often by personal conviction) because some 22-year old SriLankan kid has bettered you.
There's no cure for this. When you fire the 9-5 work you have to be ready to whore yourself as a consultant/contractor. A totally different bizness but the personal rewards can be great if you have the skills and do it right. Otherwise, a quick review of HMOs and personal health insurance plans for your *now* declining years can be a rude awakening that makes sucking to corporate crapola for a few more years to indeed be worth the benefits.
Now that I have fired all of my potential employers....?
-ex

3426. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 06:30:31 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <4e5srugf585kojg94rbk6vrtlm116polrj@4ax.com>
Source record: 40389

On 26 Oct 2002 22:09:05 GMT, n2ey@aol.com (N2EY) wrote:

>End result is that under modern-day HF amateur receiving conditions, some older
>designs will outperform newer designs of equivalent cost and complexity.
>
>Here's an example:
>
>http://www.arrl.org/tis/info/pdf/020910qex036.pdf
>
>Note that some of the best performers do not use frequency synthesis or
>up-conversion. In fact, the modified R-4C that appears to be the overall
>champion
>is a design more than 30 years old, using vacuum tubes (!) for most of the
>stages.

Did you actually read that paper ?

It lists three separate R-4C versions, two original (one with tube,
the other with FET second mixer) and a heavily modified. Some
parameters of the original versions were even worse than those of the
Icom IC-751A.

It was not clear at what bandwidth the noise floor of all the
receivers were measured, which affects the IMD DR.

The heavily modified R-4C contained new mixers, extra amplification to
compensate for the losses in the new mixer and also contained a 600 Hz
filter, which drops the noise floor and larger dynamic ranges can be
quoted. Claiming that this excellent performance is _only_ due to the
good original design (although a clean oscillator definitively helps).

>The Elecraft K2 is a low-cost single conversion design, yet it compares
>well with designs costing several times as much.

Yes, this seems to be a very good modern design.

Paul OH3LWR

3427. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 06:30:32 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <8v7sruc7mb64i5vormkmameh928bfatmrd@4ax.com>
Source record: 40390

On 27 Oct 2002 19:32:50 GMT, averyfineman@aol.com (Avery Fineman)
wrote:

> With some effort, any designer can put together a receiver front-
> end with an IP3 of at least +30 dbm, using Schottky mixer diodes
> and a very high level local oscillator injection (I've done it at work).

I assuming you are referring to diode ring mixers like SRA-1H, which require +17 dBm (50 mW) of LO power and which has a 6 dB loss/noise figure and also assume that the +30 dBm is output (not input) IP3.

Some calculations can be made of the expected performance. Assuming IF amplifier noise equivalent noise floor in the SSB bandwidth of -135 dBm (including diplexer and filter losses) two undesired mixer output signals at -25 dBm, the mixer 3rd order products would be at -135 dBm, so the ultimate dynamic range in the SSB bandwidth would be 110 dB.

Converting these figures to the mixer input, the offending tones are at -19 dBm (25 mV or S9+54 dB) and intermodulation products an noise floor at -129 dBm (0,8 uV). Assuming 10 dB SNR, the sensitivity would be about 2,5 uV.

Interfering signals can be stronger than -19 dBm, thus, the IMD dynamic range will deteriorate rapidly. Alternatively the strong interfering signals can be attenuated to -19 dBm, but this deteriorates the sensitivity my the same amount. Is this relevant depends on band noise level.

Of course you can manipulate the dynamic range figures e.g. by using a PSK bandwidth, thus the noise floor will drop, the intermodulation products can be dropped to this level by dropping the offending signal levels relative to the IP3 point.

The third order intermodulation question is very relevant when a large number of offending signals can produce intermodulation of m*f1+/-n*f2 falling on the _desired_ receiving frequency. This is typically the situation when a large number of strong signals are allowed to enter the mixer (e.g. one or more broadcast bands). Thus, it appears as if even +30 dBm IP3 is not sufficient if very wide input filters are used.

However, the question of an multi-multi contest station with multiple transmitters and antennas are on the same site is a bit different. There are only a very few, but very strong signals at the receiver input, but the likelihood of generating 3rd order interfering signals of 2f1+/-f2 falling on the desired receiver frequency is quit unlikely and can usually be avoided by coordination between the operators.

Thus, the previous 3rd order analysis is not very relevant for this situation. However, 5th and higher order products can be strong enough to be above the noise floor.

However, on such contest sites, transmitter oscillator phase noise directly and the reciprocal mixing of the transmitter carrier mixing with the phase noise of the receiver LO and the receiver blocking will cause the most problems.

With only one signal on each band (as the contest rules usually only allow for a multi-multi contest station) the problems can reduced with high power bandpass filters (installed between the rig and the linear amplifier). Such filters were described a few years back in the QST and help to reduce both the transmitter phase noise to other bands and reduce strong carrier signals from other bands that could cause desensing or reciprocal mixing with the receiver local oscillator.

In such situation, the IP3 level is not so relevant.

Paul OH3LWR

3428. Re: Antenna Basics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 12:04:56 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ursublsdfctp32@corp.supernews.com>
Source record: 40391

It'll be difficult to get a good answer here because for most hams antennas are multiple trade-offs. The best compromises for you depends on how you want to use the antenna and what kinds of restrictions you have at your particular location.

All else being equal, a vertical will give you more low angle radiation and perform better for long distances. A horizontal dipole will have more high angle radiation and be better for closer in work. The problem is that things are not usually equal and that affects your choices. 1/4 wave verticals need a good radial system. Radials need to be 1/4 wave long. Your 6-foot or even 15-foot long radials won't do much on 80 meters. As a general rule, the lower in frequency you go, the more problems you are going to have getting a good low resistance ground for your vertical.

Any antenna that is physically short will require a loading coil to bring it into resonance. Loading coils equal resistance and loss. The farther from the feed point you place the loading coils, the less the loss. Loading a vertical at the base gives you the most loss in the loading coil. Moving the coil higher up on the antenna reduces the loading coil loss.

As someone suggested, a dipole with open-wire feeders and a tuner is a good general purpose, all band antenna. The problem you may experience here is that to be effective, the dipole must be at least 1/2 wave long on the lowest frequency you intend to operate.

3429. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 13:07:26 UTC
From: n2ey@aol.com
Message-ID: <20021029080726.28322.00000135@mb-fy.aol.com>
Source record: 40392

In article <4e5srugf585kojg94rbk6vrtlm116polrj@4ax.com>, Paul Keinanen
<keinanen@sci.fi> writes:

>On 26 Oct 2002 22:09:05 GMT, n2ey@aol.com (N2EY) wrote:
>
>
>>End result is that under modern-day HF amateur receiving conditions, some
>older
>>designs will outperform newer designs of equivalent cost and complexity.
>>
>>Here's an example:
>>
>>http://www.arrl.org/tis/info/pdf/020910qex036.pdf
>>
>>Note that some of the best performers do not use frequency synthesis or
>>up-conversion. In fact, the modified R-4C that appears to be the overall
>>champion
>>is a design more than 30 years old, using vacuum tubes (!) for most of the
>>stages.
>
>Did you actually read that paper ?

Yes.
>
>It lists three separate R-4C versions, two original (one with tube,
>the other with FET second mixer) and a heavily modified. Some
>parameters of the original versions were even worse than those of the
>Icom IC-751A.

Agreed. Did you see what the modifications were? Replacement of the pentode
mixer with a modern diode mixer was one big change that made a lot of
difference. Use of aftermarket filters was another.
>
>It was not clear at what bandwidth the noise floor of all the
>receivers were measured, which affects the IMD DR.
>
>The heavily modified R-4C contained new mixers, extra amplification to
>compensate for the losses in the new mixer and also contained a 600 Hz
>filter, which drops the noise floor and larger dynamic ranges can be
>quoted.

All of the changes to the R-4C were things that were available to the designers
of the other rigs.

>Claiming that this excellent performance is _only_ due to the
>good original design (although a clean oscillator definitively helps).

The point is that the design is NOT extensively changed from the original. The design philosophy (single conversion, premixer LO generation, selectivity as close to the antenna as practical) was not changed at all.
>
>>The Elecraft K2 is a low-cost single conversion design, yet it compares
>>well with designs costing several times as much.
>
>Yes, this seems to be a very good modern design.

But - the K2 is a single-conversion design, using a fixed first IF of 4.915 MHz! It also uses a low-noise PLL in the LO. The K2 LO is relay-switched (latching relays) and operates in the HF range (~ 6 to 25 MHz). It is probably the simplest and least expensive of the current-production rigs tested.

73 de Jim, N2EY

3430. Wanted: 50 ohm male SMA termination

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 13:55:30 UTC
From: ae517@FreeNet.Carleton.CA
Message-ID: <apm40iaml1@freenet9.carleton.ca>
Source record: 40393

I'm looking for a 50 ohm termination, male SMA type to
use with my return loss bridge. It should be good to around
2.5 GHz.

Any ideas where I can find one reasonably priced?

thanks
--
73 de va3rr/aa8lu
http://www.qsl.net/va3rr

3431. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 14:16:14 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0210290616.60e66cae@posting.google.com>
Source record: 40394
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

Hi Jan-Martin,
an interesting construction was published at
http://hamradio.online.ru/cap2.htm (in Russian - sorry). It might be
made even more simple: rotor from a glass or plastic tubing approx. 50
- 100 mm dia, with alu or copper foil glued inside. Stator from a
piece of sheet metal, formed to touch the outer surface of the rotor.

BR from Ivan OK1SIP

3432. Re: Wanted: 50 ohm male SMA termination

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 15:43:51 UTC
From: samsvl@nlr.nl
Message-ID: <Xns92B6AA31F44A2samsvlnlrnl@137.17.96.14>
Source record: 40395

Hi Russ,

Check
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1780381127

I bought another lot from this seller, excelent service.

Sam

ae517@FreeNet.Carleton.CA (Russ Renaud) wrote in
news:apm40iaml1@freenet9.carleton.ca:

> I'm looking for a 50 ohm termination, male SMA type to
> use with my return loss bridge. It should be good to around
> 2.5 GHz.
>
> Any ideas where I can find one reasonably priced?
>
> thanks
> --
> 73 de va3rr/aa8lu
> http://www.qsl.net/va3rr
>

3433. Re: Wanted: 50 ohm male SMA termination

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 16:17:28 UTC
From: ae517@FreeNet.Carleton.CA
Message-ID: <apmcaolcm1@freenet9.carleton.ca>
Source record: 40396

Sam Storm van Leeuwen (samsvl@nlr.nl) writes:
> Check
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1780381127
>
> I bought another lot from this seller, excelent service.

Thanks Sam.

You've solved my problem...

--
73 de va3rr/aa8lu
http://www.qsl.net/va3rr

3434. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 16:38:01 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3DBEB969.54735289@clifto.com>
Source record: 40297

Paul Keinanen wrote:
> TRF is an example of obsolete technology, which is not very practical
> these days.
> [snip]
> Adequate front end selectivity in front of the mixer will reduce the
> amount of intermodulation products generated between the RF signals

Seems to me TRF is one good way to provide adequate front-end selectivity.

--
It is better to light just one little candle than to curse the darkness.
If everyone lit just one little candle, the EPA would outlaw candles.

3435. Re: Voltage drop across Selenium rectifier bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 20:02:57 UTC
From: fmmck@aol.com
Message-ID: <20021029150257.13323.00000094@mb-cj.aol.com>
Source record: 40298

<< Will use 4x 1N4006 in the new supply >>

Jan-Martin-

You also need to consider whether the 1N4006 reverse voltage is adequate.
Isn't that a 600 volt diode?

When an individual diode is reverse biased, the peak voltage is equal to the peak AC value plus the voltage on the filter capacitor, which might also equal the peak AC value. For rough estimate, measure the AC voltage to the bridge and multiply by 3 (actually 2.83). Then add a little for surge protection.

73, Fred, K4DII

3436. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 21:52:25 UTC
From: averyfineman@aol.com
Message-ID: <20021029165225.10423.00000216@mb-mh.aol.com>
Source record: 40301

In article <3DBEB969.54735289@clifto.com>, "Clifton T. Sharp Jr."
<clifto@clifto.com> writes:

>Paul Keinanen wrote:
>> TRF is an example of obsolete technology, which is not very practical
>> these days.
>> [snip]
>> Adequate front end selectivity in front of the mixer will reduce the
>> amount of intermodulation products generated between the RF signals
>
>Seems to me TRF is one good way to provide adequate front-end selectivity.

To evaluate that for practical applications requires thinking of Q and a
band's bandwidth...and tracking error even with equal-section ganged
variable capacitors...plus where the offending signal is located in
frequency...and the intermodulation characteristics of any active
devices ahead of the first mixer. All of those things go into selection
for adequacy.

A thing to avoid in consideration is the "it was done this (whatever)
way before" nostalgia bias which is emotional, not logical. Electrons,
fields and waves have absolutely no human bias.

The older multiple-gang receiver structures were very impressive from
a mechanical standpoint. Relative to other receivers of the same era,
the more variable gangs, the more "powerful" it seemed. A surplus
military DF receiver in my high school electric shop seemed the
"ultimate in sophistication" when it had FIVE gangs! :-)

Perhaps the most awe-inspiring (to the uninitiated) is the Collins Radio
military R-391 receiver when it is in the automatic selection cycle
of preset frequencies. All sorts of movement, motion as the ganged
inductor cores tune over their own octave ranges, odd-shaped cams
turning at different speeds. Fun to watch the first few times. However,
there is a reason for all of it and that is related to the overall mission
specification of the receiver: general coverage at any frequency from
MF through HF with a resolution of 1 KHz.
It doesn't have "bands" as such, just inductor tuning over
approximately an octave (or 2:1), the choice of variable inductor over
variable capacitors a compromise of parallel impedance better than
variable capacitor tuning over a 3:1 frequency range versus the ability
to wind slug-tuned inductors for linear positioning of resonant
frequency. The whole 390 series were the first of the "digital tuning"
radios thus everything (including the front-end TRF) in tuning related to
linear-frequency positioning. The linear-frequency inductance change
was better than trying to achieve the same thing with linear frequency

change variable capacitors. The latter would require even more space and mechanical complexity...and higher cost with a lower MTBF. The actual tracking of the tuned RF sections ahead of the 390 series' first mixer to its first LO is poorer than with an equivalent variable capacitor (by personal measurement of several) and is very roughly equivalent to two isolated parallel L-C's response having a Q of about 25 to 30. [on HF above 4 MHz, not meaured below that] However, the "first IF" range is at a greater frequency distance, so much so that conventional tracking equations (for ganged capacitors) cannot be used and the resulting mix products with lower IP3 values do not affect operation all that much. About the only thing suffering is sensitivity, in the 3 to 5 microvolt range on HF for 10 db S:S+N on AM.

For receivers having small-percentage bandwidth band selections (not general-coverage), selectivity can be done quite adequately with fixed-tuned L-C RF sections on HF...and on up to VHF and UHF. Some quick calculation with tuned circuits will show that Qs of 40 or so don't NEED to be trimmed by any variable, either L or C. Out-of-band selectivity will remain nearly the same whether or not the L or C is trimmed/tuned over small-percentage width bands.

All the selectivity ahead of the mixer will be to no avail if the active device in the RF amplifier has low equivalent IP3 due to intermod problems of its own. On the other hand, eliminating an RF amp will reduce sensitivity; first mixer conversion is at least -6 db using a high-IP3 diode mixer. Just one more compromise to consider.

If the whole purpose of the TRF was for far-off resonance selectivity, that can be accomplished in several ways and aren't necessarily aided by gang-tuning or with tracking of RF with the LO.

Len Anderson
retired (from regular hours) electronic engineer person

3437. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 21:52:28 UTC
From: averyfineman@aol.com
Message-ID: <20021029165228.10423.00000217@mb-mh.aol.com>
Source record: 40300

In article <8v7sruc7mb64i5vormkmameh928bfatmrd@4ax.com>, Paul Keinanen
<keinanen@sci.fi> writes:

>On 27 Oct 2002 19:32:50 GMT, averyfineman@aol.com (Avery Fineman)
>wrote:
>
>> With some effort, any designer can put together a receiver front-
>> end with an IP3 of at least +30 dbm, using Schottky mixer diodes
>> and a very high level local oscillator injection (I've done it at work).
>
>I assuming you are referring to diode ring mixers like SRA-1H, which
>require +17 dBm (50 mW) of LO power and which has a 6 dB loss/noise
>figure and also assume that the +30 dBm is output (not input) IP3.

For other readers who may be confused by terms:

IP3 or Third-Order Intercept is really a graphical construct based on
output as a result of 2nd harmonic plus/minus fundamental of the
inputs. I say "graphical construct" since the IP3 is an intercept of
the "normal" slope of fundamental input frequencies' mix levels and
the steeper slope of 2nd harmonic plus/minus fundamental products
from inputs. For the steeper slope, either input can have the 2nd
harmonic content such that the sum/difference with the other input
results in the mixing product.
The intercept point (IP) is equivalent to either input being at the
level indicated. The graphical plot is X-Y with "RF input" on one
axis and "LO input" on the other axis. Actual output levels versus
input will depart from a straight line rather well before reaching any
IP3, a result of compression in conversion due to many other
factors. As a rule of thumb, linear input versus output will happen
from nothing on up to 20 db below the IP3. Since the compression
in conversion varies due to many factors, the graphical intersection
(the intercept) is easier to see than just looking at tabulated
numbers. It is just the intersection of the slopes of the two curves.

====

In my high-IP3 task, the LO power was slightly more and the high
input level roughly 15 db below 1 Watt (+30 dbm). Conversion loss
at low levels was between 7.7 and 8.0 db...not swift but one of
those compromises in the time available. :-)
The application required the receiver to remain in operation
even when a nearby (physical closeness of separate antennas)
transmitter was operating on a different carrier frequency.

>Some calculations can be made of the expected performance. Assuming IF
>amplifier noise equivalent noise floor in the SSB bandwidth of -135
>dBm (including diplexer and filter losses) two undesired mixer output
>signals at -25 dBm, the mixer 3rd order products would be at -135 dBm,
>so the ultimate dynamic range in the SSB bandwidth would be 110 dB.
>
>Converting these figures to the mixer input, the offending tones are
>at -19 dBm (25 mV or S9+54 dB) and intermodulation products an noise
>floor at -129 dBm (0,8 uV). Assuming 10 dB SNR, the sensitivity would
>be about 2,5 uV.
>
>Interfering signals can be stronger than -19 dBm, thus, the IMD
>dynamic range will deteriorate rapidly. Alternatively the strong
>interfering signals can be attenuated to -19 dBm, but this
>deteriorates the sensitivity my the same amount. Is this relevant
>depends on band noise level.

...OK, I'll take those numbers at face-value, too lazy to do the
plotting (and I ran out of quadrille paper). :-)

For other confused readers, again: The slope of the 3rd Order
input is steeper than the normal mix product slope, so the
offending input level would be higher than the desired level.

>The third order intermodulation question is very relevant when a large
>number of offending signals can produce intermodulation of m*f1+/-n*f2
>falling on the _desired_ receiving frequency. This is typically the
>situation when a large number of strong signals are allowed to enter
>the mixer (e.g. one or more broadcast bands). Thus, it appears as if
>even +30 dBm IP3 is not sufficient if very wide input filters are
>used.

Whoa...the slope of 2*f1 +/- 2*f2 or 3*f1 +/- 1*f2 is steeper than
2*f1 +/- 1*f2...it is 4th Order, not 3rd, so the offending signal level
versus desired would be greater compared to a very low desired
signal level. It is easier to calculate LO second harmonic plus/minus
desired fundamental (or vice-versa) in terms of mix products and see
if they fall into the IF range. Zero-beat or near that are the ones that
can be heard.
Yes, I know that other harmonics in different mix Orders are
possible, but their occurrance becomes more rare as the Order is
increased...and the offending signal levels would be strong.
Decades ago I came across a very quick method of checking
for undesireable mixer products in Electronics magazine, taking
the lowest over the highest frequencies as a fraction less than 1.
Possible trouble from zero-beats would happen when harmonics
of each resulted in a fraction having both an integer numerator
and denominator; i.e., "1/2," "2/3," "3/5" and so on. The Order
would be, respectively, 3rd, 5th, 8th above. As the Order
increased, the mix product level would decrease.

>However, the question of an multi-multi contest station with multiple
>transmitters and antennas are on the same site is a bit different.

>There are only a very few, but very strong signals at the receiver
>input, but the likelihood of generating 3rd order interfering signals
>of 2f1+/-f2 falling on the desired receiver frequency is quit unlikely
>and can usually be avoided by coordination between the operators.
>Thus, the previous 3rd order analysis is not very relevant for this
>situation. However, 5th and higher order products can be strong enough
>to be above the noise floor.

Please avoid generalities there. :-) Antenna fields' levels fall rather rapidly beyond the near-field...and those depend on the transmitter levels going into the antenna.

What I've observed on very strong nearby signal levels is nearly always just plain overload on a receiver input that can act as another LO, giving a true desensitization. This can be acute with sharp-cutoff tube RF amplifiers, almost as if they had a DC bias applied with CW signals. That isn't any intercept point problem. That's just blocking...but it is fairly easy to determine approximate levels ahead of time. It's also easy to test.

>However, on such contest sites, transmitter oscillator phase noise
>directly and the reciprocal mixing of the transmitter carrier mixing
>with the phase noise of the receiver LO and the receiver blocking
>will cause the most problems.

I'll disagree with the "phase noise" inclusion above until proven otherwise by a reference and experiment.

Phase noise has a definite effect on QAM signals and BER values but such signals are hardly used in amateur communications. Phase noise can show up as incidental FM on VHF and above FM transmitters in ham bands but that is at a very LOW level compared to the modulation. Phase noise can be pronounced in some DDS designs or fractional-N synthesizers, particularly from aliasing, but that is an inherent to equipment thing and not what we are talking about.

>With only one signal on each band (as the contest rules usually only
>allow for a multi-multi contest station) the problems can reduced with
>high power bandpass filters (installed between the rig and the linear
>amplifier). Such filters were described a few years back in the QST
>and help to reduce both the transmitter phase noise to other bands and
>reduce strong carrier signals from other bands that could cause
>desensing or reciprocal mixing with the receiver local oscillator.

I'll bring up another little point to investigate: Linearity of finals. They've become commonplace in amateur transmitters for all modes but they aren't inherently "linear." There is always some distortion in any final amplifier (regardless of bias class) but that can be found by a 60 db dynamic range (minimum) spectrum analyzer with passive attenuation between analyzer and transmitter.

Additionally, nearly all RF signal generators can output +10 dbm,
even the Heathkits. :-) With a signal generator it's a fairly easy
thing to crank it around on all bands to see if a receiver is really
performing as advertised in selectivity and intermodulation.

In a multi-station contest setup, 1 KW = +60 dbm and a second
receiver ought to have at least 60 db of total attenuation from
that source to avoid going above 0 dbm input interference.

>In such situation, the IP3 level is not so relevant.

True. :-)

Len Anderson
retired (from regular hours) electronic engineer person

3438. Re: Voltage drop across Selenium rectifier bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 21:52:52 UTC
From: la8ak.xnd@online.no
Message-ID: <3dbf01b1.11676406@news.online.no>
Source record: 40299

On Tue, 29 Oct 2002 00:42:25 -0400, Bill M <"exray"@no
spam-caribe.net> wrote:

>Roy Lewallen wrote:
>>
>> Hm, I remember that when replacing a selenium stack with a modern diode,
>> a resistor was put in series with the modern diode. The value of the
>> resistor, as I recall, was determined by the number and area of the
>> plates in the selenium rectifier. If no one recalls how to determine the
>> resistor value, someone can probably find it in a handbook from
>> somewhere in the '60s, or one of the books on converting World War II
>> surplus equipment that were common around that time. The resistor value
>> and an estimate of the radio's current drain will get you the drop.
>>
>> Roy Lewallen, W7EL
>
>I recall 2-3 volts PER SECTION being typical of a selenium rectifier.
>As Roy says, it might be easier just to estimate the current and choose
>the resistor accordingly since the 1N400* are predictable.
>-BM

should have mentioned it, it is a more modern type, made in the 60's
in Germany and type is AEG B250C75K41 which is a small hermetically
sealed square unit in aluminium and bakerlite, so you can't really
calculate the area too easy

The type number for the bridge says 250V 75mA

73
Jan-Martin
--
remove ,xnd to reply

3439. Ramsey Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-29 23:59:22 UTC
From: Norman Franklin <normanf@pacbell.net>
Message-ID: <3DBF2153.A9EA82B3@pacbell.net>
Source record: 40305

I know that Ramsey kits are not well thought of by some. But I was wondering if any one
knew of a mail list or web site/page that has modifications, or improvements to these kits.
Thanks in advance.

Norman KG6NMT

3440. Quick follow up (was: How can you screw up a Dummy Load?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-30 01:25:18 UTC
From: Dave <local_42@hotmail.com>
Message-ID: <2yGv9.7073$wG.23742@rwcrnsc51.ops.asp.att.net>
Source record: 40302

I appreciate all the replies to my question. I really didn't expect quite so many. I have not returned to the parts house yet, but will soon. Armed with a little more knowledge and thought I'm sure even I can make this work. I think both my construction technique and choice of materials adversely effected the outcome. I'm very excited about radio now and soon it will be time to hit the books and take the test, I have no excuse not to! Hmm.....perhaps a career change is in my future.

Dave

"Dave" <local_42remove@hotmail.com> wrote in message news:LEXu9.131629$zE6.459703@rwcrnsc51.ops.asp.att.net...
> Subject line says it all. Finally broke down and bought myself a decent
> soldering station and figured I'd whip up a dummy load for my first project.
> What can be more simple than a chaises mount UHF connector, a couple pieces
> of scrap copper board, and a hand full of resistors?
>
> Cut the board into two pieces 2" x 2 1/2"
>
> Soldered each of the resistors to the boards. Used (20) 2W flame proof
> carbon resistors rated at 1KOhm 2%.
>
> I read 47 Ohms on the board. By eliminating 2 of the resistors I have 49
> Ohms.
>
> Great I say, I'm with in 2% of my target resistance. Plug her into my meter
> and calibrate the meter to read SWR and I read a whopping 10!!!!
>
> What am I not understanding about the simplest piece of equipment in my
> shack? Anyone out there give me a clue as to what I might have done wrong? I
> know the standard carbon resistors aren't the best for a dummy load
> (something about inductance right?) But from what I've read they should work
> fine for my purpose, and with my limited knowledge of electronics I need a
> push in the right direction. Very few web sites seem to talk about dummy
> loads (can't blame them, how much do you need to know about a bank of
> resistors?)
>
> Dave
>
>

3441. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-30 02:15:49 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <tlburuko3gnk5dajlthqg5q52lab5l21aa@4ax.com>
Source record: 40303

On 29 Oct 2002 21:52:28 GMT, averyfineman@aol.com (Avery Fineman)
wrote:

> Decades ago I came across a very quick method of checking
>for undesireable mixer products in Electronics magazine, taking
>the lowest over the highest frequencies as a fraction less than 1.
>Possible trouble from zero-beats would happen when harmonics
>of each resulted in a fraction having both an integer numerator
>and denominator; i.e., "1/2," "2/3," "3/5" and so on. The Order
>would be, respectively, 3rd, 5th, 8th above. As the Order
>increased, the mix product level would decrease.

Thanks for the idea. About a decade ago I was chasing some 10-15th
order intermodulation products on a repeater input, which was located
in a tower with several broadcast and communication transmitters, the
calculation took quite a while in those days :-). Finally, the culprit
was some rusty bolts in a supporting structure. With high field
strengths, quite high order products can be created.

>>However, on such contest sites, transmitter oscillator phase noise
>>directly and the reciprocal mixing of the transmitter carrier mixing
>>with the phase noise of the receiver LO and the receiver blocking
>>will cause the most problems.
>
>I'll disagree with the "phase noise" inclusion above until proven
>otherwise by a reference and experiment.
>
>Phase noise has a definite effect on QAM signals and BER values
>but such signals are hardly used in amateur communications.
>Phase noise can show up as incidental FM on VHF and above FM
>transmitters in ham bands but that is at a very LOW level compared
>to the modulation.

I think that you are confusing two things. A very bad phase noise
performance can cause incidental FM and bit errors even in a single
signal condition (only the transmitter and receiver on the band)
regardless of signal strength.

However, a strong external signal can act as a local oscillator and
mix with the phase noise sidebands of the actual local oscillator,
some of these reciprocal mixing products will fall into the IF
bandwidth increasing the effective noise floor. This affects all
modulations and requires strong offending signals.

This can be observed in congested antenna sites when notch duplexers
are used in repeaters. While the notch tuned to the own _transmitter_

frequency in the receiver line (connected to a common repeater antenna) will effectively block the own transmitter signal from the receiver, radiation from other antennas will get into the receiver with only minor attenuation. In many cases, the noise problems in the receiver can be reduced by replacing the receiver PLL with a clean crystal oscillator and a multiplier, thus reducing the reciprocal phase noise mixing products.

The repeater own transmitter line also requires a notch tuned to the repeater _receiving_ frequency to block any transmitter phase noises going from the transmitter to the common antenna and back to the receiver.

So there are really two separate problems with oscillator phase noise.

One with deviations comparable to the actual signal affecting the modulation constellation regardless of signal level (not relevant in this discussion).

The other is due to weak (60-120 dBc/Hz) below carrier noise sidebands which can spread out several megahertz from the carrier, but when the carrier is in the +10 dBm to +60 dBm range the sidebands can have considerable power (-130 dBm/Hz .. 0 dBm/Hz) above the thermal noise (-174 dBm/Hz), which can directly or trough reciprocal mixing cause all kind of reception problems.

>>With only one signal on each band (as the contest rules usually only
>>allow for a multi-multi contest station) the problems can reduced with
>>high power bandpass filters (installed between the rig and the linear
>>amplifier). Such filters were described a few years back in the QST
>>and help to reduce both the transmitter phase noise to other bands and
>>reduce strong carrier signals from other bands that could cause
>>desensing or reciprocal mixing with the receiver local oscillator.
>
>I'll bring up another little point to investigate: Linearity of finals.
>They've become commonplace in amateur transmitters for all modes
>but they aren't inherently "linear." There is always some distortion
>in any final amplifier (regardless of bias class) but that can be found
>by a 60 db dynamic range (minimum) spectrum analyzer with passive
>attenuation between analyzer and transmitter.

The "linear" amplifiers will produce all kinds of intermodulation components from a multiple frequency base band signal (such as speech) and harmonics (filtered out by the transmitter LPF). However, it does not generate much phase noise of its own, only amplify existing input broadband phase noise and possibly create some low level reciprocal mixing between the signal and the input phase noise. Thus, a bandpass filter between the rig and the linear amplifier will reduce the amount of phase noise reaching the linear amplifier and also reduces the opportunities for reciprocal mixing in the linear amplifier.

>In a multi-station contest setup, 1 KW = +60 dbm and a second
>receiver ought to have at least 60 db of total attenuation from
>that source to avoid going above 0 dbm input interference.

Reaching a 60 dB isolation in a small space can be hard, unless two vertical antennas are stacked one above the other.

At MF and lower HF, the antenna near field extends to quite a few meters, so calculating the field strength can be problematic if you are in the near field.

Paul OH3LWR

3442. Re: Voltage drop across Selenium rectifier bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-30 03:03:29 UTC
From: Bill M <exray@no>
Message-ID: <uruirg5ic0t591@corp.supernews.com>
Source record: 40304

J M Noeding wrote:

> should have mentioned it, it is a more modern type, made in the 60's
> in Germany and type is AEG B250C75K41 which is a small hermetically
> sealed square unit in aluminium and bakerlite, so you can't really
> calculate the area too easy
>
> The type number for the bridge says 250V 75mA
>
> 73
> Jan-Martin
> --

The reverse voltage rating is on the order of 20-30 volts per section so
you can make an estimate of how many sections are in the series stack.
-Bill M

3443. Re: Quick follow up (was: How can you screw up a Dummy Load?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-30 04:49:50 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3DBF6502.405F8E94@cox.net>
Source record: 40306

My QRP dummy load is much the same. At one of my parts houses, I can
get 100 resistors for $1. So I got 100 5K, 1/4w resistors. Works
great! All 100 resistors in parallel is 50 ohms, with a rating of 25w.
However, it was a lot of work to line up all the holes with all the
resistors!

Good Luck!

- Dan Tayloe, N7VE; Phoenix, Az; Az ScQRPions

Dave wrote:
>
> I appreciate all the replies to my question. I really didn't expect quite so
> many. I have not returned to the parts house yet, but will soon. Armed with
> a little more knowledge and thought I'm sure even I can make this work. I
> think both my construction technique and choice of materials adversely
> effected the outcome. I'm very excited about radio now and soon it will be
> time to hit the books and take the test, I have no excuse not to!
> Hmm.....perhaps a career change is in my future.
>
> Dave
>
> "Dave" <local_42remove@hotmail.com> wrote in message
> news:LEXu9.131629$zE6.459703@rwcrnsc51.ops.asp.att.net...
> > Subject line says it all. Finally broke down and bought myself a decent
> > soldering station and figured I'd whip up a dummy load for my first
> project.
> > What can be more simple than a chaises mount UHF connector, a couple
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> > of scrap copper board, and a hand full of resistors?
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> > Cut the board into two pieces 2" x 2 1/2"
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> > Soldered each of the resistors to the boards. Used (20) 2W flame proof
> > carbon resistors rated at 1KOhm 2%.
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> > I read 47 Ohms on the board. By eliminating 2 of the resistors I have 49
> > Ohms.
> >
> > Great I say, I'm with in 2% of my target resistance. Plug her into my
> meter
> > and calibrate the meter to read SWR and I read a whopping 10!!!!
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> > What am I not understanding about the simplest piece of equipment in my
> > shack? Anyone out there give me a clue as to what I might have done wrong?

> I
> > know the standard carbon resistors aren't the best for a dummy load
> > (something about inductance right?) But from what I've read they should
> work
> > fine for my purpose, and with my limited knowledge of electronics I need a
> > push in the right direction. Very few web sites seem to talk about dummy
> > loads (can't blame them, how much do you need to know about a bank of
> > resistors?)
> >
> > Dave
> >
> >

3444. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-30 11:01:44 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-3010020602550001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40307

In article <urs9t3he4l0810@corp.supernews.com>, Bill M <"exray"@no spam-caribe.net> wrote:

> Joe Leikhim wrote:
> >
> > At least you got to keep your sense of humor!
>
> Yeah, its funny because the same feeling made itself known 10 years
> agos, 20 years ago, etc.
> Crappy business owners, offshore operations, wank universities are
> nothing new.
> Neither are the office secretary and the little red sports car. And
> geez, we now have Viagra!
> I'm not picking on the poster, but this is the classic "male
> menopause". You work your butt off for 20 years and get savvy, your
> employer (who was the greatest when you were hired in 1987) turns out to
> be a 'player' and now you walk around unemployed (often by personal
> conviction) because some 22-year old SriLankan kid has bettered you.
> There's no cure for this. When you fire the 9-5 work you have to be
> ready to whore yourself as a consultant/contractor. A totally different
> bizness but the personal rewards can be great if you have the skills and
> do it right. Otherwise, a quick review of HMOs and personal health
> insurance plans for your *now* declining years can be a rude awakening
> that makes sucking to corporate crapola for a few more years to indeed
> be worth the benefits.
> Now that I have fired all of my potential employers....?
> -ex

I did not see this when I got into RF design as an engineer in 1977. I didn't even see this when I was a technician in the early 1970's. Every indicator when I was young was that the electronics industry was nothing but up up up. All my fellow engineers graduated from US engineering schools. There were no off shore facility that you were dealing with. Your factory in your town was building your product for the local market. Don't blame male menopause on this. If you want to believe that there is some kind of future in electronics in the US, then by all means pursue this route. More and more of the US manufacturing centres are closing. A sizable number of electrical design centers are now not even in the US. Go out into this world and look for yourself. You won't find, if you're objective, a similarity at all with that of the past, in any decade. The Chinese electrical engineering design centres are expanding rapidly now and the ones in the US which used to be operated by companies like TI, Burr Brown, TRW, Motorola, Westrex, etc are going the way of the horse drawn buggy.

As far as the contracting route goes, why should I, as an employer, hire a contractor to do my rf design when I can use a Chinese design centre for the same or less money and, at a tax break, to do my work? They have all the latest analyzers, anechoic chambers, software and other tools that some guy working from his home doesn't have, no matter how expert he is. Even if I were the best and could get $200 per hour to contract, how can I afford a Cadence license to do capture, layout, simulation, and fabrication when these cost $15,000? Not only this, even if I have a Cadence service agreement, who is going to fix the normal problems encountered in the design environment on a timely basis? If I have one license and the Fortune 500 or Chinese company has 35, who gets first attention by the HelpDesk? Reality has to set in when addressing these "incidentals" especially when you're talking about going from the bottom of S band to the top and beyond. Go ahead! Try laying out a board for 5.8 GHz using PCB123 on your Wintel box and getting the Po to be 37 dbm with stability even into a 14 db return loss.

Bottom line: as much as it pains me, if I had it to do over again and was worried about this point in my career, I would have been a civil engineer engineer instead of electrical. Someone will always need a bridge or road constructed. I wouldn't even need to worry about the locality question. They are needed everywhere, even in the US.

Steve

3445. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-30 14:13:54 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3DBFE922.2074B289@clifto.com>
Source record: 40308

carltons wrote:
> Bottom line: as much as it pains me, if I had it to do over again and was
> worried about this point in my career, I would have been a civil engineer
> engineer instead of electrical. Someone will always need a bridge or road
> constructed. I wouldn't even need to worry about the locality question.
> They are needed everywhere, even in the US.

If I had to do it all over again, I'd go into some economics-related field.
People tend to pay you well when you have your hands on their money. :)
I might spend 40 hours a week doing something less than lovable, but I'd
have 128 hours a week, and a whole buttload of money, to have fun with.

--
It is better to light just one little candle than to curse the darkness.
If everyone lit just one little candle, the EPA would outlaw candles.

3446. Re: Ramsey Kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-30 17:30:42 UTC
From: lc <larryc@northwest.com>
Message-ID: <3DC01742.901BE874@northwest.com>
Source record: 40309

yes, they are "low" cost and have a "lean design"..so the buyer gets what
they pay for.

i've used the 10m FM rx kits. More than functional but the crystal was not
included.

==========

Norman Franklin wrote:

> I know that Ramsey kits are not well thought of by some. But I was
> wondering if any one
> knew of a mail list or web site/page that has modifications, or
> improvements to these kits.
> Thanks in advance.
>
> Norman KG6NMT

--
Welcome to Oregon - "The Food Stamp State"

3447. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-30 20:20:09 UTC
From: k7itm@aol.com
Message-ID: <3200347.0210301220.2507006f@posting.google.com>
Source record: 40310

motsteve@attbi.com (carltons) wrote in message
news:<motsteve-30100206025500001@c-66-176-144-254.se.client2.attbi.com>...
> You won't find, if you're
> objective, a similarity at all with that of the past, in any decade.

Bull.

Cheers,
Tom

3448. Re: silk screening

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-30 20:29:45 UTC
From: aruder@pipeline.com
Message-ID: <appis4hsh2@slb0.atl.mindspring.net>
Source record: 40311

Jim Weir <jim@rst-engr.com> wrote:

>And if you DO have ideas, would you please post them here for everybody to see?
>I've been trying to figure out a cheap and dirty method of doing this for years
>and other than "buy the screen, buy the frame, buy the photo gear, buy the
>paint, buy the squeegee...etc." I've come up dry.

>Suggestions REALLY appreciated, especially those dealing with ways of doing
>one-offs without all the attendent setup mess.

>Jim

>"GaryH" <garyh@bellsouth.net>
>shared these priceless pearls of wisdom:

>->Anyone have any ideas on how to do your own
>->silk screening of homebrew projects
>Jim Weir, VP Eng. RST Eng. WX6RST
>A&P, CFI, and other good alphabet soup

FWIW, something I used to do that I picked up in an electronics research
dept I worked in back in the dark ages before lights were discovered, was
to take my wife's used stockings, etc, with a relatively fine denier, and put
on a frame made of 1X2 planed wood. For my work that would last years..

So then I would have a "sheet" of "silk" and I would write on it with soap.
After the soap dried, I would spray the silk with a filler paint, and after that
dried, I would wash out the soap.

This was okay for relatively crude work, but it can be fined down using
rubber stamps fo lettering, or laying out something on paper and putting
the sreen on it and tracing out the lines.

For real fine lines, I used a lettering pen (yes, with soap) and a rule laid
across the frame to hold me straight.

Again, FWIW.

And it was a long time ago.

3449. Re: silk screening

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-30 20:58:38 UTC
From: James Horn <jimhorn@svn.net>
Message-ID: <3dc0560d@news.svn.net>
Source record: 40312

Jim Weir <jim@rst-engr.com> wrote:

> And if you DO have ideas, would you please post them here for everybody to see?

Hi, Jim!

Having silk screen printed a variety of items back in my youth and college days, what did you want to know? Where to get the supplies? Which ones to use?

I've only done this on paper and card stock and using hand-cut Rubylith resist film, but photo techniques are easy nowadays. And PCs to create the original artwork are lots more capable than they were in '73 (!!).

Here in Santa Rosa, California, the local art supplies shop carries a wide range of the supplies (screen, frames, squeegees, ink, resists, books, etc.). I'm sure the Internet and mail order do so as well.

Let me know what you want to learn - perhaps I can help with the search.

73 -

Jim Horn, WB9SYN (finally working on getting on HF)

3450. FS:SK-410, J.MILLEN COUNTER +

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-30 22:28:22 UTC
From: Heytubeguy <heytubeguy@worllnet.att.net>
Message-ID: <a2Zv9.36931$Mb3.1612851@bgtnsc04-news.ops.worldnet.att.net>
Source record: 40313

SK-410 NIB, ANTENNA NOISE BRIDGE, 4 & 5 PIN SOCKETS, MILLEN TURNS COUNTER,SIMPSON 390 METER,BIRD L.P.FILTER: Do seller search on eBay under heytubeguy

73 Joe

3451. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-30 22:41:54 UTC
From: Walter AG5P <waltercw@accessus.net>
Message-ID: <xOKcnUfis_Ntwl2gXTWcqg@accessus.net>
Source record: 40314

Steve, since you brought up the situation, on an amateur
radio reflector you are getting a varied background bank
of answers with the common denominator of Ham Radio.

If I may inject the first rule of employment in the U.S.,
at least nowadays:
.....It's not what you know, but who you know!.....
Your degree paper/lamb's skin is scratch paper.

Now just think about it, if you want to build bridges then
get on it. Get back in college and take courses and make
some contacts. I think you will find that your OJT is way
more valuable than that academia degree which is usually
courses in ancient history when you get into the real world.
Oh yeah, ok.............guess what, bridge builders have a
need for EE's and RF savvy E's because even the old
spit in the dirt and make concrete profession has gone
hi-tech.

Hey, you will do just fine, at least you know the status
of the profession and want to better yourself.

GL in the contest.....73.....Walter, AG5P

"carltons" <motsteve@attbi.com> wrote in message
news:motsteve-30100206025500001@c-66-176-144-254.se.client2.attbi.com..
.
> In article <urs9t3he4l0810@corp.supernews.com>, Bill M <"exray"@no
> spam-caribe.net> wrote:
>
> > Joe Leikhim wrote:
> > >
> > > At least you got to keep your sense of humor!
> >
> > Yeah, its funny because the same feeling made itself known 10
years
> > agos, 20 years ago, etc.
> > Crappy business owners, offshore operations, wank universities are
> > nothing new.
> > Neither are the office secretary and the little red sports car.
And
> > geez, we now have Viagra!
> > I'm not picking on the poster, but this is the classic "male
> > menopause". You work your butt off for 20 years and get savvy,
your
> > employer (who was the greatest when you were hired in 1987) turns

out to
> > be a 'player' and now you walk around unemployed (often by
personal
> > conviction) because some 22-year old SriLankan kid has bettered
you.
> > There's no cure for this. When you fire the 9-5 work you have to
be
> > ready to whore yourself as a consultant/contractor. A totally
different
> > bizness but the personal rewards can be great if you have the
skills and
> > do it right. Otherwise, a quick review of HMOs and personal
health
> > insurance plans for your *now* declining years can be a rude
awakening
> > that makes sucking to corporate crapola for a few more years to
indeed
> > be worth the benefits.
> > Now that I have fired all of my potential employers....?
> > -ex
>
>
>
> I did not see this when I got into RF design as an engineer in 1977.
I
> didn't even see this when I was a technician in the early 1970's.
Every
> indicator when I was young was that the electronics industry was
nothing
> but up up up. All my fellow engineers graduated from US engineering
> schools. There were no off shore facility that you were dealing
with.
> Your factory in your town was building your product for the local
market.
> Don't blame male menopause on this. If you want to believe that
there is
> some kind of future in electronics in the US, then by all means
pursue
> this route. More and more of the US manufacturing centres are
closing. A
> sizable number of electrical design centers are now not even in the
US.
> Go out into this world and look for yourself. You won't find, if
you're
> objective, a similarity at all with that of the past, in any decade.
The
> Chinese electrical engineering design centres are expanding rapidly
now
> and the ones in the US which used to be operated by companies like
TI,

> Burr Brown, TRW, Motorola, Westrex, etc are going the way of the
horse
> drawn buggy.
>
> As far as the contracting route goes, why should I, as an employer,
hire a
> contractor to do my rf design when I can use a Chinese design centre
for
> the same or less money and, at a tax break, to do my work? They
have all
> the latest analyzers, anechoic chambers, software and other tools
that
> some guy working from his home doesn't have, no matter how expert he
is.
> Even if I were the best and could get $200 per hour to contract, how
can I
> afford a Cadence license to do capture, layout, simulation, and
> fabrication when these cost $15,000? Not only this, even if I have a
> Cadence service agreement, who is going to fix the normal problems
> encountered in the design environment on a timely basis? If I have
one
> license and the Fortune 500 or Chinese company has 35, who gets
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> attention by the HelpDesk? Reality has to set in when addressing
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> "incidentals" especially when you're talking about going from the
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> of S band to the top and beyond. Go ahead! Try laying out a board
for 5.8
> GHz using PCB123 on your Wintel box and getting the Po to be 37 dbm
with
> stability even into a 14 db return loss.
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> Bottom line: as much as it pains me, if I had it to do over again
and was
> worried about this point in my career, I would have been a civil
engineer
> engineer instead of electrical. Someone will always need a bridge
or road
> constructed. I wouldn't even need to worry about the locality
question.
> They are needed everywhere, even in the US.
>
> Steve

3452. Re: RF Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-30 23:31:13 UTC
From: Mike Newman <mnewman@clear.net.nz>
Message-ID: <obq0sukirfgfvqpvfuv1os1cc0bulmmcjk@4ax.com>
Source record: 40315

I looked at the Macom web-site, they had some rf devices with the
prefix PH in the part number, beginning with PH0104, but nothing as
far back as those I am seeking data on.

Thanks for the lead Mike, I'll try some of the microwave designers
here in NZ and see what can be found.

On Mon, 21 Oct 2002 06:16:16 GMT, Mike G. <nospam@my.email.address>
wrote:

>On Sun, 20 Oct 2002 15:43:11 +1300, Mike Newman <mnewman@clear.net.nz> wrote:
>
>>Have found some 1800Mhz linking equipment , and would like some
>>information on the RF transistors, which are marked PH146, PH192, and
>>PH190.
>>
>>I would be grateful for any information on these devices, which could
>>form the basis of a 23cm rig.
>>
>>Thanks
>>
>>Mike
>
>Hi Mike,
>
>I think you have some old PHI transistors there. PHI is short for
>Power Hybrids, Inc. who was bought by M/A-COM years ago. MA/COM was
>bought by AMP (the connector company) and a few years back, Amp was
>bought by the giant Tyco, Inc. So if you can follow all that, you're
>better than most. They are still in Torrence, CA and their URL is:
>
>http://www.macom.com/
>
>Maybe someone there has an old catalog that would have the info on
>the devices you have. I used to keep a LOT of those old catalogs
>around, but with the internet so handy, bound catalogs are getting
>to be a thing of the past.
>
>Hope this gets you a little closer to what you a looking for.
>
>Mike G.

3453. Re: silk screening

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-31 00:31:49 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailnospamorama.com>
Message-ID: <gM_v9.1080$ZT2.252@news.bellsouth.net>
Source record: 40316

Company called:

Dick Blick, http://www.dickblick.com

carries craft supplies, including silk screen materials

--
73,
Chuck
KE4ETH
Remove the obvious from Email.

"James Horn" <jimhorn@svn.net> wrote in message
news:3dc0560d@news.svn.net...
> Jim Weir <jim@rst-engr.com> wrote:
>
> > And if you DO have ideas, would you please post them here for everybody
to see?
>
> Hi, Jim!
>
> Having silk screen printed a variety of items back in my youth and college
> days, what did you want to know? Where to get the supplies? Which ones
> to use?
>
> I've only done this on paper and card stock and using hand-cut Rubylith
> resist film, but photo techniques are easy nowadays. And PCs to create
> the original artwork are lots more capable than they were in '73 (!!).
>
> Here in Santa Rosa, California, the local art supplies shop carries a wide
> range of the supplies (screen, frames, squeegees, ink, resists, books,
> etc.). I'm sure the Internet and mail order do so as well.
>
> Let me know what you want to learn - perhaps I can help with the search.
>
> 73 -
>
> Jim Horn, WB9SYN (finally working on getting on HF)

3454. Re: any Wavetek 3001 gurus??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-31 00:35:28 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <kV_v9.63095$vq2.1923064@news1.east.cox.net>
Source record: 40317

Check the power supply voltages.

When the caps fail, they normally short (tantalums!!). Did
you do an alignment according to the service manual?

Pete

"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3dbbcc34.46261510@news.online.no...
> On Sat, 26 Oct 2002 17:11:03 -0700, "Jim Pennell"
> <NoSpam@killspam.com> wrote:
>
> > I had some 'similar' problems with my wavetek 3000 and it turned out
to
> >be the electrolytic capacitors.
> >
> > As far as I could tell, they had dried out and started to leak
current,
> >enough to disturb the circuit module that was failing.
> >
> > I don't know but you might have a similar problem, the 3001 is also a
> >fairly old model and the capacitors might need replacing in the module
that
> >is showing the fault.
> >
> >
> >
> > Jim Pennell
> > N6BIU
> >
> >
> Didn't see the original poster, but I still make wonders on my 3001 -
> for the last 10 years - with a hammer or dropping it down 10cm
> towards the table when it is UNLOCK or UNLEVELLED
>
> Suppose all those semi-rigid with SMA just makes it worse to tighten
> the connectors properly!
>
> LA8AK
> --
> remove ,xnd to reply

3455. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-31 00:36:20 UTC
From: n2ey@aol.com
Message-ID: <20021030193620.15530.00000212@mb-ct.aol.com>
Source record: 40319

In article <tlburuko3gnk5dajlthqg5q52lab5l21aa@4ax.com>, Paul Keinanen
<keinanen@sci.fi> writes:

>A very bad phase noise
>performance can cause incidental FM and bit errors even in a single
>signal condition (only the transmitter and receiver on the band)
>regardless of signal strength.
>
>However, a strong external signal can act as a local oscillator and
>mix with the phase noise sidebands of the actual local oscillator,
>some of these reciprocal mixing products will fall into the IF
>bandwidth increasing the effective noise floor.

Thanks for explaining more clearly than I did, Paul.

>This affects all
>modulations and requires strong offending signals.

And when the band is full of strong signals of various modulations,(as in a
contest) the apparent rise in the effective noise floor can be enough to drown
out weaker signals - without the receiver actually being "overloaded" by strong
off-frequency signals.

End result is that you can have a receiver that appears to be very sensitive in
the lab, when connected to a signal generator and dealing with just one signal.
But when said receiver is in a real-world environment of a band full of loud
signals, the usable sensitivity is degraded to the point that the weak ones
can't be heard. Meanwhile, another receiver whose phase noise characterisitics
are better but whose "lab" sensitivity is worse manages to hear those weak
signals.
>
>This can be observed in congested antenna sites when notch duplexers
>are used in repeaters. While the notch tuned to the own _transmitter_
>frequency in the receiver line (connected to a common repeater
>antenna) will effectively block the own transmitter signal from the
>receiver, radiation from other antennas will get into the receiver
>with only minor attenuation. In many cases, the noise problems in the
>receiver can be reduced by replacing the receiver PLL with a clean
>crystal oscillator and a multiplier, thus reducing the reciprocal
>phase noise mixing products.

You mean the OLD technology of a crystal oscillator and multiplier chain can be
better in some applications than the NEW technology of a synthesizer? ;-)
>
>The repeater own transmitter line also requires a notch tuned to the
>repeater _receiving_ frequency to block any transmitter phase noises

>going from the transmitter to the common antenna and back to the
>receiver.
>
>So there are really two separate problems with oscillator phase noise.
>
>One with deviations comparable to the actual signal affecting the
>modulation constellation regardless of signal level (not relevant in
>this discussion).
>
>The other is due to weak (60-120 dBc/Hz) below carrier noise sidebands
>which can spread out several megahertz from the carrier, but when the
>carrier is in the +10 dBm to +60 dBm range the sidebands can have
>considerable power (-130 dBm/Hz .. 0 dBm/Hz) above the thermal noise
>(-174 dBm/Hz), which can directly or trough reciprocal mixing cause
>all kind of reception problems.

In the HF case, the strong offending signals may be much closer to the desired signal in frequency, and so their level doesn't need to be so great in order to cause trouble.

The Ten Tec website

http://www.tentec.com

has a decent explanation of the subject with HF examples.

73 de Jim, N2EY

3456. Re: Touch lamp EMF damaging to nearby equipment?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-31 00:36:44 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <wW_v9.63103$vq2.1923496@news1.east.cox.net>
Source record: 40318

No! The RF field is not strong enough to harm anything, but it will
interfere with nearby receivers.

Pete

"Mike Shiva" <icd3SPAMBEGONE@hotmail.com> wrote in message
news:Xns92A96FF959CADjoiuwret9q34thae7@64.154.60.171...
> Hello. I have a small touchlamp, with 3 brightness settings. I've heard
> from other newgroups that touchlamps radiate an EMF/EMI field which can
> interfere with radio equipment.
>
> I often store electronic stuff mere inches from the lamp, like my
> cellphone, Zip disks, MP3 player, etc. Can any equipment like this, turned
> on or off, be damaged (even slightly) by remaining near a touch-lamp for
> long periods of time?
>
> Thanks!
>
> -Mike Shiva
>
> --
> *Remove "Spam Be Gone" from my email address, if you want to email me
> directly. Thanks.
>

3457. Re: Voltage drop across Selenium rectifier bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-31 01:19:55 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3DC0853D.557E731C@rica.net>
Source record: 40320

Fred McKenzie wrote:
>
> << Will use 4x 1N4006 in the new supply >>
>
> Jan-Martin-
>
> You also need to consider whether the 1N4006 reverse voltage is adequate.
> Isn't that a 600 volt diode?
>
> When an individual diode is reverse biased, the peak voltage is equal to the
> peak AC value plus the voltage on the filter capacitor, which might also equal
> the peak AC value. For rough estimate, measure the AC voltage to the bridge
> and multiply by 3 (actually 2.83). Then add a little for surge protection.
>
> 73, Fred, K4DII

The reverse voltage depends on the diode configuration. A each diode
in a 4 diode bridge sees no more reverse voltage than the capacitor
voltage (assuming no load current). Each diode in a 2 diode half
bridge used with a center tapped winding sees twice the capacitor
voltage. Allowance for surge voltages and high line should be added
to these factors.

--
John Popelish

3458. Motorola Channel Elements

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-31 01:23:07 UTC
From: Kent Haase <ijeh99@mb.sympatico.ca>
Message-ID: <SE%v9.3227$b5.16416@news1.mts.net>
Source record: 40321

I have a few of these - various models. Where can I get info on how to use them (other than sticking them in a Motorola radio)? Seems like pinout data is not readily available on the Internet.

Kent VE4KEH

3459. Re: Voltage drop across Selenium rectifier bridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-31 01:58:41 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <us13cfl85nrsf3@corp.supernews.com>
Source record: 40323

For a full wave bridge configuration, 0.9 x the RMS voltage applied to the bridge is the output voltage before application to the filter cap, then you use 1.41 x the RMS output of the bridge = final peak voltage output of the filter cap.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"John Popelish" <jpopelish@rica.net> wrote in message
news:3DC0853D.557E731C@rica.net...
> Fred McKenzie wrote:
> >
> > << Will use 4x 1N4006 in the new supply >>
> >
> > Jan-Martin-
> >
> > You also need to consider whether the 1N4006 reverse voltage is
adequate.
> > Isn't that a 600 volt diode?
> >
> > When an individual diode is reverse biased, the peak voltage is equal to
the
> > peak AC value plus the voltage on the filter capacitor, which might also
equal
> > the peak AC value. For rough estimate, measure the AC voltage to the
bridge
> > and multiply by 3 (actually 2.83). Then add a little for surge
protection.
> >
> > 73, Fred, K4DII
>
> The reverse voltage depends on the diode configuration. A each diode
> in a 4 diode bridge sees no more reverse voltage than the capacitor
> voltage (assuming no load current). Each diode in a 2 diode half
> bridge used with a center tapped winding sees twice the capacitor
> voltage. Allowance for surge voltages and high line should be added
> to these factors.
>
> --
> John Popelish

3460. Re: RF Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-31 02:23:37 UTC
From: "Mike G." <nospam@my.email.address>
Message-ID: <3t41su4iovrm4d60na86a5deb7anqa2thk@4ax.com>
Source record: 40324

Yes, they only have current models on their web site, but you can email them,
or give them a call. They are a pretty good bunch.

Mike G.

On Thu, 31 Oct 2002 12:31:13 +1300, Mike Newman <mnewman@clear.net.nz> wrote:

>I looked at the Macom web-site, they had some rf devices with the
>prefix PH in the part number, beginning with PH0104, but nothing as
>far back as those I am seeking data on.
>
>Thanks for the lead Mike, I'll try some of the microwave designers
>here in NZ and see what can be found.
>
>On Mon, 21 Oct 2002 06:16:16 GMT, Mike G. <nospam@my.email.address>
>wrote:
>
>>On Sun, 20 Oct 2002 15:43:11 +1300, Mike Newman <mnewman@clear.net.nz> wrote:
>>
>>>Have found some 1800Mhz linking equipment , and would like some
>>>information on the RF transistors, which are marked PH146, PH192, and
>>>PH190.
>>>
>>>I would be grateful for any information on these devices, which could
>>>form the basis of a 23cm rig.
>>>
>>>Thanks
>>>
>>>Mike
>>
>>Hi Mike,
>>
>>I think you have some old PHI transistors there. PHI is short for
>>Power Hybrids, Inc. who was bought by M/A-COM years ago. MA/COM was
>>bought by AMP (the connector company) and a few years back, Amp was
>>bought by the giant Tyco, Inc. So if you can follow all that, you're
>>better than most. They are still in Torrence, CA and their URL is:
>>
>>http://www.macom.com/
>>
>>Maybe someone there has an old catalog that would have the info on
>>the devices you have. I used to keep a LOT of those old catalogs
>>around, but with the internet so handy, bound catalogs are getting
>>to be a thing of the past.
>>

>>Hope this gets you a little closer to what you a looking for.
>>
>>Mike G.

3461. Re: Modutec Meter in Dentron MLA2500 Linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-31 03:02:40 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <us17akqnrjp272@corp.supernews.com>
Source record: 40325

What's the full scale voltage reading on the meter, and what's the value of the series resistor switched in when it's using this scale?

Roy Lewallen, W7EL

Douglas Snowden wrote:
> I have a blown meter that was the plate voltage/ plate current
> meter. The Brand printed on the bottom is Modutec and has a number of
> 930032-1589.
>
> Anyone know what the F.S. is for this meter? 100UA 1MA ?
>
> Doug N4IJ
>
>
>
>
>

3462. Modutec Meter in Dentron MLA2500 Linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-31 04:54:56 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <us139t1vnotab8@corp.supernews.com>
Source record: 40322

I have a blown meter that was the plate voltage/ plate current
meter. The Brand printed on the bottom is Modutec and has a number of
930032-1589.

Anyone know what the F.S. is for this meter? 100UA 1MA ?

Doug N4IJ

3463. Re: Heathkit GR-78 Battery

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-31 14:33:11 UTC
From: "Peter E. Orban" <peter.orban@nrc.ca>
Message-ID: <3DC13F27.3BE19BDD@nrc.ca>
Source record: 40328

Gary \"Joe\" Mayfield wrote:
>
> I'm restoring a GR-78. Fortunatly someone removed the battery years ago. I
> know the original battery was a NiCad (I plan to use one too). I can also
> tell the battery is "split" in other words charged as two batteries, then
> used as one battery. Does anyone know how many cells this battery has? A
> first guess looks like 4 cells on each side. In other words an 8 cell / 10
> Volt battery. This sounds odd so I thought I would ask if anyone knows for
> sure.
>
> Thanks,
> Gary

I had the (dead) battery pack in my radio. It was eight AA NiCad cells
in a cylindrical aluminum case, split in the middle for charging. I
replaced it with a plastic battery holder for eight AA cells, wired it
as originally, and just using regular rechargeable cells.

Good luck, Peter
--
Peter E. Orban
National Research Council of Canada
e-mail: peter.orban@nrc.ca

3464. Re: any Wavetek 3001 gurus??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-31 14:39:45 UTC
From: lgagnon@sherrittoil.com
Message-ID: <1d3b4598.0210310639.786b1d9f@posting.google.com>
Source record: 40326

```
" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
news:<kV_v9.63095$vq2.1923064@news1.east.cox.net>...
> Check the power supply voltages.
>
> When the caps fail, they normally short (tantalums!!). Did
> you do an alignment according to the service manual?
>
> Pete

Power supply checks fine, did the alignment, have checked tantalums
and have not yet found a shorted one...although that does not mean
they might not be leaking!

Larry VE6MK
```

3465. Do the magnets in panel meters weaken with time?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-31 15:14:39 UTC
From: SeeSignature@below.com
Message-ID: <3dc14553.223430098@news.ga.comcast.giganews.com>
Source record: 40327

Old common "d'Arsonval" meters with permanent magnets - if the magnets weaken the meter goes out of calibration, I suppose. Anybody know what to expect with old meters? A gradual lessening of sensitivity? How long - how much loss? Guesses?

Jerry W4UK

3466. need help using spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-31 17:18:27 UTC
From: Norm Waterston <nospamnail@nospam.com>
Message-ID: <aprojo$731$2@slb4.atl.mindspring.net>
Source record: 40330
Cross-posted to: alt.ham-radio.marketplace,alt.ham-radio.mods,alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I just purchased a used HP141T with plug-ins. Although it didn't have manuals, I was able to obtain some military technical manuals, but these seem more suited to maintenance than actual use. There is an operational section, but unclear, at least to me. I'd just like to get stated using the analyzer. Are there any places on the web with tutorials?

Thanks, in advance.

Norm

3467. Re: Do the magnets in panel meters weaken with time?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-31 18:10:45 UTC
From: James Horn <jimhorn@svn.net>
Message-ID: <3dc18035@news.svn.net>
Source record: 40329

I suppose it depends on the magnet material. I remember that for ceramic magnets, 1% of the initial strength fades in milliseconds; 1% in seconds, and the next 1% in about a million years. So I suspect that calibration change isn't much of an issue...

Jim Horn, WB9SYN/6

3468. Re: Do the magnets in panel meters weaken with time?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-31 19:39:55 UTC
From: Mike <musterfrau@brain.net>
Message-ID: <ad13suof0pqvbs7c6oqpdun0qp1dr1skbt@4ax.com>
Source record: 40331

On Thu, 31 Oct 2002 15:14:39 GMT, SeeSignature@below.com wrote:

>Old common "d'Arsonval" meters with permanent magnets - if the magnets
>weaken the meter goes out of calibration, I suppose. Anybody know what
>to expect with old meters? A gradual lessening of sensitivity? How
>long - how much loss? Guesses?
>
>Jerry W4UK

I puchased an expensive Eagle multimeter in the very late sixties (couldn't afford an AVO 8X) about the same size as the 8X.

By the mid 1990's it was reading 10% low even with the meter mechanical adjustment full on, this I put down to aging of the magnets. Regrettable I forcibly retired it to the bin whilst making room for new gear!

3469. Re: need help using spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-31 20:04:02 UTC
From: Wes Stewart <n7ws@nowhere.com>
Message-ID: <e823su8jiuf2fqlndg93jf7ii1kuji9vie@4ax.com>
Source record: 40332
Cross-posted to: alt.ham-radio.marketplace,alt.ham-radio.mods,alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Thu, 31 Oct 2002 12:18:27 -0500, "Norm Waterston"
<nospamnail@nospam.com> wrote:

|I just purchased a used HP141T with plug-ins. Although it didn't have
|manuals, I was able to obtain some military technical manuals, but these
|seem more suited to maintenance than actual use. There is an operational
|section, but unclear, at least to me. I'd just like to get stated using the
|analyzer. Are there any places on the web with tutorials?
|
|Thanks, in advance.

Norm,

First try:

http://we.home.agilent.com/cgi-bin/bvpub/agilent/expandedresults/cp_ExpandedResults.jsp?LANGUAGE_CODE=eng&JPID=%2Ffind%2Flibrary&NID=03&NAV_ID=-11145.0.00&COUNTRY_CODE=ZZ&CT=AGILENT_COLLECTION&contentType=Editorial&entityType=ED30&subjectSelect=SUB-069

(I don't know whether this link will come through without breaks, you
may have to piece it together)

and download "Spectrum Analyzer Basics AN-150."

This will get you started but is not specific to your analyzer.

Wes N7WS

3470. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-31 20:17:40 UTC
From: Stewart Bryant <stbryant@cisco.com>
Message-ID: <3DC18FE4.1040008@cisco.com>
Source record: 40333
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

> I am particularly interested if it is possible to make a 5000pF 2000V
> or larger capacitor for 136kHz ATU, dimensions for 136kHz could be 100
> times larger than 14MHz for similar performance. Suggest mica as
> dielectricum?
>

At these frequencies it is more common to use a variometer as the
tuning component.

73

Stewart G3YSX

3471. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-31 22:53:54 UTC
From: averyfineman@aol.com
Message-ID: <20021031175354.14538.00000129@mb-cl.aol.com>
Source record: 40334

In article <tlburuko3gnk5dajlthqg5q52lab5l21aa@4ax.com>, Paul Keinanen
<keinanen@sci.fi> writes:

>On 29 Oct 2002 21:52:28 GMT, averyfineman@aol.com (Avery Fineman)
>wrote:
>
>> Decades ago I came across a very quick method of checking
>>for undesireable mixer products in Electronics magazine, taking
>>the lowest over the highest frequencies as a fraction less than 1.
>>Possible trouble from zero-beats would happen when harmonics
>>of each resulted in a fraction having both an integer numerator
>>and denominator; i.e., "1/2," "2/3," "3/5" and so on. The Order
>>would be, respectively, 3rd, 5th, 8th above. As the Order
>>increased, the mix product level would decrease.
>
>Thanks for the idea. About a decade ago I was chasing some 10-15th
>order intermodulation products on a repeater input, which was located
>in a tower with several broadcast and communication transmitters, the
>calculation took quite a while in those days :-). Finally, the culprit
>was some rusty bolts in a supporting structure. With high field
>strengths, quite high order products can be created.

No one can predict accidental semiconductors (rusty hardware). :-)

My reference was "Linear Scales Show Mixer Harmonics," by
Roger T. Stevens, Sanders Associates, published in Electronics
magazine, January 10, 1964. Stevens' method was to make a
fraction of mix products with the numerator being lowest frequency
and denominator the highest frequency...or "low over high" fraction.
He did this separately for mixer sums and differences. The result
is then solvable for an exact zero-beat if either mixer input frequency
is unknown. Stevens' accompanying charts were two linear scales
marked with various mixing Orders. It was absurdly easy to use
compared to other methods which involved two-dimensional graphs.

>>Phase noise has a definite effect on QAM signals and BER values
>>but such signals are hardly used in amateur communications.
>>Phase noise can show up as incidental FM on VHF and above FM
>>transmitters in ham bands but that is at a very LOW level compared
>>to the modulation.
>
>I think that you are confusing two things. A very bad phase noise
>performance can cause incidental FM and bit errors even in a single
>signal condition (only the transmitter and receiver on the band)
>regardless of signal strength.

PM and FM have the same sideband content, differing mainly in phase relations. There is a slight difference due to modulation frequency. I can go back to John Carson's original equations if you like (few others would care to see that...). :-)

Some mythology has been building since the first appearance of the PLL in "digital frequency control" a quarter century ago. The argument (false) is that they all have phase noise...because today's spec sheets give finished PLL and DDS components' phase noise. A well-designed and executed PLL will have predictable phase noise and that will be very close to the carrier. What few realize is that common crystal oscillators can also exhibit phase noise if they are not carefully designed. Overtone oscillators such as the Butler circuit are prone to this if not carefully tuned. If that is followed by a string of integer multiplier stages, the phase noise is also multiplied at the output.

Fractional-N and the rest of the DDS family are quite prone to alias frequency generation if not designed and executed properly. There are quite a number of application notes on the Internet covering that, all available for free download (Analog Devices and Philips, for example). Many hobbyists shy away from commercial SOC devices (systems on a chip) principally because they don't understand the method or the internal complexity or the (too often) needed serial data input for frequency control. Therefore, "digital devices are bad and have many faults." :-)

What is so curious (to me) on such mythology is that those making the statements are using one or another digital synthesizer in ready-built equipment...and not finding any fault with them. :-)

>However, a strong external signal can act as a local oscillator and
>mix with the phase noise sidebands of the actual local oscillator,
>some of these reciprocal mixing products will fall into the IF
>bandwidth increasing the effective noise floor. This affects all
>modulations and requires strong offending signals.

Quite true as a generality, but the fault is not always in the first mixer or the local oscillator of a superheterodyne. With very strong unwanted signals at the antenna, intermodulation can exist after the first mixer, before the ultimate selectivity component (usually a crystal filter). That's a matter of watching stage gains of the entire input half of a receiver at various RF gain levels. It also requires attention to the selectivity between the first mixer and the final IF filter.

Trying to listen to weak signals with very strong somewhat-nearby frequency stations lets you hear the higher modulation components of AM in the strong signal. Those can be below specification yet they can get through the input half selectivity in a receiver...and they can sound as if they are "noise." That "noise" isn't due to any LO phase noise of any kind.

>This can be observed in congested antenna sites when notch duplexers
>are used in repeaters. While the notch tuned to the own _transmitter_
>frequency in the receiver line (connected to a common repeater
>antenna) will effectively block the own transmitter signal from the
>receiver, radiation from other antennas will get into the receiver
>with only minor attenuation. In many cases, the noise problems in the
>receiver can be reduced by replacing the receiver PLL with a clean
>crystal oscillator and a multiplier, thus reducing the reciprocal
>phase noise mixing products.

A rather long time ago I was responsible for nine 24-channel microwave radio relay terminals. A 1.8 GHz General Electric circa-1950 design, the transmitter (12 W peak) and receiver were on the same antenna, running full duplex. Tx and Rx were combined in a very fussy to tune double bandpass filter or diplexer. By picking separate Tx and Rx frequencies at greater than 5% of band center, the diplexer gave greater than 100 db separation of Tx and Rx. Crystal oscillators were 5th overtone types followed by multipliers, last in the chain a septupler (7x). That oscillator (not strictly a Butler type) could be falsely aligned to hop on and off the crystal overtone causing the equivalent of noise at the receiver video detector. When properly aligned it was okay, but we had to very carefully check tuning if the oscillator tube was replaced.

In the early 1970s I used some L-band sources that were PLLs using very short pulse sampling, the sample phase compared to a crystal oscillator phase. Those had excellent phase and frequency stability and no phase noise of sufficient quantity to affect low-level receiver signals. Note: Sampler systems can be very affected by amplitude noise of an L-C oscillator, as opposed to conventional limiting-clipping-to-baseline prescaler input digital circuits of PLLs.

>The repeater own transmitter line also requires a notch tuned to the
>repeater _receiving_ frequency to block any transmitter phase noises
>going from the transmitter to the common antenna and back to the
>receiver.

Diplexing systems aren't new. Proper diplexing design for full duplex operation is not simple but requires care to keep unwanted signal attenuation high. If the modulation is relatively broadband, then the higher-frequency modulation components extend as far on either side of the carrier whether AM, FM, or PM. If the un-wanted carrier is too close in frequency, then the sidebands are going to be less attenuated and their content stronger. They can appear as "noise" of some sort...but not necessarily as phase noise.

>So there are really two separate problems with oscillator phase noise.
>
>One with deviations comparable to the actual signal affecting the
>modulation constellation regardless of signal level (not relevant in
>this discussion).

I'm familiar and agree to keep constellation talk to a minimum. :-)

A good opthalmologist is always needed for 64-level QAM viewing.

>The other is due to weak (60-120 dBc/Hz) below carrier noise sidebands
>which can spread out several megahertz from the carrier, but when the
>carrier is in the +10 dBm to +60 dBm range the sidebands can have
>considerable power (-130 dBm/Hz .. 0 dBm/Hz) above the thermal noise
>(-174 dBm/Hz), which can directly or trough reciprocal mixing cause
>all kind of reception problems.

OK, that's what I've been talking about...but I keep emphasizing that
it isn't always just phase noise. :-)

If it is actual phase noise and all stages after mixing are reasonably
linear or the level is low enough to keep away from distortion, then
the phase noise power just adds algebraically to natural noise power.
If induced noise level (of any kind) is strong enough to cause
intermods anywhere, the noise addition is no longer algebraically
additive.

In a multiple-pulse full-duplex RF situation, I've had to get elaborate
in an AGC-on-(front-end)-noise since non-time-synchronous transmit
pulses would put a "hole in the noise" due to severe limiting in the
receiver. That's an extreme example, of course.

>>I'll bring up another little point to investigate: Linearity of finals.

>The "linear" amplifiers will produce all kinds of intermodulation
>components from a multiple frequency base band signal (such as speech)
>and harmonics (filtered out by the transmitter LPF). However, it does
>not generate much phase noise of its own, only amplify existing input
>broadband phase noise and possibly create some low level reciprocal
>mixing between the signal and the input phase noise. Thus, a bandpass
>filter between the rig and the linear amplifier will reduce the amount
>of phase noise reaching the linear amplifier and also reduces the
>opportunities for reciprocal mixing in the linear amplifier.

Ahem...a bandpass filter won't reduce any close-to-carrier phase
noise. Phase noise is strongest near the carrier, decreasing in level
on either side. Usually. :-)

Non-attention to higher speech components of some speakers, even
males, can result in limiting-clipping effects in a linear final amp.
That results in a wider sideband content and can be within the
passband of the filter...but it sounds like intermittent noise.

>>In a multi-station contest setup, 1 KW = +60 dbm and a second
>>receiver ought to have at least 60 db of total attenuation from
>>that source to avoid going above 0 dbm input interference.
>
>Reaching a 60 dB isolation in a small space can be hard, unless two
>vertical antennas are stacked one above the other.

I'm assuming the DX island location has at least 50 meters of
distance between different antennas. :-)

3472. Re: Do the magnets in panel meters weaken with time?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-10-31 23:27:03 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <us3es8knrgo04a@corp.supernews.com>
Source record: 40335

More likely, aging calibration resistors, and caps, and diodes, etc.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Mike" <musterfrau@brain.net> wrote in message
news:ad13suof0pqvbs7c6oqpdun0qp1dr1skbt@4ax.com...
> On Thu, 31 Oct 2002 15:14:39 GMT, SeeSignature@below.com wrote:
>
> >Old common "d'Arsonval" meters with permanent magnets - if the magnets
> >weaken the meter goes out of calibration, I suppose. Anybody know what
> >to expect with old meters? A gradual lessening of sensitivity? How
> >long - how much loss? Guesses?
> >
> >Jerry W4UK
> I puchased an expensive Eagle multimeter in the very late sixties
> (couldn't afford an AVO 8X) about the same size as the 8X.
>
> By the mid 1990's it was reading 10% low even with the meter
> mechanical adjustment full on, this I put down to aging of the
> magnets. Regrettable I forcibly retired it to the bin whilst making
> room for new gear!

3473. Re: Do the magnets in panel meters weaken with time?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-01 00:12:47 UTC
From: k9sqg@aol.com
Message-ID: <20021031191247.04295.00001876@mb-mo.aol.com>
Source record: 40336

Not sure I can speak to that topic but the reduced magnetic field might be partially offset by a weakened spring?

3474. Re: RF probe to measure small UHF signals??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-01 02:18:35 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <%vlw9.77150$vq2.2129547@news1.east.cox.net>
Source record: 40337

To measure the crystal reference signal in your 3001?
I used an Optoelectronic's 3-GHz handheld counter.
The only other option is a spectrum analyzer where you
can accurately peak the preselector for max. signal
at 1440 MHz.

Pete

"Larry Gagnon" <lagagnon@fakesprint.ca> wrote in message
news:3db1e430.1824590@news.sprint.ca...
> I need to measure a 20mV 1440 MHz oscillator signal. Is it possible to
> do so with a homebrew RF probe that can measure into this UHF range?
> If so, can anyone recommend a suitable design? Any help greatly
> appreciated.
>
> Larry VE6MK
> **********
> to send direct email remove "fake" from address

3475. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-01 02:20:06 UTC
From: Kevin Ames <mtnclimb@in-tch.com>
Message-ID: <apsobhshu1@news.tamerica.net>
Source record: 40338

Steve,
Well, your story sounds a lot like mine. I started in Ham radio at 13 years old, went off to college to become an EE and worked as a technician while going to school.

I made one critical decision during that period of time that I will never regret, I took an internship the summer I was 19 yrs old. I got to talking to one of the Engineers at the company I was working at. He was in his mid 20's and he told me to be sure and do all the odd and exciting things I have ever thought of doing before I graduate. He spelled it out for me as "You will have the rest of your life to sit behind a desk, don't waste your college summers doing these internships."

I listened to his advice and never spent another summer in an office. The following summer I worked as a fisherman in Alaska. Being raised in Livingston, MT I had grown quite fond of the mountains, fishing, and forests. The summer I returned from Alaska, there was a forest fire in the moutains south of Livingston. It struck my curiosity and I decided to try working as a wildland fire fighter the next year. Seventy five job applications later (Electrical Engineering isn't exactly high marks on a fire fighting job application) I found my self near Seeley Lake, MT working as an Initial Attack engine crew member. When the summer and fire season was wrapping up and it was time to go back to college (in Bozeman) I discovered that for the very first time in my life I did not want to leave the job. I had made modest money compared to my technician jobs, but it was the most rewarding work I had ever done. I had met a girl (who 5 years later would become my wife). It was a great summer.

I continued to fight fires every summer. My last semester of college I refused to interview with any companies, I got into the best physical shape of my life and was the only student in my MSU EE graduating class to go off and work for $10/hr fighting wildland fires. It took me six years to complete my degree and here I was swinging a pulaski in the dirt, cutting down trees, and loving every minute of it. I had made it on to the Bitterroot Hotshots and was living the good life. I kept that up for two more years, working fires in the summer and being an engineer/technician at a small engineering company in the winter.

Well the winter of 2001 rolled around and I was not able to get my job back at the small company I had previously worked at. I started knocking on the doors of larger ones. Sure enough I landed a job at a larger company in Bozeman. They made me an offer as a year round EE that I couldn't refuse. I decided to give up fire. Winter turned into Spring, Spring into summer. The temperature rose, the air got dry, and the lightning started to pop. Smoke columns were everywhere in sight as I would drive home from my desk

job. It was driving me insane. I had a good job (by most people's standards) but I would get depressed thinking about being there, designing stuff for other people till I retired. Then like a saving grace to me the stock market crash finally hit the company I was working at. I was layed off in July of 2001. To my amazement, I was completely thrilled. I called the Forest Service and two hours later I was filling out my hiring papers to work on the local fire crew, back in my element.

I continued with fire and am now a USFS Fire Crew Leader by occupation. My winter will be spent working as a radio technician for the Forest Service. My engineering education has by no means been a waste, my basement is completely filled with test equipment, homemade PCB's and hundreds of projects I have spent doing in my free time, some work, some don't, but all have been fun. The challenge that originally intrigued me about engineering has become exciting again. For me, the key was doing a job that I love to do as my occupation and using my education for my own gain. Who knows maybe somewhere in this pile of homebrewed half complete projects, there is a design that will allow me to retire on something besides a fireman's salary. The advice I would give you is chase after that dream whether it's fighting a fire, flying a fighter jet, or driving a truck. Throw caution to the wind, just be willing to adjust your lifestyle to fit your new occupation. Beleive me, it may take some time, but before long the ol' soldering iron will come out again, this time for no one's challenge but your own. It makes all the difference in the world.

73's
Kevin Ames (AA7YQ)

3476. Re: Do the magnets in panel meters weaken with time?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-01 04:00:30 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <i2t3susmutjq8avcdjfj4u899pfa8m1ki8@4ax.com>
Source record: 40339

On 01 Nov 2002 00:12:47 GMT k9sqg@aol.com (K9SQG) wrote:

>Not sure I can speak to that topic but the reduced magnetic field might be
>partially offset by a weakened spring?

I really don't think the magnet will change perceptably in our
lifetimes and the spring won't either, unless it can, and does, rust.

I agree with the other poster who mentioned the series resistors.
These are MUCH more likely to change, plus they always change upwards,
which would make the meters seem to have lost sensitivity.

-

Jim Adney jadney@vwtype3.org
Madison, Wisconsin USA

3477. Re: Do the magnets in panel meters weaken with time?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-01 06:39:04 UTC
From: k7itm@aol.com
Message-ID: <3200347.0210312239.9726468@posting.google.com>
Source record: 40340

SeeSignature@below.com wrote in message
news:<3dc14553.223430098@news.ga.comcast.giganews.com>...
> Old common "d'Arsonval" meters with permanent magnets - if the magnets
> weaken the meter goes out of calibration, I suppose. Anybody know what
> to expect with old meters? A gradual lessening of sensitivity? How
> long - how much loss? Guesses?

Of course, that's not the only thing that might change to change the
calibration. It also depends on the spring constant of the restoring
springs.

In practice, I haven't noticed it to be a problem, but I could check
some 50-year-old meter movements to see how they've held up, assuming
they were calibrated correctly to begin with. Think it's worth
spending a few minutes on? (These days, anything I need to know
accurately, I measure digitally...mechanical meters have a place, but
for me, it's generally getting quick relative indications or seeing
trends; much easier to find a minimum or maximum with a mechanical
meter than a digital one. But even easier with a tone whose frequency
is proportional to the measured value!)

Cheers,
Tom

3478. K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-01 07:47:40 UTC
From: David Walker <roger@hotmail.com>
Message-ID: <3dc23198@news.comindico.com.au>
Source record: 40341

Any K2 Owners read this group?

3479. Re: need help using spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-01 08:15:55 UTC
From: UnTale <i@i.com>
Message-ID: <%Kqw9.102760$%M1.2612739@twister2.libero.it>
Source record: 40342
Cross-posted to: alt.ham-radio.marketplace,alt.ham-radio.mods,alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

> First try:
>
http://we.home.agilent.com/cgi-bin/bvpub/agilent/expandedresults/cp_ExpandedResults.jsp?LANGUAGE_CODE=eng&JPID=%2Ffind%2Flibrary&NID=03&NAV_ID=-11145.0.00&COUNTRY_CODE=ZZ&CT=AGILENT_COLLECTION&contentType=Editorial&entityType=ED30&subjectSelect=SUB-069
> (I don't know whether this link will come through without breaks, you
> may have to piece it together)
> and download "Spectrum Analyzer Basics AN-150."

I confirm!
search for Agilent application note; you'll find all you need:

5965-7009E.pdf=Hint for making better spectrum analyzer measurements
(AN1286-1)
5966-4008E.pdf=Spectrum analyzer measurements and noise (AN1303)
5968-3411E.pdf=Optimizing spectrum analyzer measurement speed (AN1318)
5968-3659E.pdf=Optimizing spectrum analyzer spectrum accuracy (AN1316)
5968-4545E.pdf=Optimizing RF and microwave spectrum analyzer dynamic range
(AN1315)
hp-am-fm.pdf (may be I've renamed the file)=Spectrum analysis Amplitude and
frequency modulation (AN150-1)
signal analysis AN243.pdf (") =The fundamentals of signal analysis (AN243)
SpectAnalysis-AN150.pdf (") =Spectrum analysis (AN150)
wireless_sabasics.pdf (" ")=Spectrum analysis basics

I suggest you (in order)
1)AN150
2)Spectrum analysis basics
3)AN1286-1

--
"Nunc est bibendum,
nunc pede libero pulsanda tellus"
Orazio, Odi, I, 37, 1

73 de iz7ath, Talino
http://www.qsl.net/iz7ath

3480. A Source for Large/Long Telescopic Whip Antenna Elements?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-01 08:47:03 UTC
From: Will White <googlyelmo@earthlink.net>
Message-ID: <3DC23FBD.5E2D4A01@earthlink.net>
Source record: 40343
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

I am in search of long telescopic whip antenna elements for a portable loaded HF dipole I am making. The largest I have found thus far are 72"

extended, and I need 96-108", about .25" diameter, not more than .50" fattest section, with a threaded or punched base for mounting. I have tried Rat Shack and the usual catalog suppliers (Mouser, Fair Radio, Ocean State, AES) without success. Does anyone know of a mail-order source for such parts?

--
Will White, KD7BFX
Seattle WA US
King County, Grid CN87tq
ITU Zone 6, CQ Zone 3
****
"The wireless telegraph is not difficult to understand.
The ordinary telegraph is like a very long cat.
You pull the tail in New York, and it meows in Los Angeles.
The wireless is the same, only without the cat."
- Albert Einstein
****

3481. Re: need help using spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-01 09:06:27 UTC
From: Norm Waterston <nospamnail@nospam.com>
Message-ID: <aptg58$5lo$1@slb3.atl.mindspring.net>
Source record: 40344
Cross-posted to: alt.ham-radio.marketplace,alt.ham-radio.mods,alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc
Body handling: HTML body converted to readable text

Thanks Wes and Talino. I have downloaded the files you both suggested.

Norm

"UnTale" wrote in message
news:%Kqw9.102760$%M1.2612739@twister2.libero.it...
> > First try:
> >
>
http://we.home.agilent.com/cgi-bin/bvpub/agilent/expandedresults/cp_Expanded
>
Results.jsp?LANGUAGE_CODE=eng&JPID=%2Ffind%2Flibrary&NID=03&NAV_ID=-11145.0.
>
00&COUNTRY_CODE=ZZ&CT=AGILENT_COLLECTION&contentType=Editorial&entityType=ED
> 30&subjectSelect=SUB-069
> > (I don't know whether this link will come through without breaks, you
> > may have to piece it together)
> > and download "Spectrum Analyzer Basics AN-150."
>
>
> I confirm!
> search for Agilent application note; you'll find all you need:
>
> 5965-7009E.pdf=Hint for making better spectrum analyzer measurements
> (AN1286-1)
> 5966-4008E.pdf=Spectrum analyzer measurements and noise (AN1303)
> 5968-3411E.pdf=Optimizing spectrum analyzer measurement speed (AN1318)
> 5968-3659E.pdf=Optimizing spectrum analyzer spectrum accuracy (AN1316)
> 5968-4545E.pdf=Optimizing RF and microwave spectrum analyzer dynamic range
> (AN1315)
> hp-am-fm.pdf (may be I've renamed the file)=Spectrum analysis Amplitude
and
> frequency modulation (AN150-1)
> signal analysis AN243.pdf (") =The fundamentals of signal analysis
(AN243)
> SpectAnalysis-AN150.pdf (") =Spectrum analysis (AN150)
> wireless_sabasics.pdf (" ")=Spectrum analysis basics
>
> I suggest you (in order)
> 1)AN150
> 2)Spectrum analysis basics
> 3)AN1286-1

>
>
> --
> "Nunc est bibendum,
> nunc pede libero pulsanda tellus"
> Orazio, Odi, I, 37, 1
>
> 73 de iz7ath, Talino
> http://www.qsl.net/iz7ath
>
>
>

3482. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-01 13:07:23 UTC
From: n2ey@aol.com
Message-ID: <20021101080723.00112.00000182@mb-fz.aol.com>
Source record: 40345

In article <3dc23198@news.comindico.com.au>, "David Walker" <roger@hotmail.com> writes:

>Any K2 Owners read this group?
>
You mean Elecraft K2?

I built and use #2084, which has the antenna tuner (KAT2) and audio filter/realtime clock (KAF2) options. Great rig! Made 309 QSOs in last years CW SS in about 14 hours of operation, running 5W into an inverted V at 35 feet. This year I'm going to try to do better.

73 de Jim, N2EY

3483. HC6/U / HC49 crystal holders.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-01 15:49:05 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <NdDA2F0xJqw9EwMW@fslife.co.uk>
Source record: 40346

I'm looking for a manufacturer of these and wonder if someone here can post some names.

I can find a good number of suppliers but am trying to find the source.

Millen do not show any on their site.

I have one here with the name McMurdo but cannot trace any company of that name.

Bakelite is OK but ceramic would be nice. Bolt in not PCB mount.

Many thanks.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3484. Re: New program OSCTRACK.exe

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-01 18:04:32 UTC
From: N2EY@AOL.COM
Message-ID: <c2356669.0211011004.1211eaa0@posting.google.com>
Source record: 40247

novatech@eskimo.com (Steven Swift) wrote in message
news:<apfcjm$4bv$1@eskinews.eskimo.com>...
>
> Where is this? I missed the original article.

http://www.arrl.org/tis/info/pdf/020910qex036.pdf

73 de Jim, N2EY

3485. Re: Do the magnets in panel meters weaken with time?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-01 18:13:25 UTC
From: averyfineman@aol.com
Message-ID: <20021101131325.03526.00000344@mb-cj.aol.com>
Source record: 40248

In article <3dc14553.223430098@news.ga.comcast.giganews.com>,
SeeSignature@below.com writes:

>Old common "d'Arsonval" meters with permanent magnets - if the magnets
>weaken the meter goes out of calibration, I suppose. Anybody know what
>to expect with old meters? A gradual lessening of sensitivity? How
>long - how much loss? Guesses?
>
>Jerry W4UK

Unless the meter has been physically or magnetically abused,
they should last a human lifetime...at least to within their best
calibration percentage. Note: "Magnetic abuse" refers to a
VERY strong AC field.

Every d'Arsonval meter is actually a very small power meter. It
has an internal resistance and develops a voltage drop across
the (nearly always copper) meter motor coil. That drop is
typically 50 mV full-scale but can vary depending on make and
model and full-scale range.

Most run-of-the-mill d'Arsonval meters are +/-2% to +/-3%
accuracy over a stated temperature range. The internal copper
resistance causes the most change in accuracy over temperature.
If greater accuracy is required, a mirror scale (extra cost) is
needed to reduce reading parallax to a minimum and some
high-accuracy models have some temperature compensation
of the motor winding built-in. On common panel meters,
expect a normal 2% scale change from brass monkey cool
temps to sweltering hot T-shirt temps. All due to copper meter
motor winding and external series or shunt resistors.

Yes, the internal magnetic field can change in time but that is
such a small change that you need a very fancy calibration lab
to detect it along with some very costly reference standards to
use for comparison.

For a stable current or voltage measurement need, a packaged
op-amp with band-gap voltage reference and selected precision
resistors reading out to a digital display is going to cost less and
be more accurate over temperature than any d'Arsonval meter.

Len Anderson
retired (from regular hours) electronic engineer person

3486. Re: HC6/U / HC49 crystal holders.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-01 19:19:53 UTC
From: Richard Heindel <rheindel@neo.rr.com>
Message-ID: <ttAw9.23342$yY.1753250@twister.neo.rr.com>
Source record: 40249

Try these links...

http://www.jancrystals.com/
http://www.icmfg.com/

Both are very good and popular here in the states.
73
Richard WB8KRN

3487. Re: Do the magnets in panel meters weaken with time?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-01 19:58:43 UTC
From: Mike <musterfrau@brain.net>
Message-ID: <4qm5sugroit9prod5tke50f0b9ppojp7co@4ax.com>
Source record: 40250

On Thu, 31 Oct 2002 17:27:03 -0600, "M.E." <bogus@nospam.com> wrote:

>More likely, aging calibration resistors, and caps, and diodes, etc.

Possibly, having bought it for home use, I preferred it to the 8X
which I used professionally. However with cheap Digitalmm's it fell
into disuse and when I resurrected it for a specific task it had lost
equal sensitivity on all ranges. I did open it up and have a quick
tweak but the aluminium sclae plate had also begun to turn to powder
so it was binned. Shame on reflection, but that's nostalga for you.

3488. FS: NIXIE Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-01 21:45:12 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <IBCw9.321489$o.3217064@news1.west.cox.net>
Source record: 40251
Cross-posted to:
misc.industry.electronics.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.equipment

email w6krc@arrl.net for detailed list.

3489. Re: Do the magnets in panel meters weaken with time?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-01 23:42:48 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <us645mbuqlom11@corp.supernews.com>
Source record: 40252

I have several 40+ year old Simpson panel meters, which all test to full range with as little as 25mV. The tolerance of the shunt used in the circuit and any calibration pot are where most all of the error will be found in these circuits. To assure that your meter will hold it's cal. for the foreseeable future, use only 1% resistors for shunts, and 1% cal pots, which will give you an overall cal tolerance of + or - 4%. If you need better that this, you should be using a digital meter.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Jim Adney" <jadney@vwtype3.org> wrote in message
news:i2t3susmutjq8avcdjfj4u899pfa8m1ki8@4ax.com...
> On 01 Nov 2002 00:12:47 GMT k9sqg@aol.com (K9SQG) wrote:
>
> >Not sure I can speak to that topic but the reduced magnetic field might
be
> >partially offset by a weakened spring?
>
> I really don't think the magnet will change perceptably in our
> lifetimes and the spring won't either, unless it can, and does, rust.
>
> I agree with the other poster who mentioned the series resistors.
> These are MUCH more likely to change, plus they always change upwards,
> which would make the meters seem to have lost sensitivity.
>
> -
> ---
> Jim Adney jadney@vwtype3.org
> Madison, Wisconsin USA
> ---

3490. Re: Do the magnets in panel meters weaken with time?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 00:36:34 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <us67lj4cj6i1b1@corp.supernews.com>
Source record: 40254

M.E. wrote:
> I have several 40+ year old Simpson panel meters, which all test to full
> range with as little as 25mV. The tolerance of the shunt used in the circuit
> and any calibration pot are where most all of the error will be found in
> these circuits. To assure that your meter will hold it's cal. for the
> foreseeable future, use only 1% resistors for shunts, and 1% cal pots, which
> will give you an overall cal tolerance of + or - 4%. If you need better that
> this, you should be using a digital meter.

But don't make the mistake of thinking that just because a digital meter shows you lots of numbers past the decimal point, that it's any more accurate than your old Simpson. Read the specs carefully -- and unless it comes from a reputable manufacturer, take them with a large grain of salt. Digital meters have resistors too.

But it is true that a properly designed and calibrated (and probably expensive) digital meter can be made to be more accurate, and readable to greater resolution, than the best analog meters.

Roy Lewallen, W7EL

3491. Re: TUBES, 1000's @ very low prices

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 00:51:27 UTC
From: Joe <me@mynet.com>
Message-ID: <zlFw9.1302$_u.521@news.bellsouth.net>
Source record: 40255
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.swap

I have 11 M2057's if your interested. all test 90-95%
oddball2@bellsouth.net

3492. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 01:49:26 UTC
From: Kent Haase <ijeh99@mb.sympatico.ca>
Message-ID: <leGw9.4437$b5.22081@news1.mts.net>
Source record: 40256

Yup. #2673.

Kent VE4KEH

"David Walker" <roger@hotmail.com> wrote in message
news:3dc23198@news.comindico.com.au...
> Any K2 Owners read this group?

3493. Re: Do the magnets in panel meters weaken with time?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 02:11:28 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <us6d2jn8hqarce@corp.supernews.com>
Source record: 40257

I've not seen any change in meters that haven't been abused or the seal broken. Why don't you establish a full scale current with a good battery and good pot with a known good digital meter. Then check your meter for full scale deflection by putting it in series, you will have to turn down the pot because the inserttion of your meter will add some resistance. There's a pretty good write up in older ARRL handbooks on determining the meter movements specs. Let us know what you find, and good luck.
73
hank wd5jfr

<SeeSignature@below.com> wrote in message
news:3dc14553.223430098@news.ga.comcast.giganews.com...
> Old common "d'Arsonval" meters with permanent magnets - if the magnets
> weaken the meter goes out of calibration, I suppose. Anybody know what
> to expect with old meters? A gradual lessening of sensitivity? How
> long - how much loss? Guesses?
>
> Jerry W4UK

3494. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 02:16:38 UTC
From: Woody <woody.white@att.net>
Message-ID: <3DC335A2.F68D4A4C@att.net>
Source record: 40258

Here is at least one more... S/N 2600. Have all options but the audio filter/clock and the 100 wt PA. Works great! Just before the context last weekend, managed to pick up (from Virginia) Chatham and South Cook islands using 5 watts and 60 meter long wire on 17M SSB.

Modified mine for PSK31 addind PTT I/O & isolated audio I/O (see my web page) with DIN recept. on the rear.

The kit is well engineered and went together easily, but with my luck, had two unusual problems which had me pulling out my hair for a while. One of the T/R control line runs (8T) had a Cu whisker (~ 0.0005") under the conformal coating, shorting it to the output of an opamp. ...A 30 second fix AFTER I found it! Also the MCU (U6?) analog input pin for power control had an internal short causing the TX to go full power all the time. After Elecraft sent me a new MCU, all worked fine.

73,
Woody
--
My website: http://woody.white.home.att.net/
WB4QXE - Homebrew Ham/Electronics Projects &
eclectic Scanning Electron Microscope Images

3495. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 02:25:33 UTC
From: ON5MJ <on5mjREMOVE@skynet.be>
Message-ID: <3dc337a0$0$6018$ba620e4c@news.skynet.be>
Source record: 40259

Hello evryone over there,

As I am interested in understanding more about this K2, do you know where I can find the schematics (blocs and circuits).

73 de ON5MJ - Jacques.

3496. Re: Modutec Meter in Dentron MLA2500 Linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 02:57:23 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <us655cfo45al0c@corp.supernews.com>
Source record: 40253

I gues you made it a matter of ohms law didn't you. I think
there is 3meg in series with it for 3KV FS

Roy Lewallen <w7el@eznec.com> wrote in message
news:us17akqnrjp272@corp.supernews.com...
> What's the full scale voltage reading on the meter, and what's the value
> of the series resistor switched in when it's using this scale?
>
> Roy Lewallen, W7EL
>
> Douglas Snowden wrote:
> > I have a blown meter that was the plate voltage/ plate current
> > meter. The Brand printed on the bottom is Modutec and has a number of
> > 930032-1589.
> >
> > Anyone know what the F.S. is for this meter? 100UA 1MA ?
> >
> > Doug N4IJ
> >
> >
> >
> >
> >
> >
>

3497. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 03:53:14 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0111022254240001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40260

In article <3200347.0210301220.2507006f@posting.google.com>, k7itm@aol.com
(Tom Bruhns) wrote:

> motsteve@attbi.com (carltons) wrote in message
news:<motsteve-3010020602550001@c-66-176-144-254.se.client2.attbi.com>...
> > You won't find, if you're
> > objective, a similarity at all with that of the past, in any decade.
>
> Bull.
>
> Cheers,
> Tom

Name it.

3498. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 04:00:09 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0111022301200001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40261

Kevin,

I liked your story a lot. It was very interesting and somewhat uplifting. It still sounds like you have lots of time left in your life. Unfortunately, my odometer has gone around a couple of times and can't do anything physical to speak of. I'm still looking for something that I can do and be as constructive as possible in the process. I'm good at explaining science and electronics and am looking of a way of doing that without going into the public school system where your teaching has to conform to the PC requirements of the day. Good luck in the fire fighting.

BTW, I fought fires in the Navy, but I was 18 and only did Class B and C fires.

:-)

Steve

In article <apsobhshu1@news.tamerica.net>, "Kevin Ames" <mtnclimb@in-tch.com> wrote:

> Steve,
> Well, your story sounds a lot like mine. I started in Ham radio at 13 years
> old, went off to college to become an EE and worked as a technician while
> going to school.
>
> I made one critical decision during that period of time that I will never
> regret, I took an internship the summer I was 19 yrs old. I got to talking
> to one of the Engineers at the company I was working at. He was in his mid
> 20's and he told me to be sure and do all the odd and exciting things I have
> ever thought of doing before I graduate. He spelled it out for me as "You
> will have the rest of your life to sit behind a desk, don't waste your
> college summers doing these internships."
>
> I listened to his advice and never spent another summer in an office. The
> following summer I worked as a fisherman in Alaska. Being raised in
> Livingston, MT I had grown quite fond of the mountains, fishing, and
> forests. The summer I returned from Alaska, there was a forest fire in the
> moutains south of Livingston. It struck my curiosity and I decided to try
> working as a wildland fire fighter the next year. Seventy five job
> applications later (Electrical Engineering isn't exactly high marks on a
> fire fighting job application) I found my self near Seeley Lake, MT working
> as an Initial Attack engine crew member. When the summer and fire season
> was wrapping up and it was time to go back to college (in Bozeman) I
> discovered that for the very first time in my life I did not want to leave
> the job. I had made modest money compared to my technician jobs, but it was

> the most rewarding work I had ever done. I had met a girl (who 5 years
> later would become my wife). It was a great summer.
>
> I continued to fight fires every summer. My last semester of college I
> refused to interview with any companies, I got into the best physical shape
> of my life and was the only student in my MSU EE graduating class to go off
> and work for $10/hr fighting wildland fires. It took me six years to
> complete my degree and here I was swinging a pulaski in the dirt, cutting
> down trees, and loving every minute of it. I had made it on to the
> Bitterroot Hotshots and was living the good life. I kept that up for two
> more years, working fires in the summer and being an engineer/technician at
> a small engineering company in the winter.
>
> Well the winter of 2001 rolled around and I was not able to get my job back
> at the small company I had previously worked at. I started knocking on the
> doors of larger ones. Sure enough I landed a job at a larger company in
> Bozeman. They made me an offer as a year round EE that I couldn't refuse.
> I decided to give up fire. Winter turned into Spring, Spring into summer.
> The temperature rose, the air got dry, and the lightning started to pop.
> Smoke columns were everywhere in sight as I would drive home from my desk
> job. It was driving me insane. I had a good job (by most people's
> standards) but I would get depressed thinking about being there, designing
> stuff for other people till I retired. Then like a saving grace to me the
> stock market crash finally hit the company I was working at. I was layed
> off in July of 2001. To my amazement, I was completely thrilled. I called
> the Forest Service and two hours later I was filling out my hiring papers to
> work on the local fire crew, back in my element.
>
> I continued with fire and am now a USFS Fire Crew Leader by occupation. My
> winter will be spent working as a radio technician for the Forest Service.
> My engineering education has by no means been a waste, my basement is
> completely filled with test equipment, homemade PCB's and hundreds of
> projects I have spent doing in my free time, some work, some don't, but all
> have been fun. The challenge that originally intrigued me about engineering
> has become exciting again. For me, the key was doing a job that I love to
> do as my occupation and using my education for my own gain. Who knows
> maybe somewhere in this pile of homebrewed half complete projects, there is
> a design that will allow me to retire on something besides a fireman's
> salary. The advice I would give you is chase after that dream whether it's
> fighting a fire, flying a fighter jet, or driving a truck. Throw caution to
> the wind, just be willing to adjust your lifestyle to fit your new
> occupation. Beleive me, it may take some time, but before long the ol'
> soldering iron will come out again, this time for no one's challenge but
> your own. It makes all the difference in the world.
>
> 73's
> Kevin Ames (AA7YQ)

3499. Re: Motorola Channel Elements

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 04:03:41 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0111022304520001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40262

In article <SE%v9.3227$b5.16416@news1.mts.net>, "Kent Haase"
<ijeh99@mb.sympatico.ca> wrote:

> I have a few of these - various models. Where can I get info on how to use
> them (other than sticking them in a Motorola radio)? Seems like pinout data
> is not readily available on the Internet.
>
> Kent VE4KEH

Do they have solid pins or do they have pins that look like stranded
wire? Send me an email or do another post and I'll get you the info.
BTW, you'll need a 7.5 vdc supply to power them, no matter what. As I
recall, they don't draw more than about 2 mA even for the UHF ones.

Steve ex Moto wheenie

3500. Re: Anyone Have a Cure for RF Burnout?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 04:17:49 UTC
From: Bill M <exray@no>
Message-ID: <us6kamamngij7b@corp.supernews.com>
Source record: 40263

carltons wrote:
>
> In article <3200347.0210301220.2507006f@posting.google.com>, k7itm@aol.com
> (Tom Bruhns) wrote:
>
> > motsteve@attbi.com (carltons) wrote in message
> news:<motsteve-3010020602550001@c-66-176-144-254.se.client2.attbi.com>...
> > > You won't find, if you're
> > > objective, a similarity at all with that of the past, in any decade.
> >
> > Bull.
> >
> > Cheers,
> > Tom
>
> Name it.

Any. When you're 23 and your company sells out you think its an
improvement. When you're 50 and have gone thru a whole series of
consolidations and still have a job, you consider yourself fortunate.
You mention teaching...one of the most admirable of professions for
those who care about their industry and the newcomers. Not as lucrative
as contracting but...you have experience and that can be the best
teacher and very rewarding personally... and it may come very easily for
you.
Just do it. People with skills don't starve to death because they made
a bad choice.

-Bill

3501. Re: Do the magnets in panel meters weaken with time?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 04:33:57 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <m3l6su03matjdso51gjdh2iucccamfpf0c@4ax.com>
Source record: 40264

On 01 Nov 2002 18:13:25 GMT averyfineman@aol.com (Avery Fineman)
wrote:

> The internal copper
> resistance causes the most change in accuracy over temperature.
> If greater accuracy is required, a mirror scale (extra cost) is
> needed to reduce reading parallax to a minimum and some
> high-accuracy models have some temperature compensation
> of the motor winding built-in. On common panel meters,
> expect a normal 2% scale change from brass monkey cool
> temps to sweltering hot T-shirt temps. All due to copper meter
> motor winding and external series or shunt resistors.

The question of meter sensitivity to temp changes came up in a
different area recently and I was surprised when someone claimed to
have found a rather large temp dependence in a d'Arsonval meter meant
for automotive use, a VDO tachometer.

How is temp compensation done on such meters, and is it possible for
cheap meters to have much more temp dependence than even a well made
but uncompensated movement?

thanks,

-

Jim Adney jadney@vwtype3.org
Madison, Wisconsin USA

3502. FS: New Uniden BC200XLT

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 06:27:47 UTC
From: Gary <garytaylor605@yahoo.com>
Message-ID: <DfKw9.2537$UA4.2247494@news.alltel.net>
Source record: 40265
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

For Sale: New Uniden BC200XLT handheld scanner with full 800MHZ. Never used, still in the box with all original accessories. Asking $160, obo. If anyone is interested, please email directly.

Thanks,
Gary

3503. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 06:57:38 UTC
From: Robert Fanfant <fanfant1@attbi.com>
Message-ID: <BHKw9.218255$%d2.73487@sccrnsc01>
Source record: 40266

www.elecraft.com . You can download the entire manual and schematics can be found there.

"ON5MJ" <on5mjREMOVE@skynet.be> wrote in message news:3dc337a0$0$6018$ba620e4c@news.skynet.be...
> Hello evryone over there,
>
> As I am interested in understanding more about this K2, do you know where I
> can find the schematics (blocs and circuits).
>
> 73 de ON5MJ - Jacques.
>
>

3504. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 08:15:56 UTC
From: J-R Roy <F6EGK@hotmail.com>
Message-ID: <aq01ju$2e3$1@news-reader11.wanadoo.fr>
Source record: 40267

One more : #351

Jean-Roger - F6EGK

"David Walker" <roger@hotmail.com> a crit dans le message news:
3dc23198@news.comindico.com.au...
> Any K2 Owners read this group?
>
>
>
>

3505. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 08:32:02 UTC
From: la8ak.xnd@online.no
Message-ID: <3dc38c06.309278725@news.online.no>
Source record: 40268

On 01 Nov 2002 13:07:23 GMT, n2ey@aol.com (N2EY) wrote:

>In article <3dc23198@news.comindico.com.au>, "David Walker" <roger@hotmail.com>
>writes:
>
>>Any K2 Owners read this group?
>>
>You mean Elecraft K2?
>
>I built and use #2084, which has the antenna tuner (KAT2) and audio
>filter/realtime clock (KAF2) options. Great rig! Made 309 QSOs in last years CW
>SS in about 14 hours of operation, running 5W into an inverted V at 35 feet.
>This year I'm going to try to do better.
>
>73 de Jim, N2EY
>

it is an unofficial site for modifications www.qsl.net/la3za/mod.htm

--
remove ,xnd to reply

3506. Re: HC6/U / HC49 crystal holders.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 10:27:42 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <c9YEOv3ei6w9Ewsm@fslife.co.uk>
Source record: 40269

I
>http://www.jancrystals.com/
>http://www.icmfg.com/
Many thanks Richard.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3507. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 12:12:48 UTC
From: amdx <amdx@att.net>
Message-ID: <4jPw9.21372$VJ5.1210695@bgtnsc05-news.ops.worldnet.att.net>
Source record: 40270

It would be interesting to put capacitance across your resistors
to tune out the inductance. See if you can bring your swr down
closer to 1.
Mike

3508. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 12:58:16 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <yGTw9.1913$%q2.54742@newsfep1-win.server.ntli.net>
Source record: 40278

"amdx" <amdx@att.net> wrote in message
news:4jPw9.21372$VJ5.1210695@bgtnsc05-news.ops.worldnet.att.net...
> It would be interesting to put capacitance across your resistors
> to tune out the inductance. See if you can bring your swr down
> closer to 1.
============
This might be acceptable when using the dummy load for a specific (narrow) frequency band ,but not as a universal (multi band) dummy load. Strictly speaking ,it would only be suitable for 1 frequency for which the load would be strictly resistive.

Frank gm0csz.kn6wh@ntlworld.com

3509. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 13:53:51 UTC
From: k9sqg@aol.com
Message-ID: <20021102085351.23908.00002112@mb-mm.aol.com>
Source record: 40272

Not sure why a dummy load is needed, hi. Just do the testing with an antenna, any evening, on top of the foreign broadcast stations on 40 meters. Another alternative for daytime work is to make a dummy load out of inductive or non-inductive resistors, use an "antenna tuner" and you've got your 1:1 load.

73s,

Evan

3510. GS-1B

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 14:20:21 UTC
From: WPG <vincetuonoWPG@inwind.it>
Message-ID: <FaRw9.106338$RO.2735003@twister1.libero.it>
Source record: 40273

Hi, I am an Italian OM my call is IK7WPG, I have bought a GS-1B Russian tube from a fair, I would like to know his impedance of entry. Thanks to everybody and 73 de Vin IK7WPG

3511. Re: Do the magnets in panel meters weaken with time?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 14:23:47 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3DC3EE3B.75119534@townsqr.com>
Source record: 40274

Henry Kolesnik wrote:

> I've not seen any change in meters that haven't been abused or the seal
> broken. Why don't you establish a full scale current with a good battery
> and good pot with a known good digital meter. Then check your meter for
> full scale deflection by putting it in series, you will have to turn down
> the pot because the inserttion of your meter will add some resistance.
> There's a pretty good write up in older ARRL handbooks on determining the
> meter movements specs. Let us know what you find, and good luck.
> 73
> hank wd5jfr
>
> <SeeSignature@below.com> wrote in message
> news:3dc14553.223430098@news.ga.comcast.giganews.com...
> > Old common "d'Arsonval" meters with permanent magnets - if the magnets
> > weaken the meter goes out of calibration, I suppose. Anybody know what
> > to expect with old meters? A gradual lessening of sensitivity? How
> > long - how much loss? Guesses?
> >
> > Jerry W4UK

Hey guys, the things aren't linear in the first place. As I recall they are calibrated and read most accurately at their midscale. Any change could be reversed by recalibration.

Dick

3512. Re: Do the magnets in panel meters weaken with time?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 15:00:30 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <us7puc5c2hs2d9@corp.supernews.com>
Source record: 40275

Typical calibration is done at FULL SCALE reading, because the maximum error will happen at that point too. So, you calibrate there to minimize the error.
The mid-scale error will be neglegible. For example: My plate current meter on my HB HF amp has a error of + or - 10mA @ 1000mA. full scale reading. My grid-current meter has an error of + or - 1mA @ 100mA full-scale reading. The typical meter will not chenage much due to temperature, provided the meter movement is enclosed. Tempature will affect the shumt resistor value & the cal pot, for a small amount, but this should not be a factor when the unit is inside a house where the temp is fairly consant. Units that are outside inn the weather need a heater inside to maintain a more or less constant temp. Cold lowers the resistence, heat raises it.
But, all meters are relative anyway.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Dick Carroll" <dixie@townsqr.com> wrote in message
news:3DC3EE3B.75119534@townsqr.com...
>
>
> Henry Kolesnik wrote:
>
> > I've not seen any change in meters that haven't been abused or the seal
> > broken. Why don't you establish a full scale current with a good
battery
> > and good pot with a known good digital meter. Then check your meter for
> > full scale deflection by putting it in series, you will have to turn
down
> > the pot because the inserttion of your meter will add some resistance.
> > There's a pretty good write up in older ARRL handbooks on determining
the
> > meter movements specs. Let us know what you find, and good luck.
> > 73
> > hank wd5jfr
> >
> > <SeeSignature@below.com> wrote in message
> > news:3dc14553.223430098@news.ga.comcast.giganews.com...
> > > Old common "d'Arsonval" meters with permanent magnets - if the magnets
> > > weaken the meter goes out of calibration, I suppose. Anybody know what
> > > to expect with old meters? A gradual lessening of sensitivity? How
> > > long - how much loss? Guesses?
> > >
> > > Jerry W4UK

>
> Hey guys, the things aren't linear in the first place. As I recall they
are
> calibrated and read most accurately at their midscale. Any change could be
> reversed by recalibration.
>
> Dick
>

3513. test

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 15:34:49 UTC
From: n2cqr@clix.pt
Message-ID: <3dc3f088.2187338067@news.clix.pt>
Source record: 40271

```
t
73 de Bill CU2JL N2CQR
Sao Miguel Island, The Azores, Portugal
37.7 N 25.7 W
http://planeta.clix.pt/n2cqr
```

3514. Re: GS-1B

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 16:28:15 UTC
From: Robert Offer <robert@g1zjp.freeserve.co.uk>
Message-ID: <aq0uem$nh2$1@newsg1.svr.pol.co.uk>
Source record: 40276

Hi Vin
Look here for details & spec.
http://www.nd2x.net/gs1b.html
73
de Bob
G1ZJP

3515. Re: GS-1B

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 16:43:57 UTC
From: WPG <vincetuonoWPG@inwind.it>
Message-ID: <hhTw9.106883$RO.2750012@twister1.libero.it>
Source record: 40277

Thanks Bob for the fast answer, this site I already visited him but
unfortunately the impedance of entry is not taken back.
73 de Vin IK7WPG

"Robert Offer" <robert@g1zjp.freeserve.co.uk> ha scritto nel messaggio
news:aq0uem$nh2$1@newsg1.svr.pol.co.uk...
> Hi Vin
> Look here for details & spec.
> http://www.nd2x.net/gs1b.html
> 73
> de Bob
> G1ZJP
>
>

3516. Pattern of *Tri-Di-Pole*+++

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 17:19:30 UTC
From: wa8mea@hotmail.com
Message-ID: <8a260fb2.0211020919.1d04a7f@posting.google.com>
Source record: 40279
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur,rec.radio.amateur.homebrew,rec.radio.amateur.dx

Could use some help from some of our more technically minded antenna buffs.

Several years back, I came up with a general use dipole for SWL's that I named the "Tri-Di-Pole". The "Tri" meant a third wire element connected to the ground side of the dipole at the appex, with this wire running straight done to be connected to a ground rod. This was invented more for practicality purposes, so SWL's didn't have to fiddle with ground wires soldered to those tiny little external antenna phone plugs that are in common use for most portable shortwave radios.

But over the years, several hams have called me about using this same antenna for transmitting. To be honest, I've never tried it for transmit. I just don't have the real estate to experiment with it. But now I'm curious, how well would it work for transmitting purposes?

My devices are born more out of a practical design than technical. I freely admit I'm not all that antenna theory book smart. My questions: What kind of a pattern would this antenna have? Would the take off angle make it highly suitable for DX on certain freq bands? And what would I have to trim? Just the two standard dipole elements? Or would I also have to trim the third ground element? Anybody ever try such a design for transmit and on what freqs?

Thanks for any/all input.

73, Bill Lauterbach - WA8MEA
DWM Communications

http://qth.com/dwm

wa8mea@hotmail.com

3517. Elektor Back Issue

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 17:30:34 UTC
From: "richardwilliam.ayley" <richardwilliam.ayley@ntlworld.com>
Message-ID: <s3dx9.9051$VM5.456863@newsfep2-win.server.ntli.net>
Source record: 40207

Has any body got the February 1998 issue of Elektor UK magazine with the "Frequency Display & VFO Stabilizer" article in it. I would like to copy it for my own use.

Reply richard_ayley@hotmail.com

3518. FS: PC 900 high gm triode - cheap

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 18:21:57 UTC
From: arnoldg@c2i.net
Message-ID: <3dc41717.21750174@news1.c2i.net>
Source record: 40280
Cross-posted to:
rec.radio.amateur.homebrew,rec.audio.tubes,rec.audio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

Hello,

PC 900 is a B7G base triode with a heater of 3.9V 0.3A, Va is 135V
Vg -1V Ia=11mA Wa 2.2W Ik=20mA max, u=76 and the gm is 14.5mA/V
A very promising valve to experiment with in low-level stages, both
audio and HF/VHF amplification. It was developed for use in VHF and
UHF television tuners. The low heater voltage makes it very easy to
use in an ordinary 6.3V heater system, just use a dropper resistor of
8.2 ohm 2W and you are very close to 3.9V

I have 400 pcs in stock and I will sell them at only $ 5.00 each or
$ 2.50 each if you buy 100 pcs or more. The valves are NOS, in mint
condition, original boxes and the label is Haltron, but they are
rebranded, and probably made by Philips or Siemens.
Have a look at my website www.demostenes.no and e-mail me if
interested.

Best regards,

Arnold Goks&#65533;yr

DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://www.demostenes.no

Thousands of different valves in stock as well as
sockets,transformers,books,caps,resistors and
other components. Web site is updated every week.
You can order on-line.

3519. Antenna Switch Questions.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 19:53:00 UTC
From: Dave <local_42@hotmail.com>
Message-ID: <w2Ww9.210819$md1.47658@sccrnsc03>
Source record: 40281

I'm about to put together an antenna switch for my shack and I had a few questions and I figured the NG could give me a little push in the right direction.

Much like a dummy load an antenna switch is very simple. But it is there anything special I should take into consideration? My needs are simple. I need an output for my Omni, an output for a beam, Output for dummy load, and a spare output for experimental/temporary Antennas. Simple right? Grab a project box, some spare SO-239 Connectors and a 4 position rotary switch...right? Is there any reason why I cant just switch the center conductor of the feeds and then the outer shields are all grounded together right? Am I making sense? I would like any unconnected antennas to be grounded (outer shield to center pin) and a position that grounds all outputs when my station is off line. But I'm not sure how to do this yet. I've been thinking it over, but no good ideas have come to mind. I'd like something simple and elegant that keeps the number of components to the absolute minimum. With a few switches I know I can do it but I was hoping there was a way to keep the switches to a minimum and different settings down to the absolute minimum.

I'd also like to be able to plug both my radios into the antenna switch. I guess the idea is I'd like to monitor two different freq with two radios on one antenna. But I think when transmitting with one rig is where I would have a problem. How could I go about simply and effectively separating the rigs during transmission? A radio with a dual band monitoring function is just not feasible at this point and really doesn't interest me. I'd like to use the equipment I own now to effectively monitor the freqs I use.

If it makes any difference in construction technique or components I operate on 11 meters and am only broadcasting 4W. I appreciate any suggestions or links to give me an idea of my next step. I'm heading out this afternoon to pick up a few parts for other projects and figured if I need something I haven't considered now is the time to ask. Course the more trips to the parts house the better. I love wandering the aisles, something all ways jumps off the shelf and screams "BUY ME! You need me. Just think what you can build with me!"

Thank you for any ideas,

Dave

3520. Works great on the second go round (was: How can you screw up a Dummy Load?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 19:53:17 UTC
From: Dave <local_42@hotmail.com>
Message-ID: <N2Ww9.217366$qM2.71897@sccrnsc02>
Source record: 40282

Problem was in my construction technique. I did a pretty sloppy job on the first one. Built a second unit and paid attention to detail. Dummy load reads as close to 1/1 as I can see on an analogue meter. With the 2W resistors it can easily take 10 times what I'm pumping into it. Doesn't even get warm. I was all smiles Wednesday night when I showed my girlfriend the completed project (looks very professional, I think, inside and out) Of course she wasn't to impressed and I was a little mumbly when she said "Ok, looks nice, but what does it do and why did you build it" The logical answer of "It's a simple introduction to construction and useful for off air tune ups" did nothing for her. Oh well, I'm much the same when she talks about her horses, he he.

Thanks for all the input,

Dave

"Dave" <local_42remove@hotmail.com> wrote in message news:LEXu9.131629$zE6.459703@rwcrnsc51.ops.asp.att.net...
> Subject line says it all. Finally broke down and bought myself a decent
> soldering station and figured I'd whip up a dummy load for my first project.
> What can be more simple than a chaises mount UHF connector, a couple pieces
> of scrap copper board, and a hand full of resistors?
>
> Cut the board into two pieces 2" x 2 1/2"
>
> Soldered each of the resistors to the boards. Used (20) 2W flame proof
> carbon resistors rated at 1KOhm 2%.
>
> I read 47 Ohms on the board. By eliminating 2 of the resistors I have 49
> Ohms.
>
> Great I say, I'm with in 2% of my target resistance. Plug her into my meter
> and calibrate the meter to read SWR and I read a whopping 10!!!!
>
> What am I not understanding about the simplest piece of equipment in my
> shack? Anyone out there give me a clue as to what I might have done wrong? I
> know the standard carbon resistors aren't the best for a dummy load
> (something about inductance right?) But from what I've read they should work
> fine for my purpose, and with my limited knowledge of electronics I need a

> push in the right direction. Very few web sites seem to talk about dummy
> loads (can't blame them, how much do you need to know about a bank of
> resistors?)
>
> Dave
>
>

3521. Re: PC 900 high gm triode - cheap

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 20:18:48 UTC
From: Choky <choky*remove*@eunet.yu>
Message-ID: <aq1ge1$k5e$1@news.eunet.yu>
Source record: 40288
Cross-posted to:
rec.radio.amateur.homebrew,rec.audio.tubes,rec.audio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

```
huh,Demo -this is good Spam example!
at least -looking on xposting issue.
btw- like I said once before,PC900 is nice little one.....
```

--
Choky
Prodanovic Aleksandar
choky*remove*@eunet.yu
YU
---
remove *remove* to reply!

"DEMOSTENES A. Goks&#65533;yr" <arnoldg@c2i.net> wrote in message
news:3dc41717.21750174@news1.c2i.net...
| Hello,
|
| PC 900 is a B7G base triode with a heater of 3.9V 0.3A, Va is 135V
| Vg -1V Ia=11mA Wa 2.2W Ik=20mA max, u=76 and the gm is 14.5mA/V
| A very promising valve to experiment with in low-level stages, both
| audio and HF/VHF amplification. It was developed for use in VHF and
| UHF television tuners. The low heater voltage makes it very easy to
| use in an ordinary 6.3V heater system, just use a dropper resistor of
| 8.2 ohm 2W and you are very close to 3.9V
|
| I have 400 pcs in stock and I will sell them at only $ 5.00 each or
| $ 2.50 each if you buy 100 pcs or more. The valves are NOS, in mint
| condition, original boxes and the label is Haltron, but they are
| rebranded, and probably made by Philips or Siemens.
| Have a look at my website www.demostenes.no and e-mail me if
| interested.
|
| Best regards,
|
| Arnold Goks&#65533;yr
|
| DEMOSTENES - N6899 Balestrand, Norway
| Tlf. +47 5769 1340 Fax +47 5769 1267
| http://www.demostenes.no
|
| Thousands of different valves in stock as well as
| sockets,transformers,books,caps,resistors and
| other components. Web site is updated every week.

| You can order on-line.
|

3522. Re: Antenna Switch Questions.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 20:23:58 UTC
From: "Thomas C. Sefranek" <WA1RHP@ARRL.net>
Message-ID: <yvWw9.3211$t4.362460@newsread2.prod.itd.earthlink.net>
Source record: 40283

I have built several remote control antenna switches using relays.

Dave <local_42@hotmail.com> wrote in message
news:w2Ww9.210819$md1.47658@sccrnsc03...
> I'm about to put together an antenna switch for my shack and I had a few
> questions and I figured the NG could give me a little push in the right
> direction.
>
> Much like a dummy load an antenna switch is very simple. But it is there
> anything special I should take into consideration? My needs are simple. I
> need an output for my Omni, an output for a beam, Output for dummy load,
and
> a spare output for experimental/temporary Antennas. Simple right? Grab a
> project box, some spare SO-239 Connectors and a 4 position rotary
> switch...right? Is there any reason why I cant just switch the center
> conductor of the feeds and then the outer shields are all grounded
together
> right? Am I making sense? I would like any unconnected antennas to be
> grounded (outer shield to center pin) and a position that grounds all
> outputs when my station is off line. But I'm not sure how to do this yet.
> I've been thinking it over, but no good ideas have come to mind. I'd like
> something simple and elegant that keeps the number of components to the
> absolute minimum. With a few switches I know I can do it but I was hoping
> there was a way to keep the switches to a minimum and different settings
> down to the absolute minimum.
>
> I'd also like to be able to plug both my radios into the antenna switch. I
> guess the idea is I'd like to monitor two different freq with two radios
on
> one antenna. But I think when transmitting with one rig is where I would
> have a problem. How could I go about simply and effectively separating the
> rigs during transmission? A radio with a dual band monitoring function is
> just not feasible at this point and really doesn't interest me. I'd like
to
> use the equipment I own now to effectively monitor the freqs I use.
>
> If it makes any difference in construction technique or components I
operate
> on 11 meters and am only broadcasting 4W. I appreciate any suggestions or
> links to give me an idea of my next step. I'm heading out this afternoon
to
> pick up a few parts for other projects and figured if I need something I
> haven't considered now is the time to ask. Course the more trips to the
> parts house the better. I love wandering the aisles, something all ways

> jumps off the shelf and screams "BUY ME! You need me. Just think what you
> can build with me!"
>
>
> Thank you for any ideas,
>
> Dave
>
>
>

3523. Re: Antenna Switch Questions.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 20:33:38 UTC
From: Bill M <exray@no>
Message-ID: <us8dg3jlkse483@corp.supernews.com>
Source record: 40284

Dave wrote:
>
>
> a spare output for experimental/temporary Antennas. Simple right? Grab a
> project box, some spare SO-239 Connectors and a 4 position rotary
> switch...right? Is there any reason why I cant just switch the center
> conductor of the feeds and then the outer shields are all grounded together
> right?

Yep, thats fine.

>
> I'd also like to be able to plug both my radios into the antenna switch. I
> guess the idea is I'd like to monitor two different freq with two radios on
> one antenna. But I think when transmitting with one rig is where I would
> have a problem. How could I go about simply and effectively separating the
> rigs during transmission?

Short answer is that you can't transmit with that scheme. You can rig
up all the switches you need to make a 'matrix' of different
rigs/antennas, though.
Now if you really wanted to xmt with a scheme like that, what you would
want is some sort of RF activated relay or switch but I don't know if
that would even be fast enough to protect the 'other' set. Manually
switching it off line seems to be the simplest.

As for parts, a decent 'old' quality rotary switch, even the phenolic
wafer types, are generally adequate at that power level and frequency.
Ceramic would be better but not essential.

Good luck and congrats on the dummy load.

-Bill M
WX4A

3524. Re: Do the magnets in panel meters weaken with time?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 20:45:47 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0211021547000001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40285

In article <us7puc5c2hs2d9@corp.supernews.com>, "M.E." <bogus@nonspam.com>
wrote:

> Typical calibration is done at FULL SCALE reading, because the maximum error
> will happen at that point too. So, you calibrate there to minimize the
> error.
> The mid-scale error will be neglegible. For example: My plate current meter
> on my HB HF amp has a error of + or - 10mA @ 1000mA. full scale reading.
> My grid-current meter has an error of + or - 1mA @ 100mA full-scale reading.
> The typical meter will not chenage much due to temperature, provided the
> meter movement is enclosed. Tempature will affect the shumt resistor value &
> the cal pot, for a small amount, but this should not be a factor when the
> unit is inside a house where the temp is fairly consant. Units that are
> outside inn the weather need a heater inside to maintain a more or less
> constant temp. Cold lowers the resistence, heat raises it.
> But, all meters are relative anyway.
>
> --
> Respond to my "real" e-mail;
> kk5dr@ev1

The old panel meters varied from the fantastic vane type to the lousy ones
of different varieties. They are nothing more than psuedo-static motors
and have mechanical as well as magnetic theories in play to make them
work. All these things vary with no predictability. The best thing to
happen in the last few years to decades is the advent of A/D's and digital
readout becoming practical. I started in elecctronics in the days of
graphical methods of solution, vacuum tubes, and panel meters and all I
can say is that now I threw my old analog meter in the closet and have a
more accurate and easier to use instrument to do my measurements than I
ever thought possible. This is especially true for resistance
measurements.

Question on cal? If it's off at mid scale it's off everywhere with
digital. Now I expect a flame from someone at ....uk telling me
otherwise, but I don't care. :-)

Steve WB4CZR

3525. Re: Antenna Switch Questions.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 20:46:12 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <us8ecj6oa91gb7@corp.supernews.com>
Source record: 40286

Dave wrote:
> I'm about to put together an antenna switch for my shack and I had a few
> questions and I figured the NG could give me a little push in the right
> direction.
>
> Much like a dummy load an antenna switch is very simple. But it is there
> anything special I should take into consideration? My needs are simple. I
> need an output for my Omni, an output for a beam, Output for dummy load, and
> a spare output for experimental/temporary Antennas. Simple right? Grab a
> project box, some spare SO-239 Connectors and a 4 position rotary
> switch...right? Is there any reason why I cant just switch the center
> conductor of the feeds and then the outer shields are all grounded together
> right? Am I making sense? I would like any unconnected antennas to be
> grounded (outer shield to center pin) and a position that grounds all
> outputs when my station is off line. But I'm not sure how to do this yet.
> I've been thinking it over, but no good ideas have come to mind. I'd like
> something simple and elegant that keeps the number of components to the
> absolute minimum. With a few switches I know I can do it but I was hoping
> there was a way to keep the switches to a minimum and different settings
> down to the absolute minimum.

The method you propose is probably ok if you use a metal box and keep the wires as short as possible. The reason for the short wires is that when you separate the center conductor from the shield, you still have a transmission line, but one having a much higher impedance. If this section of high impedance line is too long, it'll affect your impedance match. This would probably be a problem only if it's bad enough to make your transmitter's output drop, but it's something you should strive to minimize. A better approach from this standpoint is to use a two-wafer switch and switch both conductors at the same time, making the connection from the connectors to the switch with small diameter coax like RG-58 or RG-174 (smaller). But it's a lot of extra trouble, is susceptible to problems like melting the coax insulation when soldering, and really unnecessary for what you're doing as long as you can keep the wires short. The metal box is important for two reasons. One is that the wires to the switch will pick up nearby noise on receive, and will radiate on transmit, and a metal box provides shielding. The other reason is that it'll provide a low impedance path between the antenna and rig coax shields, and by being the outer conductor of the "transmission lines" inside the box, it'll lower the impedances of these lines a bit. So get a metal box, but not one that's a lot bigger than you need, use the single wire approach, and you'll be ok.

Sorry, I don't know of a simple way to do the grounding thing with a common type of rotary switch. Maybe someone else knows a way. The

configuration is simple using relays (an SPDT or DPDT switch for each antenna), but that's considerably more complicated and expensive than what you propose.

> I'd also like to be able to plug both my radios into the antenna switch. I
> guess the idea is I'd like to monitor two different freq with two radios on
> one antenna. But I think when transmitting with one rig is where I would
> have a problem. How could I go about simply and effectively separating the
> rigs during transmission? A radio with a dual band monitoring function is
> just not feasible at this point and really doesn't interest me. I'd like to
> use the equipment I own now to effectively monitor the freqs I use.

For receiving, you might be able to get by with just connecting two radios to one antenna -- it won't hurt anything anyway. A generally better way is to use a "splitter". There are at least a couple of ways of making these, and you might be able to find one you can buy. This isolates the two receivers from each other but connects each to the antenna. A splitter also works as a combiner for transmitting, provided it's built to take the power. The down side is that you'll always eat 3 dB in a splitter/combiner. That probably won't be a problem on receive (although it could be), but it'll reduce the signal you're transmitting. Directly connecting receivers won't reduce this loss -- the only solution is a mechanical switch to select the radio you want to use for transmitting at a given time.

> If it makes any difference in construction technique or components I operate
> on 11 meters and am only broadcasting 4W. I appreciate any suggestions or
> links to give me an idea of my next step. I'm heading out this afternoon to
> pick up a few parts for other projects and figured if I need something I
> haven't considered now is the time to ask. Course the more trips to the
> parts house the better. I love wandering the aisles, something all ways
> jumps off the shelf and screams "BUY ME! You need me. Just think what you
> can build with me!"

Watch out. Keep up that attitude, and you're likely to end up in amateur radio!

Roy Lewallen, W7EL

3526. Re: Do the magnets in panel meters weaken with time?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 21:42:42 UTC
From: averyfineman@aol.com
Message-ID: <20021102164242.15163.00000313@mb-da.aol.com>
Source record: 40287

In article <m3l6su03matjdso51gjdh2iucccamfpf0c@4ax.com>, Jim Adney
<jadney@vwtype3.org> writes:

>On 01 Nov 2002 18:13:25 GMT averyfineman@aol.com (Avery Fineman)
>wrote:

>> of the motor winding built-in. On common panel meters,
>> expect a normal 2% scale change from brass monkey cool
>> temps to sweltering hot T-shirt temps. All due to copper meter
>> motor winding and external series or shunt resistors.
>
>The question of meter sensitivity to temp changes came up in a
>different area recently and I was surprised when someone claimed to
>have found a rather large temp dependence in a d'Arsonval meter meant
>for automotive use, a VDO tachometer.
>
>How is temp compensation done on such meters, and is it possible for
>cheap meters to have much more temp dependence than even a well made
>but uncompensated movement?

I don't have a good answer to that question. :-)

When I was specifying and buying instrument meters, I didn't much
care about what the manufacturer put inside the case as long as it
met spec and we could make a profit with it. <shrug>

In the course of that work, I did run into a peculiar temperature
problem with a previously-proven 1% meter circuit...2% error
between cooler temps of the final test area versus the engineering
lab! After carefully dismantling one instrument's meter circuit and
testing every component carefully, nothing out of tolerance was
found. The trouble lay in the meter range switch, a rotary of several
decks that also mounted the range resistors between decks. The
production foreman had used several "very straight" well-tinned
leads traded with a buddy at a capacitor manufacturer...they made
the wire cross-over connections between range switch decks look
nice. Those leads turned out to have a high nickel content and the
thermocouple effect of dissimilar metals produced the extra error.
We had to electrically compare a pre-production prototype wafer
switch assembly with a production model assembly to zero in on
the error agent.

Any dissimilar metal junction in a few-millivolt meter circuit can
cause problems over temperature. Errors don't have to be due to
the meter alone.

To "qualify" a meter of your own, just make a setup to compare it to some standard such as voltmeter circuit with a known resistor, the series across a stable supply measured with a 4 1/2 digit DVM (for accuracy). Take the meter by itself and soak it in a refrigerator (not the freezer) alongside a food temp gauge for a couple or three hours. Take it out and connect it, read the indication and note it. Let it warm up on the bench for another 2-3 hours, along with the food temp gauge, and measure it at room temperature...whatever the food temp gauge indicated. Food temperature gauges come in all sorts of ranges and are cheap, accurate enough to yield a reasonably good temperature value.

What you actually DO with the information depends on your final task. That simple test will yield DATA where no data was available before. Such data is better than a lot of talk back and forth based on no quantitative testing.

Len Anderson
retired (from regular hours) electronic engineer person

3527. Re: RJELOOP3 was "Calculating self-capacitance of an inductor?"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 21:59:43 UTC
From: la8ak.xnd@online.no
Message-ID: <3dc44755.357236811@news.online.no>
Source record: 40289

On Sun, 13 Oct 2002 17:30:18 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>For design of square frame antennas, VLF to HF, dimensions, width, number of
>turns, wire size, wire spacing, tuning capacitance needed for given
>frequency, self-capacitance, Q -
>
>Download in a few seconds program RJELOOP3 from website below. Run
>immediately. User friendly.
>---
>========================
>Regards from Reg G4FGQ
>Free Radio Design Software
>Go to http://www.g4fgq.com
>========================
>
>
Only problem is that you may wish to have 50 or 75 ohm feeder
resistance, this may usually be accomplished with a 1/100 loop area
ratio,
so one turn out of 25 or 30turns doesn't give a useful connection,
it is probably 1000 ohm and you still need an amplifier to feed the
cable - I don't see it is practical.

A 50ohm output may need an amplifier, dependent on type of receiver
you use, some transceivers are quite deaf on LF/MF

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

3528. Re: Antenna Switch Questions.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-02 22:35:50 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <ZfCcndXX_6X6zlmgXTWcpA@cnmnetwork.com>
Source record: 40290

I have a couple of B&W coaxial switches and they have a setup whereby the unused antennas are grounded. It's done by the shape of the moving contact of the switch.

You can't do this yourself. You could buy one of these switches; mine has 6 positions.

An alternative would be to do the switching with relays, where making any sort of relay logic is relatively simple. For these frequencies, you don't have to worry too much about lead dress as long as the size of the box is small, say less than maybe 6" in any direction. After all, a tenth wave at 11 meters is a bit over three feet, and you won't have a problem with a small box.

The main thing is, don't hot switch. That is, don't change switch positions while transmitting. You can damage the switch (or relay) contacts and/or the output stage of the transmitter.

3529. Re: PC 900 high gm triode - cheap

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 00:05:42 UTC
From: la8ak.xnd@online.no
Message-ID: <3dc44a77.358039186@news.online.no>
Source record: 40291
Cross-posted to:
rec.radio.amateur.homebrew,rec.audio.tubes,rec.audio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

On Sat, 2 Nov 2002 21:18:48 +0100, "Choky" <choky*remove*@eunet.yu>
wrote:

>huh,Demo -this is good Spam example!
>at least -looking on xposting issue.
>btw- like I said once before,PC900 is nice little one.....
>
even for audio - I am told, if they are inexpensive....

--
remove ,xnd to reply

3530. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 00:05:42 UTC
From: la8ak.xnd@online.no
Message-ID: <3dc44b71.358289054@news.online.no>
Source record: 40292

On Sat, 2 Nov 2002 12:58:16 -0000, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>> It would be interesting to put capacitance across your resistors
>> to tune out the inductance. See if you can bring your swr down
>> closer to 1.
>============

>This might be acceptable when using the dummy load for a specific (narrow)
>frequency band ,but not as a universal (multi band) dummy load. Strictly
>speaking ,it would only be suitable for 1 frequency for which the load would
>be strictly resistive.
>
>Frank gm0csz.kn6wh@ntlworld.com
>

in principle, yes, but it might work on a higher frequency band - say
2m, and provided the capacitance is small it wouldn't harm on HF

73
Jan-Martin LA8AK
--
remove ,xnd to reply

3531. Re: Antenna Switch Questions.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 01:23:31 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <OV_w9.2782$%q2.90929@newsfep1-win.server.ntli.net>
Source record: 40293

"Bob" <balbert@cnmnetwork.com> wrote in message
news:ZfCcndXX_6X6zlmgXTWcpA@cnmnetwork.com...
> I have a couple of B&W coaxial switches and they have a setup whereby the
> unused antennas are grounded. It's done by the shape of the moving
contact
> of the switch.
>
> You can't do this yourself. You could buy one of these switches; mine has
6
> positions.
>
> An alternative would be to do the switching with relays, where making any
> sort of relay logic is relatively simple. For these frequencies, you
don't
> have to worry too much about lead dress as long as the size of the box is
> small, say less than maybe 6" in any direction. After all, a tenth wave
at
> 11 meters is a bit over three feet, and you won't have a problem with a
> small box.
>
> The main thing is, don't hot switch. That is, don't change switch
positions
> while transmitting. You can damage the switch (or relay) contacts and/or
> the output stage of the transmitter.
==========
Many years ago in the 1970s Heathkit supplied a kit of a 4 position single deck shorting switch with 4pcs SO239 socket which were directly soldered (no wiring) to the switch contacts . The sockets were positioned in a hexagon .There also was an external screw type earth connection . I still use the switch.

Some time ago I made for a club a remotely operated 6 position antenna switch with 6pcs 12V DPDT miniature relays with plastic caps which were closely positioned on a piece of circuit board leaving a slot in the circuit board through which the relay solder tags protruded . These could in this way be connected with very short wires and practically directly to 7 SO-239 sockets (to accept PL259 connectors). The SO 239 sockets were fitted (in line) in the lid of a die-cast aluminium box.

Each relay had its 2 changeover contacts put in parallel .

The remote control box had 6 LEDs in a panel with room for (antenna) labels and a multi-deck rotary switch configured such that with 1 relay energised the relevant socket was connected with a socket to be connected to the transceiver , while most other sockets were connected to ground

However 1 particular SO239 connector relay was operated the other way around ,it connected the connector with the transceiver connector when de-energised . This particular connector was for the dummy load.
Hence when the power to the relay box would fail ,the transceiver would always be automatically connected to the dummy load (fail safe principle)
When the dummy load would be selected with the multi-position switch , the relevant relay would be de-energised , but the respective LED would be 'on' .

I recommended that the unit should not be used for RF power in excess of 100 Watts (based on gut-feeling).
However during a contest the unit was used in the output of a 400 W Power amp. , be it without 'hot switching'
Upon inspecting the tiny relay contacts after the event I was very surprised that they still were in a prestine condition.

Frank gm0csz.kn6wh@ntlworld.com

3532. need an elmer...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 03:17:59 UTC
From: Tazanator <tazanator1@hotmail.com>
Message-ID: <Hz0x9.230104$%d2.76301@sccrnsc01>
Source record: 40294

okay got a ociliscopr (philips PM3200) does 0-10Mhz was told I can check output and signal strength on it ... how (I am tech so my freq's are 50 and up ... mostly 2 meters...)
KB9YMX

3533. Re: How can you screw up a Dummy Load?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 03:55:38 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <_61x9.2005$vZ6.1840272@newshog.newsread.com>
Source record: 40295

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
news:SE5C4ZBJ5Fv9EA30@ifwtech.co.uk...
> Dave wrote:
> >Subject line says it all. Finally broke down and bought myself a decent
> >soldering station and figured I'd whip up a dummy load for my first
project.
> >What can be more simple than a chaises mount UHF connector, a couple
pieces
> >of scrap copper board, and a hand full of resistors?

How was the meter calibrated? For VSWR it's forward power plus reflected,
divided by forward (as I recall...I've been known to miss a digit here and
there)

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek

3534. Re: need an elmer...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 03:58:01 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <us97g741besk2b@corp.supernews.com>
Source record: 40296

Not on a 10MHz scope you won't.
The bandwidth of the scope must be equal to or more that the freq your testing.
When you get the correct scope, you can place a piece of wire in the probe port and wrap a few turns around the coax. Read your output on a meter first, then note the level of the output on the scope screen, now you can use it to see what your PEP is.
If you get real fancy, you can use a RF sampling unit, that goes in-line with the coax,, and sends a sample of the RF to the scope port, which you must adjust the scope for a slightly less than full screen display, and adjust the sweep speed to a rate that you can see.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Tazanator" <tazanator1@hotmail.com> wrote in message news:Hz0x9.230104$%d2.76301@sccrnsc01...
> okay got a ociliscopr (philips PM3200) does 0-10Mhz was told I can check
> output and signal strength on it ... how (I am tech so my freq's are 50 and
> up ... mostly 2 meters...)
> KB9YMX
>
>

3535. 2.4 Gig infor needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 03:59:29 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <Ba1x9.2006$vZ6.1839884@newshog.newsread.com>
Source record: 40197

I'm looking for some 2.4 gig equipment to try both EME, ATV, and digital.

I've not worked on the 2.4 gig band before, so I know very little about it. The ARRL handbook does little more than aknowledge it exists. With all the shairing, it's difficult to find what frequencys I can use and what power.

I'm also looking for just plain information, or scematics. Something to build, buy, or modify for RX, and TX.

So far the highest I've been has been the 23 CM band.

I think we're limited to 50 watts out plus antenna gain, but I haven't been able to find much in the way of information on the band.

73

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

3536. Re: Works great on the second go round (was: How can you screw up a Dummy Load?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 10:47:17 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <wOYqqdD16Px9EACs@ifwtech.co.uk>
Source record: 40198

Dave Wrote:

>Problem was in my construction technique. I did a pretty sloppy job on the
>first one. Built a second unit and paid attention to detail.

If you can bear to admit it, it would be interesting to know how sloppy
the construction had to be, to make it stop working?

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3537. Re: need an elmer...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 13:21:32 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <aq38vm$2j5$1@news7.svr.pol.co.uk>
Source record: 40201

"Tazanator" <tazanator1@hotmail.com> wrote in message
news:Hz0x9.230104$%d2.76301@sccrnsc01...
> okay got a ociliscopr (philips PM3200) does 0-10Mhz was told I can
check
> output and signal strength on it ... how (I am tech so my freq's are 50
and
> up ... mostly 2 meters...)
> KB9YMX

You could build a mixer to convert 50 MHz and 144 MHz signals down to 10
MHz. The Handbook has a suitable circuit for this.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

3538. Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 13:21:48 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <eaGcnZBJSN6qu1igXTWcqw@comcast.com>
Source record: 40200

according to the new issue of QST, the contest is being revived (I guess, the last time I even considered it was as a teenager in the 1960's when I had a BC-221H).

At any rate, I know that GPS provides an extremely good reference. How about the signals from CDMA transmission on the local cell? Saw an item on the "Bay which cited the URL below as a reference:

http://www.symmetricom.com/media/pdf/documents/ds-ts-2700-s1.pdf

3539. Re: 2.4 Gig infor needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 13:34:34 UTC
From: scott <acepilot@bloomer.net>
Message-ID: <3DC525EA.F107DB96@bloomer.net>
Source record: 40199

For regulations, see the FCC rule book. I think the ARRL website even has them on line. For equipment, you might take a look at http://www.downeastmicrowave.com/ to see what they have available. ARRL also published a couple microwave books.

Scott N0EDV
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

Roger Halstead wrote:

> I'm looking for some 2.4 gig equipment to try both EME, ATV, and digital.
>
> I've not worked on the 2.4 gig band before, so I know very little about it.
> The ARRL handbook does little more than aknowledge it exists. With all the
> shairing, it's difficult to find what frequencys I can use and what power.
>
> I'm also looking for just plain information, or scematics. Something to
> build, buy, or modify for RX, and TX.
>
> So far the highest I've been has been the 23 CM band.
>
> I think we're limited to 50 watts out plus antenna gain, but I haven't been
> able to find much in the way of information on the band.
>
> 73
>
> --
> Roger Halstead (K8RI EN73)
> www.rogerhalstead.com
> N833R World's oldest Debonair? (S# CD-2)

--

3540. Oscilloscope mixer ....was: need an elmer...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 14:48:59 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <OKax9.988$oL4.60376@newsfep1-win.server.ntli.net>
Source record: 40202

> > okay got a osciliscope (Philips PM3200) does 0-10Mhz was told I can
check
> > output and signal strength on it ... how (I am Tech so my freq's are 50
> > and up ... mostly 2 meters...) , KB9YMX
==========
> You could build a mixer to convert 50 MHz and 144 MHz signals down to 10
> MHz. The Handbook has a suitable circuit for this.
> 73, Leon
==========
In ARRL Handbook 1995 , page 26.28 a mixer for HF sigs is described
utilising a SRA-1 mixer.
I have a SBL-1 mixer and a stable signal gen up to 184 MHz to be used as LO.
Would the SBL-1 mixer be capable of handling up to 144 -148 MHz using a
0-10 MHz oscilloscope ?

Frank gm0csz.kn6wh@ntlworld.com

3541. Re: 2.4 Gig infor needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 15:36:42 UTC
From: Gary Tait <taitg@hurontel.on.ca>
Message-ID: <nigasuou7uv3bd8vfg6jq6mksq6m8oo6t0@4ax.com>
Source record: 40203

On Sun, 03 Nov 2002 03:59:29 GMT, "Roger Halstead" <rdhalste@tm.net>
wrote:

>I'm looking for some 2.4 gig equipment to try both EME, ATV, and digital.
>
>I've not worked on the 2.4 gig band before, so I know very little about it.
>The ARRL handbook does little more than aknowledge it exists. With all the
>shairing, it's difficult to find what frequencys I can use and what power.
>
>I'm also looking for just plain information, or scematics. Something to
>build, buy, or modify for RX, and TX.
>
>So far the highest I've been has been the 23 CM band.
>
>I think we're limited to 50 watts out plus antenna gain, but I haven't been
>able to find much in the way of information on the band.
>
>73

You can buy those 2.4 Ghz X10 video relays, and hack them for Amatuer
use.

3542. Re: Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 15:48:25 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <usahae1igo86d4@corp.supernews.com>
Source record: 40204

I think this is the timing source for a CDMA site. It uses GPS to discipline a xtal oven and they claim Stratum 1 capability which is the highest Bell standard for timing. I'd guess it's somewhere between a rubidium and cesium. I'd venture to guess the winner of the contest will have a frequency standard that is most nearly in phase with one the ARRL is using.
"john walton" <jdwalton@comcast.net> wrote in message news:eaGcnZBJSN6qu1igXTWcqw@comcast.com...
> according to the new issue of QST, the contest is being revived (I guess,
> the last time I even considered it was as a teenager in the 1960's when I
> had a BC-221H).
>
> At any rate, I know that GPS provides an extremely good reference. How
> about the signals from CDMA transmission on the local cell? Saw an item
> on the "Bay which cited the URL below as a reference:
>
> http://www.symmetricom.com/media/pdf/documents/ds-ts-2700-s1.pdf
>
>
>
>
>

3543. Re: Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 16:54:10 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3DC554B2.19F1B969@ieee.org>
Source record: 40205

Henry Kolesnik wrote:

> I think this is the timing source for a CDMA site. It uses GPS to
> discipline a xtal oven and they claim Stratum 1 capability which is the
> highest Bell standard for timing. I'd guess it's somewhere between a
> rubidium and cesium. I'd venture to guess the winner of the contest will
> have a frequency standard that is most nearly in phase with one the ARRL is
> using.

This device seems to me to "get" it's timing from the CDMA site. I wouldn't go
so far as to call it a "Stratum One" but that is just my opinion.

Assuming most frequency measurement will be with a very accurate counter, the
main
problem will be determining the frequency of the signal in the face of
constantly varying
phase due to fading. The advantage will go to those within "ground wave"
distance
of the transmitter.

Just my opinion
Bill K7NOM

>
> "john walton" <jdwalton@comcast.net> wrote in message
> news:eaGcnZBJSN6qu1igXTWcqw@comcast.com...
> > according to the new issue of QST, the contest is being revived (I guess,
> > the last time I even considered it was as a teenager in the 1960's when I
> > had a BC-221H).
> >
> > At any rate, I know that GPS provides an extremely good reference. How
> > about the signals from CDMA transmission on the local cell? Saw an item
> > on the "Bay which cited the URL below as a reference:
> >
> > http://www.symmetricom.com/media/pdf/documents/ds-ts-2700-s1.pdf
> >
> >
> >
> >
> >

3544. Re: 2.4 Gig infor needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 17:15:22 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <aq3lja$a7i$0@216.39.177.115>
Source record: 40206

Aren't the X-10 transmitters only 10 mw with a 100 ft range?

73 de Jack

"Gary Tait" <taitg@hurontel.on.ca> wrote in message
news:nigasuou7uv3bd8vfg6jq6mksq6m8oo6t0@4ax.com...
> On Sun, 03 Nov 2002 03:59:29 GMT, "Roger Halstead" <rdhalste@tm.net>
> wrote:
>
> >I'm looking for some 2.4 gig equipment to try both EME, ATV, and digital.
> >
> >I've not worked on the 2.4 gig band before, so I know very little about
it.
> >The ARRL handbook does little more than aknowledge it exists. With all
the
> >shairing, it's difficult to find what frequencys I can use and what
power.
> >
> >I'm also looking for just plain information, or scematics. Something to
> >build, buy, or modify for RX, and TX.
> >
> >So far the highest I've been has been the 23 CM band.
> >
> >I think we're limited to 50 watts out plus antenna gain, but I haven't
been
> >able to find much in the way of information on the band.
> >
> >73
>
> You can buy those 2.4 Ghz X10 video relays, and hack them for Amatuer
> use.
>

3545. need a spark gap transmitter for experiment

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 18:04:28 UTC
From: tagangchiou@yahoo.com.tw
Message-ID: <6a3d2a74.0211031004.3a9f9fc0@posting.google.com>
Source record: 40208

I would like to buy a simple spark gap transmitter for a scientific project. I wonder if there is one that I can purchase? I am willing to pay for building it.

The requirement:
1. have a spark gap (and standard components like transformer, L, C, and probably an antenna. If possible, I want a small loop antenna for experiment)
2. simple (so that I can measure different characteristics by replacing the L and C).
3. basic safety (e.g. at least with a safety fuse).
4. portable (I need to carry it to other places for measurement.)
5. not very fragile (It will be shipped to Taiwan.)
6. can transmit longer than six feet.
If possible, I want to operate it under low power so that it will not interfere neighbors' utilities. (If necessary, I will operate in a Farady Cage to avoid violating FCC regulations.)

Does anyone know where to order it, or is willing to help make one for pay? Thank you very much!!

Ps. Please contact me at <dc at media . mit . edu> (convert at to @, and connect the others). Please do not contact me at tagangchoiu at yahoo.com.tw because it receives too many spam mail. Thanks.

Best regards,
David

3546. Re: Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 18:37:21 UTC
From: dinoal7lz@aol.com
Message-ID: <20021103133721.25072.00001377@mb-dh.aol.com>
Source record: 40209

You can attempt to account for the propagation error by monitoring the standard time signal stations closest to the ARRL FMT transmission frequencies, i.e. CHU at 3.33 and 7.335 and WWV at 15 MHz and tracking the error over time at approximately the same time the test will be conducted. If the radio you use accepts an external reference (the HP Z3801A for example) and you offset your BFO (also locked) to a known value you can then measure the frequency of the audio signal then use the radio's displayed frequency, the average of audio counts recorded during the test and the correction factor already noted to determine the received signal's frequency. At least that all sounds good in theory---we're going to use this methodololgy during the FMT and see what happens.

Dino KL0S/4

3547. Re: 2.4 Gig infor needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 19:16:02 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <SBex9.2100$Ve3.1635732@monger.newsread.com>
Source record: 40210

"Gary Tait" <taitg@hurontel.on.ca> wrote in message
news:nigasuou7uv3bd8vfg6jq6mksq6m8oo6t0@4ax.com...
> On Sun, 03 Nov 2002 03:59:29 GMT, "Roger Halstead" <rdhalste@tm.net>
> wrote:
>
> >I'm looking for some 2.4 gig equipment to try both EME, ATV, and digital.
> >
> >I've not worked on the 2.4 gig band before, so I know very little about
it.
> >The ARRL handbook does little more than aknowledge it exists. With all
the
> >shairing, it's difficult to find what frequencys I can use and what
power.
> >
> >I'm also looking for just plain information, or scematics. Something to
> >build, buy, or modify for RX, and TX.
> >
> >So far the highest I've been has been the 23 CM band.
> >
> >I think we're limited to 50 watts out plus antenna gain, but I haven't
been
> >able to find much in the way of information on the band.
> >
> >73
>
> You can buy those 2.4 Ghz X10 video relays, and hack them for Amatuer
> use.
>
Thanks, but they dont run near enough power...I'm looking at running about
50 watts, or what ever is max legal limit right at the feed horn.
Besides, with all the X-10 pop ups, I swore I'd never purchase any of their
equipment.

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

3548. Re: Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 19:41:34 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3DC57BED.88E75C94@ieee.org>
Source record: 40211

Dino AL7LZ wrote:

> You can attempt to account for the propagation error by monitoring the standard
> time signal stations closest to the ARRL FMT transmission frequencies, i.e. CHU
> at 3.33 and 7.335 and WWV at 15 MHz and tracking the error over time at
> approximately the same time the test will be conducted. If the radio you use
> accepts an external reference (the HP Z3801A for example) and you offset your
> BFO (also locked) to a known value you can then measure the frequency of the
> audio signal then use the radio's displayed frequency, the average of audio
> counts recorded during the test and the correction factor already noted to
> determine the received signal's frequency. At least that all sounds good in
> theory---we're going to use this methodololgy during the FMT and see what
> happens.
>
> Dino KL0S/4

Sounds like a pretty good arrangement to me.

My only comment would be to try and average as many measurements as possible.

Maybe on the next test I will set up and see what I can do.

Bill K7NOM

3549. Re: Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 19:55:01 UTC
From: dinoal7lz@aol.com
Message-ID: <20021103145501.11177.00003315@mb-fi.aol.com>
Source record: 40212

Well, my counter offers only three time base intervals 0.1/1/10 seconds...the ARRL test signals will last 20 seconds at a pop and I'm going to use the 10 sec gate time...hopefully I'll get two readings per key down period, but most likely only one. For those with gate times down in the 3-5 second range the task will be much easier and as Bill suggests will provide more samples (no, we won't go down the road with statistics since figures always lie and liars always figure!). The old FMT as I recall had 5 minutes of key down on each frequency consecutively whereas here it's going to be 5 minutes simultaneously on all the freqs, so if your'e going to try to measure multiple test signals the mechanics of how you do all the switching is going to play a big role. My goal is to get two frequencies solid and if the S/N ratios are good and Murphy doesn't visit the shack I'll try for three of the four.

Good luck to those participating!

Dino KL0S/4

3550. Re: RJELOOP3 was "Calculating self-capacitance of an inductor?"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 20:00:35 UTC
From: la8ak.xnd@online.no
Message-ID: <3dc576f6.434977699@news.online.no>
Source record: 40213

On Sun, 13 Oct 2002 17:30:18 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>For design of square frame antennas, VLF to HF, dimensions, width, number of
>turns, wire size, wire spacing, tuning capacitance needed for given
>frequency, self-capacitance, Q -
>
>Download in a few seconds program RJELOOP3 from website below. Run
>immediately. User friendly.
>---
>========================
>Regards from Reg G4FGQ
>Free Radio Design Software
>Go to http://www.g4fgq.com
>========================
>
>
Reg,

Only problem is that you may wish to have 50 or 75 ohm feeder
resistance, this may usually be accomplished with a 1/100 loop area
ratio,
so one turn out of 25 or 30turns doesn't give a useful connection,
it is probably 1000 ohm, and you still need an amplifier or
transformer to feed the coax-cable - I don't see it is practical.

Tried the approach today, with coupling loop =1/100 of tuned loop
area, my loop on 136kHz has 26 turns in 1x1m square (Q=150, Cp=550pF),
and the coupling loop has single turn 50x50cm. It seem to work
satisfactorily, but I haven't measured the actual impedance.

Noise is peaked significantly when tuned, bakground noise increases
considerably when antenna is connected to the receiver. It seem not
necessary to use an RF amplifier ahead of the receiver converter
(74HC4066 mixer)

73,
Jan-Martin
LA8AK
--
remove ,xnd to reply

3551. Re: Oscilloscope mixer ....was: need an elmer...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 20:11:20 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <aq423v$9nq$1@news6.svr.pol.co.uk>
Source record: 40215

"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message
news:OKax9.988$oL4.60376@newsfep1-win.server.ntli.net...
> > > okay got a osciliscope (Philips PM3200) does 0-10Mhz was told I can
> check
> > > output and signal strength on it ... how (I am Tech so my freq's are
50
> > > and up ... mostly 2 meters...) , KB9YMX
> ==========
> > You could build a mixer to convert 50 MHz and 144 MHz signals down to 10
> > MHz. The Handbook has a suitable circuit for this.
> > 73, Leon
> ==========
> In ARRL Handbook 1995 , page 26.28 a mixer for HF sigs is described
> utilising a SRA-1 mixer.
> I have a SBL-1 mixer and a stable signal gen up to 184 MHz to be used as
LO.
> Would the SBL-1 mixer be capable of handling up to 144 -148 MHz using a
> 0-10 MHz oscilloscope ?

Should be OK, the SBL-1 goes up to at least 500 MHz. The SRA-1 can take more
input signal than the SBL-1.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

3552. Re: 2.4 Gig infor needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 20:18:07 UTC
From: "Mike G." <nospam@my.email.address>
Message-ID: <021bsuscj6ib01j35enr7poiqfspbrv26m@4ax.com>
Source record: 40214

That's what power amps are for!

On 3 Nov 2002 17:15:22 GMT, "Jack Taylor" <n7oo@theriver.com> wrote:

>Aren't the X-10 transmitters only 10 mw with a 100 ft range?
>
>73 de Jack
>
>"Gary Tait" <taitg@hurontel.on.ca> wrote in message
>news:nigasuou7uv3bd8vfg6jq6mksq6m8oo6t0@4ax.com...
>> On Sun, 03 Nov 2002 03:59:29 GMT, "Roger Halstead" <rdhalste@tm.net>
>> wrote:
>>
>> >I'm looking for some 2.4 gig equipment to try both EME, ATV, and digital.
>> >
>> >I've not worked on the 2.4 gig band before, so I know very little about
>it.
>> >The ARRL handbook does little more than aknowledge it exists. With all
>the
>> >shairing, it's difficult to find what frequencys I can use and what
>power.
>> >
>> >I'm also looking for just plain information, or scematics. Something to
>> >build, buy, or modify for RX, and TX.
>> >
>> >So far the highest I've been has been the 23 CM band.
>> >
>> >I think we're limited to 50 watts out plus antenna gain, but I haven't
>been
>> >able to find much in the way of information on the band.
>> >
>> >73
>>
>> You can buy those 2.4 Ghz X10 video relays, and hack them for Amatuer
>> use.
>>
>

3553. Matching Network for an LF inverted-L-antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 22:41:01 UTC
From: la8ak.xnd@online.no
Message-ID: <3dc58371.438173394@news.online.no>
Source record: 40216

Wonder why it is "always" mentioned to use a series coil to tune out
the capacitance of the 136kHz aerial, instead of more normal sort of
matching - using T- or L-network

Below is shown some impedance for a thought antenna (had to enter some
radial length for the program to work) using ENDFEED.exe provided by
G4FGQ

H. Height, metres .. 10.0
N. Number of buried radial wires . 2
L. Length, metres .. 150.0
R. Length of radials, metres 50.0
W. Wire dia, mm 2.00
D. Diameter of radial wires, mm .. 1.0
F. Frequency Kilo-Hz 136
S. Strap length to radials, metres 3.0
G. Ground characteristics:-
Average soil: R = 100, K = 12
H+L+S = 0.074 wavelengths.
R ohms jX ohms Tune out jX
with
FEEDPOINT INPUT IMPEDANCE: 18.9 -1096.1 1282.7
micro-Henrys

<-- Transcvr Shunt L Antenna
-->
T-NETWORK L & C values: 142 pF 3666.6 uH 295 pF

<-- Transcvr Series X Antenna
-->
L-NETWORK L & C values: 2086.4 uH 3328.4 uH
Alternative L & C values: 656 pF 794.7 uH

LOSS in T-match coil 25.4 % of Tx Pwr GROUND ELECTRODE
SYSTEM, INPUT Z
in antenna conductor 3.3 % .. .. .. DC Resistance
2.9 ohms
in soil in vicinity 42.6 % .. .. .. RF Resistance
7.2 ..
in system of radials 28.6 % .. .. .. RF Reactance
7.0 ..

Overall power radiating efficiency .. 0.05 percent
Overall loss relative to ideal system 33.1 decibels or 5.5
'S-points'

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

3554. Re: RJELOOP3 was "Calculating self-capacitance of an inductor?"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 23:34:41 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aq4bqgjur1@venus.btinternet.com>
Source record: 40217

Dear Jan Martin,

We have a VLF receiving loop with 25 or 30 turns and a small value of tuning capacitor. It is the difficulty of obtaining a 10,000 pF variable capacitor which has got us into this awkward position. Inevitably the very high L/C ratio results in a high output impedance even with only one coupling loop turn.

I was aware of this when I wrote the program but was reluctant to change to another method of coupling the main loop to an ordinary receiver because it upsets the balance of the loop to ground.

From the point of view of receiving efficiency I would have preferred to use a single turn loop, as in a magloop, with a very big tune capacitor.

Even if the coupling loop has only one turn the antenna impedance seen by the receiver is of the order of 1000 ohms.

Your problem : You are trying to match the 1000-ohm antenna impedance to a standard 50-ohm receiver. Unfortunately there is no low loss answer. The coupling between 25 or 30 turns on the main loop and a tiny, single-turn, 50-ohm coupling loop is itself very efficient. Loop Q is an order of magnitude less than a copper pipe magloop..

As you say, if signals are lost in receiver noise then a preamplifier is needed. The preamplier can consist of a single bi-polar emitter follower which will have a high input impedance of the same order as the antenna. At VLF a small power transistor running at a few milliamps will have an output impedance around 50 ohms to match the input impedance of the main receiver.

I've forgotten the design formula for a simple emitter-follower impedance-matching anplifier stage. It depends on DC collector current. But if you want a really high input impedance then use a small power FET source follower. Come to think about it - the FET would improve loop Q. So go for that !

Use any two-wire, low-capacitance line to connect coupling loop to pre-amp.

This should help you get further forward.

Regards, Reg, G4FGQ

3555. Re: need a spark gap transmitter for experiment

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-03 23:57:54 UTC
From: Bruce Lane <feedspammerstothebalrog.4.spamvac@spamgourmet.com>
Message-ID: <MPG.182f57e1b679c746989a48@news.drizzle.com>
Source record: 40218

In article <6a3d2a74.0211031004.3a9f9fc0@posting.google.com>,
tagangchiou@yahoo.com.tw says...

> I would like to buy a simple spark gap transmitter for a scientific
> project. I wonder if there is one that I can purchase? I am willing to
> pay for building it.

Were I in your position, I would consider a different kind of
transmitter, one that does not have the capability to cause severe
interference with things like public safety and government radio
services. How would you feel if your experiment knocked out, say, local
police communication, and someone got hurt or killed as a result because
help did not get the word in time to reach them?

> interfere neighbors' utilities. (If necessary, I will operate in a
> Farady Cage to avoid violating FCC regulations.)

It will indeed be necessary if you insist on a spark-gap type. I'd
be surprised if you find someone willing to aid you with something like
that.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

3556. Re: need a spark gap transmitter for experiment

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 00:54:38 UTC
From: jgboyles@aol.com
Message-ID: <20021103195438.03450.00000114@mb-ma.aol.com>
Source record: 40219

>Subject: Re: need a spark gap transmitter for experiment
>From: Bruce Lane feedspammerstothebalrog.4.spamvac@spamgourmet.com
>Date: 11/3/02 3:57 PM Pacific Standard Time
>Message-id: <MPG.182f57e1b679c746989a48@news.drizzle.com>
>
>In article <6a3d2a74.0211031004.3a9f9fc0@posting.google.com>,
>tagangchiou@yahoo.com.tw says...
>
>> I would like to buy a simple spark gap transmitter for a scientific
>> project. I wonder if there is one that I can purchase? I am willing to
>> pay for building it.
>
> Were I in your position, I would consider a different kind of
>transmitter, one that does not have the capability to cause severe
>interference with things like public safety and government radio
>services. How would you feel if your experiment knocked out, say, local
>police communication, and someone got hurt or killed as a result because
>help did not get the word in time to reach them?

Holy cow, are you not aware that at any time there are perhaps 100 million spark gap transmitters on the air in the USA. They are internal combustion engine spark plugs and they generally do not cause the severe amount of interference to vital police and medical interference you refer.

As for the orginal request, an automobile ignition coil, from the local junk yard, or Auto Zone will work fine for about an 1/8" spark using 12 volts. Insert a resistor if it produces "severe interference" Email if you need more details, but the interference is easily contained.
73 Gary N4AST

3557. Re: need a spark gap transmitter for experiment

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 01:01:30 UTC
From: ON5MJ <on5mjREMOVE@skynet.be>
Message-ID: <3dc5c6eb$0$73795$ba620e4c@news.skynet.be>
Source record: 40220

I suggest not to do this experiment. Generates too much dirty things even at low power. Or maybe in the middle of the desert. Check on Google with words like "titanic" etc, for your information. But actually not to be done.

73 de ON5MJ - Jacques

3558. Re: need a spark gap transmitter for experiment

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 01:27:06 UTC
From: jgboyles@aol.com
Message-ID: <20021103202706.03430.00000139@mb-ma.aol.com>
Source record: 40221

>I suggest not to do this experiment. Generates too much dirty things even at
>low power. Or maybe in the middle of the desert.

I suggest not doing this experiment because most everything about low power spark transmitters was discovered about 100 years ago. As for dirty things and severe interference, if the power is low, and not much of an antenna, you will be lucky if you get past the edge of your yard. I know, I tried it 35 years ago. Automobile spark plugs are low power spark transmitters. I can sometime pick them up at 6'.
73 Gary N4AST

3559. Re: need a spark gap transmitter for experiment

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 01:41:47 UTC
From: Bruce Lane <feedspammerstothebalrog.4.spamvac@spamgourmet.com>
Message-ID: <MPG.182f703a66716944989a49@news.drizzle.com>
Source record: 40222

In article <20021103195438.03450.00000114@mb-ma.aol.com>,
jgboyles@aol.com says...

> Holy cow, are you not aware that at any time there are perhaps 100 million
> spark gap transmitters on the air in the USA. They are internal combustion
> engine spark plugs and they generally do not cause the severe amount of
> interference to vital police and medical interference you refer.

Of course I know this. When someone says "spark gap transmitter,"
it makes me think of the 'real thing,' as in what they used during the
earliest days of radio. Perhaps I assumed too much from the original
post, but it sounded to me like this fellow wanted to build a full-blown
full-power spark transmitter.

If this is not accurate, then I can say I sit corrected.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

3560. Detect direction of radio transmitter??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 01:48:39 UTC
From: holysmokes99@hotmail.com
Message-ID: <1783abaf.0211031748.f234799@posting.google.com>
Source record: 40223
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.basics

I am a total newbie to anything to do with electronics, radio waves, etc, but was just wondering something. If I placed some kind of radio receiver at the end of a narrow tube that was shielded againsst radio waves except at the other end (the opening), and had a radio transmitting source a few hundred feet away, would I be able to determine the direction of the source of the radio waves by turning the 360 degrees in all directions, with the direction of the strongest reception being the direction of the source?

I have really no idea the nature of radio wave bouncing, etc. Just curious....

Thanks,
Marcus

3561. Re: RJELOOP3 was "Calculating self-capacitance of an inductor?"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 02:21:56 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <usbme2a1346808@corp.supernews.com>
Source record: 40225

Reg Edwards wrote:
> . . .
> I've forgotten the design formula for a simple emitter-follower
> impedance-matching anplifier stage. It depends on DC collector current. But
> if you want a really high input impedance then use a small power FET source
> follower. Come to think about it - the FET would improve loop Q. So go
> for that !
> . . .

The output impedance of an emitter follower, in ohms, is about 26/Ie(mA) where Ie(ma) is the emitter current in mA. The output impedance of a FET source follower is about 1/gm, typically around 500 ohms.

Roy Lewallen, W7EL

3562. Re: Detect direction of radio transmitter??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 02:27:27 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <3DC5DB11.9DF5C37F@rica.net>
Source record: 40224
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.basics

Marcus wrote:
>
> I am a total newbie to anything to do with electronics, radio waves,
> etc, but was just wondering something. If I placed some kind of radio
> receiver at the end of a narrow tube that was shielded againsst radio
> waves except at the other end (the opening), and had a radio
> transmitting source a few hundred feet away, would I be able to
> determine the direction of the source of the radio waves by turning
> the 360 degrees in all directions, with the direction of the strongest
> reception being the direction of the source?
>
> I have really no idea the nature of radio wave bouncing, etc. Just
> curious....
>
> Thanks,
> Marcus

This is very similar to trying to determine the direction of a source of sound by listening through a long thin tube (smaller diameter than the wavelength of the sound). There is a bit of directionality, but just as sound will refract around a corner, so will radio waves. Really good directionality only happens if the tube is large in diameter compared to the wavelength, as it is when you look through a tube (light is just very short wavelength radio waves). So, for something like 27 mHZ citizen band, you would begin to get good directionality if the tube were a hundred feet in diameter and ten thousand feet long. There are easier ways. Look up the yagi-uda beam antenna.

For example:
http://www.arrl.org/tis/info/pdf/8108032.pdf

--
John Popelish

3563. Re: need a spark gap transmitter for experiment

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 02:29:50 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <usbmsr6rmg3t03@corp.supernews.com>
Source record: 40227

Actually, there are a number of things about how spark transmitter really worked that were apparently unknown at the time. Jack Belrose, VE2CV, has done a lot of research on and modeling of spark transmitters, and has built several. See for example http://www.kwarc.on.ca/hammond/spark.html. A Google search of belrose + spark will bring you several pages of references.

Roy Lewallen, W7EL

JGBOYLES wrote:
>>I suggest not to do this experiment. Generates too much dirty things even at
>>low power. Or maybe in the middle of the desert.
>
>
> I suggest not doing this experiment because most everything about low power
> spark transmitters was discovered about 100 years ago. As for dirty things and
> severe interference, if the power is low, and not much of an antenna, you will
> be lucky if you get past the edge of your yard. I know, I tried it 35 years
> ago. Automobile spark plugs are low power spark transmitters. I can sometime
> pick them up at 6'.
> 73 Gary N4AST

3564. Re: Detect direction of radio transmitter??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 02:35:24 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <usbn79rnqjfob9@corp.supernews.com>
Source record: 40228
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.basics

You do have a lot to learn. The short answer is no, unless you're listening for extremely high frequency signals (say, 10 GHz or so), where the hole size is substantial compared to the wavelength of the signal. There are ways to determine the direction a signal is coming from, though. Do a web search on "radio direction finding" or "RDF" and you'll find lots to read.

Roy Lewallen, W7EL

Marcus wrote:
> I am a total newbie to anything to do with electronics, radio waves,
> etc, but was just wondering something. If I placed some kind of radio
> receiver at the end of a narrow tube that was shielded againsst radio
> waves except at the other end (the opening), and had a radio
> transmitting source a few hundred feet away, would I be able to
> determine the direction of the source of the radio waves by turning
> the 360 degrees in all directions, with the direction of the strongest
> reception being the direction of the source?
>
> I have really no idea the nature of radio wave bouncing, etc. Just
> curious....
>
> Thanks,
> Marcus

3565. Re: need a spark gap transmitter for experiment

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 03:56:17 UTC
From: "Geoffrey G. Rochat" <geoff777@777pkworks.com777>
Message-ID: <aq4q4n$7do$1@news.utelfla.com>
Source record: 40229

>I would like to buy a simple spark gap transmitter for a scientific
>project. I wonder if there is one that I can purchase? I am willing to
>pay for building it.

Whatever you're doing, you might consider investigating the New England Museum of Wireless and Steam (see http://users.ids.net/~newsm/), run by Bob Merriam in East Greenwich, RI. The museum has a large collection of spark gap transmitters, including the entire original Massie Wireless Telegraphy Company "PJ" station, and the museum's volunteers have considerable experience with them.

3566. Mercury Wetted Relay as input relay in a linear amp ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 05:26:12 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <usbmk9e3qij371@corp.supernews.com>
Source record: 40226

I have a nice looking flat pack mercury wetted relay made by
CP Clare (HGJ2MT54211P00) that I'd like to use as a
reed relay in the input circuit of an amplifier. Any idea if this
would be suitable, being that it has a lot of metal for the case?
It is a 24 or 28vdc and since it is mercury wetted I assume it
could handle 100w without trouble. Anyone knowanything
about this relay ????

Doug N4IJ

3567. First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 05:59:26 UTC
From: pyr@zyan.takethisoff.org
Message-ID: <87bs55oowv.fsf@zyan.org>
Source record: 40230
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

1943 first edition Radio Engineers' handbook by Frederick Emmons Terman

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1578866409

--
pyr

3568. Re: RJELOOP3 was "Calculating self-capacitance of an inductor?"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 06:48:43 UTC
From: la8ak.xnd@online.no
Message-ID: <3dc5bf59.453511360@news.online.no>
Source record: 40231

On Sun, 3 Nov 2002 23:34:41 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>Dear Jan Martin,
>
>We have a VLF receiving loop with 25 or 30 turns and a small value of tuning
>capacitor. It is the difficulty of obtaining a 10,000 pF variable capacitor
>which has got us into this awkward position. Inevitably the very high L/C
>ratio results in a high output impedance even with only one coupling loop
>turn.
>
>I was aware of this when I wrote the program but was reluctant to change to
>another method of coupling the main loop to an ordinary receiver because it
>upsets the balance of the loop to ground.
>
>From the point of view of receiving efficiency I would have preferred to use
>a single turn loop, as in a magloop, with a very big tune capacitor.
>
>Even if the coupling loop has only one turn the antenna impedance seen by
>the receiver is of the order of 1000 ohms.
>
>Your problem : You are trying to match the 1000-ohm antenna impedance to a
>standard 50-ohm receiver. Unfortunately there is no low loss answer. The
>coupling between 25 or 30 turns on the main loop and a tiny, single-turn,
>50-ohm coupling loop is itself very efficient. Loop Q is an order of
>magnitude less than a copper pipe magloop..
>
>As you say, if signals are lost in receiver noise then a preamplifier is
>needed. The preamplier can consist of a single bi-polar emitter follower
>which will have a high input impedance of the same order as the antenna. At
>VLF a small power transistor running at a few milliamps will have an output
>impedance around 50 ohms to match the input impedance of the main receiver.
>
>I've forgotten the design formula for a simple emitter-follower
>impedance-matching anplifier stage. It depends on DC collector current. But
>if you want a really high input impedance then use a small power FET source
>follower. Come to think about it - the FET would improve loop Q. So go
>for that !
>
>Use any two-wire, low-capacitance line to connect coupling loop to pre-amp.
>
>This should help you get further forward.
>---
>Regards, Reg, G4FGQ

>
>
well, the problem is solved on this side, I don't see it as a problem
any more, and my solution was described in the first poster.
My intention was to have the program changed to include links
consisting of less than full loop diameter

In my case the coupling loop has only half the diameter of the large
loop, which means the area is 1/4 of the larger loop, and the coupling
is 1/(4*26) which is almost 1/100, and the transformation is 1:10000.

The 50 ohm feeder impedance is transformed to 500K

I don't see any reason for using an amplifier as the signal output is
still much higher than the receiver noise, in fact the S-meter peaks
6-10dB from the bottom when the loop is tuned to resonnance, on FT-902
this means the signal into the HF transceiver is in the microvolt
region and could well have been at least 20dB lower without causing
any suffer.
I use MC3356 as S-meter detector for FT-902, but the sensitivity was
set to 2 V because of some unknown signals where it was connected.

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

3569. Re: 2.4 Gig infor needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 07:05:39 UTC
From: KC8PMX <kc8pmx@NOSPAMdiamondcs.net>
Message-ID: <aq5t2p71nao@enews4.newsguy.com>
Source record: 40237

Hello there Roger...

Was good to talk with ya on the air, and I am glad to see that the
suggestion of checking online like this may actually yield some positive
results. Lemme know what ya find out.

From time to time I even see WB8RCR here!

--
Ryan, KC8PMX
FF/MFR
REMOVE "NOSPAM" in email address to reply.

> > >So far the highest I've been has been the 23 CM band.
> > >
> > >I think we're limited to 50 watts out plus antenna gain, but I haven't
> been
> > >able to find much in the way of information on the band.
> > >
> > >73
> >
> > You can buy those 2.4 Ghz X10 video relays, and hack them for Amatuer
> > use.
> >
> Thanks, but they dont run near enough power...I'm looking at running about
> 50 watts, or what ever is max legal limit right at the feed horn.
> Besides, with all the X-10 pop ups, I swore I'd never purchase any of
their
> equipment.
>
>
> --
> Roger Halstead (K8RI EN73)
> www.rogerhalstead.com
> N833R World's oldest Debonair? (S# CD-2)
>
>

3570. Re: Detect direction of radio transmitter??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 09:08:56 UTC
From: Kevin McMurtrie <mcmurtri@sonic.net>
Message-ID: <mcmurtri-D155BB.01085804112002@typhoon.sonic.net>
Source record: 40232
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.basics

In article <1783abaf.0211031748.f234799@posting.google.com>,
holysmokes99@hotmail.com (Marcus) wrote:

>I am a total newbie to anything to do with electronics, radio waves,
>etc, but was just wondering something. If I placed some kind of radio
>receiver at the end of a narrow tube that was shielded againsst radio
>waves except at the other end (the opening), and had a radio
>transmitting source a few hundred feet away, would I be able to
>determine the direction of the source of the radio waves by turning
>the 360 degrees in all directions, with the direction of the strongest
>reception being the direction of the source?
>
>I have really no idea the nature of radio wave bouncing, etc. Just
>curious....
>
>Thanks,
>Marcus

It would only work for GHz frequencies. Openings bend waves. The lower the frequency and the smaller the opening, the more it's bent. This happens for pond ripples, sound, RF, and even light (CD rainbows are the obvious example).

Take a look at how Yagi TV antennas are built. Only signals going in the proper direction will be received. Everything else cancels and is reflected off grounded poles.

Lower frequencies require multiple antennas and phase detection, unless you want a monster Yagi aerial.

3571. Re: Detect direction of radio transmitter??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 10:33:57 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.00000202.00277f38@btinternet.com>
Source record: 40233
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.basics

Hi,

RF, of a wavelength greater than the diameter of a tube,
will actually propagate down it but with considerable
attenuation as with a waveguide operating below its cut-off
frequency. The technique has been used in signal generator
attenuators where an output coupling coil is slid in and
out such a tube with an oscillator (sometimes something as
large as an 807) pumping the power in at the other end. If
I remember correctly, attenuation is proportional to the
log of the separation which then enables the dial to be
directly calibrated in dB.

Cheers - Joe, G3LLV

3572. Sensitivity of relative fieldstrength sensor/instrument at increasing frequency

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 13:26:03 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <lBux9.825$C37.85365@newsfep1-win.server.ntli.net>
Source record: 40234

Recently at a radio club junk sale I acquired a very handy 'RF clip-on current meter' ,for example to check the (relative) current in radials associated with a vertical antenna.
Inside are just an inductor (no toroid) a (germanium?) diode and a pot meter
I noticed that when clipping the device onto a rubber duck antenna of a hand held 2m/70cms transceiver, the meter deflection at 145 MHz is much less compared with operating at 430 MHz with the same RF output (with the potmeter in the same position)

The same effect exists when holding the said transceiver near a SWR meter (labelled 3.5 - 150 MHz) which has a short whip antenna , such that the instrument can also serve as a relative fieldstrength meter.

I should add that in both instruments the moving coil meter is RF shorted by a ceramic disc capacitor (which perhaps is NOT effective at UHF frequencies?)

Perhaps someone can explain why the amount of RF energy picked up by these 2 sensors/instruments increases at increasing frequency and at frequencies well beyond their normal operating range.

Frank gm0csz.kn6wh@ntlworld.com

3573. Re: Sensitivity of relative fieldstrength sensor/instrument at increasing frequency

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 13:43:56 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3dc678c0.312546@news.freeserve.net>
Source record: 40235

On Mon, 4 Nov 2002 13:26:03 -0000, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>Recently at a radio club junk sale I acquired a very handy 'RF clip-on
>current meter' ,for example to check the (relative) current in radials
>associated with a vertical antenna.
>Inside are just an inductor (no toroid) a (germanium?) diode and a pot meter
>I noticed that when clipping the device onto a rubber duck antenna of a hand
>held 2m/70cms transceiver, the meter deflection at 145 MHz is much less
>compared with operating at 430 MHz with the same RF output (with the
>potmeter in the same position)
>
>The same effect exists when holding the said transceiver near a SWR meter
>(labelled 3.5 - 150 MHz) which has a short whip antenna , such that the
>instrument can also serve as a relative fieldstrength meter.
>
>I should add that in both instruments the moving coil meter is RF shorted by
>a ceramic disc capacitor (which perhaps is NOT effective at UHF
>frequencies?)
>
>Perhaps someone can explain why the amount of RF energy picked up by these 2
>sensors/instruments increases at increasing frequency and at frequencies
>well beyond their normal operating range.
>
Frank, putting things simply, the pickup coil (inductor) is closer
to a wavelength at 450Mhz (about 70cms) than it is at 144Mhz (about
2m) therefore it picks up more RF.
This is'nt strictly true, but its probably easier to understand.

3574. FS:ENDS TODAY

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 13:47:34 UTC
From: Heytubeguy <heytubeguy@worllnet.att.net>
Message-ID: <WTux9.24512$VJ5.1499305@bgtnsc05-news.ops.worldnet.att.net>
Source record: 40236

James Millen Counter, Ant. noise bridge, 4 & 5 pin ceramic sockets: estate items:see heytubeguy under ebay 'seller' for these and other item. Many, many others + 20-30 antique radios coming in the future.
73 Heytubeguy

3575. Re: 2.4 Gig infor needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 14:23:25 UTC
From: Dale Parfitt <parinc@verizon.net>
Message-ID: <3DC68367.16C9CCAA@verizon.net>
Source record: 40238

Roger Halstead wrote:

> I'm looking for some 2.4 gig equipment to try both EME, ATV, and digital.
>
> I've not worked on the 2.4 gig band before, so I know very little about it.
> The ARRL handbook does little more than aknowledge it exists. With all the
> shairing, it's difficult to find what frequencys I can use and what power.
>
> I'm also looking for just plain information, or scematics. Something to
> build, buy, or modify for RX, and TX.
>
> So far the highest I've been has been the 23 CM band.
>
> I think we're limited to 50 watts out plus antenna gain, but I haven't been
> able to find much in the way of information on the band.
>
> 73
>
> --
> Roger Halstead (K8RI EN73)
> www.rogerhalstead.com
> N833R World's oldest Debonair? (S# CD-2)

Hi Roger,

2.4 GHz EME is sparsely populated. You would be much better off to pursue 23cM EME. With even a small dish (12') it is not unusual to hear guys ragchewing on SSB.
You will need a minimum of 100W at the feed. We use circular polarity, so Faraday rotation is not an issue. Typical LNA NF's are as low as 0.2dB.
Do a Google search under Moon-net, and pick up copies of the ARRL Microwave Project Manual And UHF/Microwave Experimenters Manual.

I currently run 250W at the feed to a 14' surface- echoes are very readable on SSB and CW.

GL,

Dale W4OP

3576. Re: Detect direction of radio transmitter??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 14:28:11 UTC
From: john graesser <graesser@tca.net>
Message-ID: <usd0vo34pt5t92@corp.supernews.com>
Source record: 40239
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.basics

"Joe McElvenney" <ximac@btinternet.com> wrote in message
news:VA.00000202.00277f38@btinternet.com...
> Hi,
>
> RF, of a wavelength greater than the diameter of a tube,
> will actually propagate down it but with considerable
> attenuation as with a waveguide operating below its cut-off
> frequency. The technique has been used in signal generator
> attenuators where an output coupling coil is slid in and
> out such a tube with an oscillator (sometimes something as
> large as an 807) pumping the power in at the other end. If
> I remember correctly, attenuation is proportional to the
> log of the separation which then enables the dial to be
> directly calibrated in dB.
>
>
> Cheers - Joe, G3LLV

Finally someone explains how the close in tool works for t-hunts. Yagis or loops work fine at a distance, but for the last 100 yards or so, the preferred tool around here is a sheided tube that you lower your handheld into, the distance down the tube determines the attenuation. That close to a transmitter a yagi would be swamped by signals and reflections.
thanks, John.
KC5DWD

3577. Re: need help using spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 15:21:45 UTC
From: temple@karvul.zzz
Message-ID: <3dc68c9d.2339487@news.attcanada.ca>
Source record: 40240
Cross-posted to: alt.ham-radio.marketplace,alt.ham-radio.mods,alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I remember that one!

As I recall, the original manuals were not that helpful if you were unfamiliar with basic S/A use. I had an Elmer when I worked in the lab.

Have you tried HP's web site directly?

I've noticed that a lot of equipment manufacturers have become much less anal-retentive about documentation in recent years.

>I just purchased a used HP141T with plug-ins. Although it didn't have
>manuals, I was able to obtain some military technical manuals, but these
>seem more suited to maintenance than actual use. There is an operational
>section, but unclear, at least to me. I'd just like to get stated using the
>analyzer. Are there any places on the web with tutorials?
>
>Thanks, in advance.
>
>Norm
>
>
>
>

3578. Re: Matching Network for an LF inverted-L-antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 15:51:39 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aq6529$so0$1@venus.btinternet.com>
Source record: 40241

-- "J M Noeding" <
> Wonder why it is "always" mentioned to use a series coil to tune out
> the capacitance of the 136kHz aerial, instead of more normal sort of
> matching - using T- or L-network

There's no difference in principle between a bottom-end loading coil and an L-network. They both consist of an inductance in series with a capacitor. But the bottom loading coil, all by itself , can only be adjusted to cancel (tune) the aerial capcitance. It cannot produce a resistive 'match'.

With an L-network there's an additional capacitance in parallel with the aerial capacitance to ground, etc. But the load (radiation) resistance is in series only with the aerial capacitance.

The additional capacitor in the L-network allows the aerial resistance to be transformed to another value such as 50 ohms. That's because only a portion of the transmitter current flows through the load (the aerial's radiation resistance).

Without the additional capacitor the transmitter has to be happy with whatever the radiation resistance happens to be. The poor thing has to grin and bear it. (Nit-pickers Roy or Cecil will now have to supply a correction by saying transmitters don't have feelings. Only people have feelings. ;o))

The loss in the coil is smaller when there is no additional capacitor. In the case of the L-network the coil has to carry the current in both aerial AND additional capacitor.

The L-network cannot always match the antenna input resistance to 50 ohms. For example, this can occur when the impedance looking into the antenna is not a capacitance but looks like another coil.

But a T-network with its second capacitor can cover a wider variety of aerial impedances. It has three knobs on the front. And because the circulating currents inside the T-match all flow through the coil, the T-match is always less efficient than the L-match for the same radiation resistance.

T-matches are used by lazy people who dislike having to go outside in the rain to change the length of the feedline when changing from one end of the band to the other. Automatic T-matches are used by VERY lazy people. I have one.

==========
Regards from Reg G4FGQ
For Free Radio Design Software
Go to http://www.g4fgq.com

==========

3579. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 16:03:11 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <aq65nv0rct@drn.newsguy.com>
Source record: 40243
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

pyr@zyan.takethisoff.org wrote...
>
> 1943 first edition Radio Engineers' handbook by Frederick Emmons Terman
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1578866409

No takers yet? I recommend this book and own two copies,
one for home and one for work. I also got one for the
Institute's library. IIRC, I paid between $25 and 40.

Thanks,
- Win

3580. Re: Matching Network for an LF inverted-L-antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 16:12:21 UTC
From: Wes Stewart <n7ws@nowhere.com>
Message-ID: <0n6dsu04qoqk2n25dgekpfer3a20468qec@4ax.com>
Source record: 40242

On Mon, 4 Nov 2002 15:51:39 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

[snip]
|
|The L-network cannot always match the antenna input resistance to 50 ohms.

Add me to the nitpickers :)

An L-network can match anything to anything. An L-network is two
reactances, one series, one shunt. The shunt can be on either the load
side or the source side of the series element and the elements can be
any combination of reactances. Two L's, two C's or one of each.

There is always a solution, not always a good solution, but a solution
nevertheless.

3581. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 16:49:13 UTC
From: john@Neopha.44in88.net
Message-ID: <slrnasd9jv.lc.john@Neopha.44in88.net>
Source record: 40244
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On 4 Nov 2002 08:03:11 -0800, Winfield Hill <whill@picovolt.com> wrote:
>pyr@zyan.takethisoff.org wrote...
>>
>> 1943 first edition Radio Engineers' handbook by Frederick Emmons Terman
>> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1578866409
>
> No takers yet? I recommend this book and own two copies,
> one for home and one for work. I also got one for the
> Institute's library. IIRC, I paid between $25 and 40.
>
> Thanks,
> - Win
>

I always wonder what they left out because of wartime secrecy.
What was the last thing you used yours for?

--

John E. Todd <> jtodd@island.net

Note: Ensure correct polarity prior to connection.

3582. Re: Detect direction of radio transmitter??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 17:31:01 UTC
From: holysmokes99@hotmail.com
Message-ID: <1783abaf.0211040931.42d6fec1@posting.google.com>
Source record: 40245
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.basics

Thank you all for your replies. That is great information, and I will follow some of the leads you provided.

Cheers,
Marcus

3583. Re: need a spark gap transmitter for experiment

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 18:06:10 UTC
From: k7itm@aol.com
Message-ID: <3200347.0211041006.694bbc6c@posting.google.com>
Source record: 40246

So David, now that you've gotten lots of responses telling you to not even think about doing the experiments, could you please tell us more about what you really want to accomplish? Why spark?? Do you understand that, basically, the spark is a switch and not the "source" of the RF? You can for sure learn a lot by shock-exciting the same set of tank components at much lower power, using an electronic switch. Also, as the site that Roy mentioned points out, the antenna itself is an integral part of the resonant system, so you almost certainly won't get the same results with a "small loop" antenna as you would with a full-size antenna.

And for that matter, you can see a lot just by simulating. It's not hard to do a Spice (or similar) simulation of a spark transmitter, and if you like math exercises, you may even be able to do it analytically with linear components.

There have been some good articles in Electronics World+Wireless World over the years on the early days of radio, including some nice explanations of spark transmitters. Have a look there, in addition to Roy's reference.

Cheers,
Tom

tagangchiou@yahoo.com.tw (David Chiou) wrote in message news:<6a3d2a74.0211031004.3a9f9fc0@posting.google.com>...
> I would like to buy a simple spark gap transmitter for a scientific
> project. I wonder if there is one that I can purchase? I am willing to
> pay for building it.
>
> The requirement:
> 1. have a spark gap (and standard components like transformer, L, C,
> and probably an antenna. If possible, I want a small loop antenna for
> experiment)
> 2. simple (so that I can measure different characteristics by
> replacing the L and C).
> 3. basic safety (e.g. at least with a safety fuse).
> 4. portable (I need to carry it to other places for measurement.)
> 5. not very fragile (It will be shipped to Taiwan.)
> 6. can transmit longer than six feet.
> If possible, I want to operate it under low power so that it will not
> interfere neighbors' utilities. (If necessary, I will operate in a
> Farady Cage to avoid violating FCC regulations.)
>
> Does anyone know where to order it, or is willing to help make one for

> pay? Thank you very much!!
>
> Ps. Please contact me at <dc at media . mit . edu> (convert at to @,
> and connect the others). Please do not contact me at tagangchoiu at
> yahoo.com.tw because it receives too many spam mail. Thanks.
>
> Best regards,
> David

3584. Re: Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 18:20:10 UTC
From: k7itm@aol.com
Message-ID: <3200347.0211041020.510ef405@posting.google.com>
Source record: 40147

So...Dino or someone else...can you post the details of the FMT?
Frequency, time; how long will a carrier be provided?? I certainly
agree that it will be a lot easier for folk near the transmitter, but
it might be interesting to see what those of us who are undoubtedly
far from the transmitter can do. But it will be very helpful if the
signal is there for more than a second or two at a time.

My experience tells me that on HF, the accuracy of the standard isn't
really much of a problem, it's the propagation that will limit the
overall measurement accuracy. Also, I wonder what the phase noise
characteristics of the transmitter will be...how broad will the
transmitted signal be? Will it be just one of the standard ARRL
transmitters?

Cheers,
Tom

dinoal7lz@aol.com (Dino AL7LZ) wrote in message
news:<20021103133721.25072.00001377@mb-dh.aol.com>...
> You can attempt to account for the propagation error by monitoring the standard
> time signal stations closest to the ARRL FMT transmission frequencies, i.e. CHU
> at 3.33 and 7.335 and WWV at 15 MHz and tracking the error over time at
> approximately the same time the test will be conducted. If the radio you use
> accepts an external reference (the HP Z3801A for example) and you offset your
> BFO (also locked) to a known value you can then measure the frequency of the
> audio signal then use the radio's displayed frequency, the average of audio
> counts recorded during the test and the correction factor already noted to
> determine the received signal's frequency. At least that all sounds good in
> theory---we're going to use this methodololgy during the FMT and see what
> happens.
>
> Dino KL0S/4

3585. Re: Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 18:27:25 UTC
From: dinoal7lz@aol.com
Message-ID: <20021104132725.23961.00003695@mb-md.aol.com>
Source record: 40148

Tom---Here's the info from the ARRL web site:

The first W1AW FMT will run on November 7, 2002 at 0245Z (November 6, 2002, 9:45 PM ET). It will replace the W1AW Phone Bulletin normally scheduled at that time. It is recommended that participants listen to W1AW's transmissions prior to the event to get an idea on conditions to see which band (or bands) will be best for measurement purposes.

Format

The FMT will begin with a general W1AW (QST) call beginning exactly at 0245Z sent simultaneously on four (4) amateur frequencies. The test will consist of 20-second key-down transmissions, followed by a series of dits, followed by station identification.

The test will last for a period of approximately five (5) minutes total. The test will end with a series of V's, followed by station identification. W1AW will identify before, during and after the transmissions.

The approximate frequencies are as follows:

80 meters - 3580 kHz

40 meters - 7047 kHz

20 meters - 14048 kHz

15 meters - 21068 kHz

Reporting and Results

The submitted report should include the time of reception, frequency measured and signal report, in addition to name, call and QTH. If possible, participants should submit reports on more than one band (but not necessarily on all four).

A Certificate of Participation will be available to all entrants. Those entrants that come closest to the measured frequency as measured by the ARRL laboratory will be listed in the test report and will also receive special recognition on their certificate.

Entries should be postmarked by December 6, 2002 to be eligible. Send entries to:

W1AW/FMT
225 Main Street
Newington CT 06111

Equipment to be used for the 2002 W1AW Frequency Measuring Test

Transmitting Equipment:

* Harris RF-3200 Exciters w/ Harris RF-3220 Solid State Amplifiers

Antennas:

* 80-meter cage at 60 feet
* Phased 40-meter yagis; 65 feet and at 130 feet
* Phased 20-meter yagis; 35 feet and at 70 feet
* Phased 15-meter yagis; 45 feet and at 90 feet.

CW Generation:

* Compaq 133 with DRSI packet card (used to control matrix)
* ARRL Laboratory-designed Keying Matrix (keys all exciters simultaneously)

Measuring Equipment:

* Hewlett Packard Z3801 GPS Receiver/Frequency Standard (provides 10 MHz reference)
* Optoelectronics 8010 Frequency Counter w/ 10 MHz signal reference
* (QST Product Review)
* Dunestar Bandpass filters
* Alpha/Delta switches

Have fun!!!

Dino KL0S/4

3586. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 18:31:10 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <mZfMAMBuzrx9EwRq@jmwa.demon.co.uk>
Source record: 40151
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Winfield Hill <whill@picovolt.com>
wrote (in <aq65nv0rct@drn.newsguy.com>) about 'First Edition 1943 Radio
Engineers Handbook', on Mon, 4 Nov 2002:
>pyr@zyan.takethisoff.org wrote...
>>
>> 1943 first edition Radio Engineers' handbook by Frederick Emmons Terman
>> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1578866409
>
> No takers yet? I recommend this book and own two copies,
> one for home and one for work. I also got one for the
> Institute's library. IIRC, I paid between $25 and 40.
>
Do you have the 1943 edition, though? IIRC, the last edition is dated
about 1954 and contains important extra information.
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

3587. Re: Do the magnets in panel meters weaken with time?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 18:38:26 UTC
From: k7itm@aol.com
Message-ID: <3200347.0211041038.546ebab9@posting.google.com>
Source record: 40149

Assorted comments, not necessarily in reply to Dick's posting but
covering some other points in the thread as well:

I view d'Arsonval meter movements to be sensitive to _current_, not
power; you have to allow for change in internal resistance, but the
response to current should be proportional to the magnetic field and
inversely proportional to the restoring spring constant. Both of
those _may_ change noticabley with temperature. But I suppose a
proper shunt for a copper-wound meter would be made from copper as
well. Then the current sharing will remain in a constant ratio, if
the meter and the shunt are kept at the same temperature.

Over the weekend, I measured several old d'Arsonval meters against a
Fluke 4.5 digit DVM and another 3.75 digit DVM I have; I occasionally
check the Fluke against my HP3456A at work, so I think it's pretty
close...closer than I can read the meters. Not one of the meters was
as much as 2% off at full scale. A couple with mirrored scales,
individually calibrated, were as close as I could read them. This was
done at very close to 20C; it might be interesting to try it at 0C and
50C. The meters ranged in age from about 15 years to over 50 years.
They were from assorted manufacturers: GE, Simpson, "Micronta"
(whoever made them for Radio Shack), Weston, and whoever made them for
HP.

Cheers,
Tom

Dick Carroll <dixie@townsqr.com> wrote in message news:<3DC3EE3B.75119534@townsqr.com>...
> Henry Kolesnik wrote:
>
> > I've not seen any change in meters that haven't been abused or the seal
> > broken. Why don't you establish a full scale current with a good battery
> > and good pot with a known good digital meter. Then check your meter for
> > full scale deflection by putting it in series, you will have to turn down
> > the pot because the inserttion of your meter will add some resistance.
> > There's a pretty good write up in older ARRL handbooks on determining the
> > meter movements specs. Let us know what you find, and good luck.
> > 73
> > hank wd5jfr
> >
> > <SeeSignature@below.com> wrote in message
> > news:3dc14553.223430098@news.ga.comcast.giganews.com...
> > > Old common "d'Arsonval" meters with permanent magnets - if the magnets
> > > weaken the meter goes out of calibration, I suppose. Anybody know what
> > > to expect with old meters? A gradual lessening of sensitivity? How

> > > long - how much loss? Guesses?
> > >
> > > Jerry W4UK
>
> Hey guys, the things aren't linear in the first place. As I recall they are
> calibrated and read most accurately at their midscale. Any change could be
> reversed by recalibration.
>
> Dick

3588. Re: Matching Network for an LF inverted-L-antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 19:47:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <usdjm71a44p315@corp.supernews.com>
Source record: 40150

A slight clarification. There isn't a *single* L network that can match anything to anything. (I know Wes didn't mean that, but what he wrote might possibly be interpreted this way.) It's just that an L network (actually, usually two) can be designed to match two given impedances. From one situation to the next, you might need a different combination of Ls and Cs, as Wes says. And in some cases the shunt element has to be on one side of the network and in other cases the other. And in some special cases one element or the other isn't there at all.

Roy Lewallen, W7EL

Wes Stewart wrote:
> On Mon, 4 Nov 2002 15:51:39 +0000 (UTC), "Reg Edwards"
> <g4fgq.regp@btinternet.com> wrote:
>
> [snip]
> |
> |The L-network cannot always match the antenna input resistance to 50 ohms.
>
> Add me to the nitpickers :)
>
> An L-network can match anything to anything. An L-network is two
> reactances, one series, one shunt. The shunt can be on either the load
> side or the source side of the series element and the elements can be
> any combination of reactances. Two L's, two C's or one of each.
>
> There is always a solution, not always a good solution, but a solution
> nevertheless.

3589. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 20:20:24 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.00000206.003a8af0@btinternet.com>
Source record: 40152
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Hi,

With the 1955 edition the title changed to "Electronic and Radio Engineering". I bought my copy, a paper-back printed in Singapore, from a second-hand book stall in the Middle East.

There is a biographical note on the great man at -

http://www.smecc.org/frederick_terman.htm

Cheers - Joe

3590. Re: Oscilloscope mixer ....was: need an elmer...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 20:35:30 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <T_Ax9.2212$zb.82958@newsfep1-gui.server.ntli.net>
Source record: 40153

Guys, a reality check is in order here.

If the guy cannot use a scope, he is unlikely to posses the necessary
technical knowledge to correctly build and aliign such a mixer.

That said, there's nothing like doing a job beyond one's abilities to force
the aquisition of skill and knowledge

Alec M1BNK
Teesside UK
"Leon Heller" <leon@heller123.freeserve.co.uk> wrote in message
news:aq423v$9nq$1@news6.svr.pol.co.uk...
>
> "Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message
> news:OKax9.988$oL4.60376@newsfep1-win.server.ntli.net...
> > > > okay got a osciliscope (Philips PM3200) does 0-10Mhz was told I
can
> > check
> > > > output and signal strength on it ... how (I am Tech so my freq's
are
> 50
> > > > and up ... mostly 2 meters...) , KB9YMX
> > ==========
> > > You could build a mixer to convert 50 MHz and 144 MHz signals down to
10
> > > MHz. The Handbook has a suitable circuit for this.
> > > 73, Leon
> > ==========
> > In ARRL Handbook 1995 , page 26.28 a mixer for HF sigs is described
> > utilising a SRA-1 mixer.
> > I have a SBL-1 mixer and a stable signal gen up to 184 MHz to be used as
> LO.
> > Would the SBL-1 mixer be capable of handling up to 144 -148 MHz using a
> > 0-10 MHz oscilloscope ?
>
> Should be OK, the SBL-1 goes up to at least 500 MHz. The SRA-1 can take
more
> input signal than the SBL-1.
>
> 73, Leon
> --
> Leon Heller, G1HSM
> leon_heller@hotmail.com
> http://www.geocities.com/leon_heller
>

>

3591. Re: Matching Network for an LF inverted-L-antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 22:36:44 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aq6spqhhg1@helle.btinternet.com>
Source record: 40154

Wes wrote -

> Add me to the nitpickers :)
>
==========

Hi Wes, You do yourself an injustice. The point you raise is not trivial and should have been mentioned in my light-hearted rambling. My omission could have been misleading.

==========

> An L-network can match anything to anything. An L-network is two
> reactances, one series, one shunt. The shunt can be on either the load
> side or the source side of the series element and the elements can be
> any combination of reactances. Two L's, two C's or one of each.

==========

There are in fact 8 members of the L-network family (2 cubed). But from a practical point of view, in the black box with only two knobs on the front we are restricted to only one of them. An array of switches is needed to select any one of the eight possibilities. And the box must also contain two L's and two C's. This is of course uneconomic because only three components are needed for the more flexible (but less efficient) T or Pi networks.

When considering the whole gammut of possible antenna impedances relative to 50 ohms, provided the direction of transmission through the box can be reversed, one L and one C will cover a large proportion of the possibilities. The restrictions, as always, are practical ones - minimum and maximum settings of the variables.

Anyone interested in numbers but dislikes arithmetic could download (in a few seconds and run imediately) program L_TUNER from website below. It has a companion T_TUNER. These programs indicate when impractical component values arise.

They are of use when peculiar antenna impedances are known and matching-network component values are needed. On such occasions human imagination fails. This frequently results in questions on these radio newsgroups.

Personally I prefer home-brew L-networks. No knobs - just a handful of alligator/crocodile clips. Some years back Roy once went to much trouble to describe to me the anatomical differences between animals which have seperately evolved in Florida and Egypt, from which beasts the names of clips have been derived. But why some clips get hot enough to sear the skin

off thumb and finger tips when connected to tank coils, and others do not, I have never discovered.

Jan-Martin asks such deceptively simple questions. I think he does it intentionally. ;o)

==========
Regards from Reg G4FGQ
For Free Radio Design Software
Go to http://www.g4fgq.com
==========

3592. Re: Mercury Wetted Relay as input relay in a linear amp ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 22:36:45 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aq6spshhg2@helle.btinternet.com>
Source record: 40155

Been a long time since I had much to do with mercury-wetted relays. But I don't think their power handling abilities had anything to do with their applications.

They were often used in high-speed data-handling circuits and suchlike. Contact bounce was eliminated. There was no probability of self-sealing contacts at microvolt signal levels. Absolutely no noise. Insignificant contact potentials.

Conclusion - use in reliable, low-noise, high-speed, very-low-signal-level circuits. Radio receiving antenna circuits ? Low-noise amplifier inputs ?

Some types could not be used at all orientations because the small mercury reservoir could run to one location inside the bulb and short-circuited the lead-in wires.

Mercury found its way to the contacts by capilliary action along the contact blades. The surface of the blades was etched in extremely fine cross-hatched grooves to facilitate capilliary action.

I remember using them at 20 or 30 Hz switching frequences for comparison of signal levels of a few millivolts. These were Clare relays around 1960. Is this manufacturer still in business then ?

Reg.
--
==========
Regards from Reg G4FGQ
For Free Radio Design Software
Go to http://www.g4fgq.com
==========
"Douglas Snowden" <snowden@peoplepc.com> wrote in message
news:usbmk9e3qij371@corp.supernews.com...
> I have a nice looking flat pack mercury wetted relay made by
> CP Clare (HGJ2MT54211P00) that I'd like to use as a
> reed relay in the input circuit of an amplifier. Any idea if this
> would be suitable, being that it has a lot of metal for the case?
> It is a 24 or 28vdc and since it is mercury wetted I assume it
> could handle 100w without trouble. Anyone knowanything
> about this relay ????
>
> Doug N4IJ
>
>
>

3593. Re: Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 22:59:37 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <tZCx9.94268$wG.345939@rwcrnsc51.ops.asp.att.net>
Source record: 40156

Why not just measure WWV or WWVB. It's always (almost) available, you KNOW where it is both in location and frequency, as well as it's published accuracy, so you can determine yourself how close you can come to the actual frequency. Any time, any day, depending on prop to your location. Seems like a waste from here to measure someone's secondary standard, provided for extremely short averaging periods.

W4ZCB

3594. Re: Oscilloscope mixer ....was: need an elmer...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 23:06:21 UTC
From: Tazanator <tazanator1@hotmail.com>
Message-ID: <N3Dx9.72119$bt.122749@rwcrnsc52.ops.asp.att.net>
Source record: 40157

well he's got the right idea ... I asked for an elmer cause I have no idea
what to do.
"Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com> wrote in message
news:T_Ax9.2212$zb.82958@newsfep1-gui.server.ntli.net...
> Guys, a reality check is in order here.
>
> If the guy cannot use a scope, he is unlikely to posses the necessary
> technical knowledge to correctly build and aliign such a mixer.
>
> That said, there's nothing like doing a job beyond one's abilities to
force
> the aquisition of skill and knowledge
>
> Alec M1BNK
> Teesside UK
> "Leon Heller" <leon@heller123.freeserve.co.uk> wrote in message
> news:aq423v$9nq$1@news6.svr.pol.co.uk...
> >
> > "Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message
> > news:OKax9.988$oL4.60376@newsfep1-win.server.ntli.net...
> > > > > okay got a osciliscope (Philips PM3200) does 0-10Mhz was told I
> can
> > > check
> > > > > output and signal strength on it ... how (I am Tech so my freq's
> are
> > 50
> > > > > and up ... mostly 2 meters...) , KB9YMX
> > > ==========
> > > > You could build a mixer to convert 50 MHz and 144 MHz signals down
to
> 10
> > > > MHz. The Handbook has a suitable circuit for this.
> > > > 73, Leon
> > > ==========
> > > In ARRL Handbook 1995 , page 26.28 a mixer for HF sigs is described
> > > utilising a SRA-1 mixer.
> > > I have a SBL-1 mixer and a stable signal gen up to 184 MHz to be used
as
> > LO.
> > > Would the SBL-1 mixer be capable of handling up to 144 -148 MHz using
a
> > > 0-10 MHz oscilloscope ?
> >
> > Should be OK, the SBL-1 goes up to at least 500 MHz. The SRA-1 can take

> more
> > input signal than the SBL-1.
> >
> > 73, Leon
> > --
> > Leon Heller, G1HSM
> > leon_heller@hotmail.com
> > http://www.geocities.com/leon_heller
> >
> >
>
>

3595. Re: 2.4 Gig infor needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 23:29:38 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <CpDx9.2176$Ve3.1710256@monger.newsread.com>
Source record: 40158

"Dale Parfitt" <parinc@verizon.net> wrote in message
news:3DC68367.16C9CCAA@verizon.net...
>
>
> Roger Halstead wrote:
>
> > I'm looking for some 2.4 gig equipment to try both EME, ATV, and
digital.
> >
> > I've not worked on the 2.4 gig band before, so I know very little about
it.
> > The ARRL handbook does little more than aknowledge it exists. With all
the
> > shairing, it's difficult to find what frequencys I can use and what
power.
> >
> > I'm also looking for just plain information, or scematics. Something to
> > build, buy, or modify for RX, and TX.
> >
> > So far the highest I've been has been the 23 CM band.
> >
> > I think we're limited to 50 watts out plus antenna gain, but I haven't
been
> > able to find much in the way of information on the band.
> >
> > 73
> >
> > --
> > Roger Halstead (K8RI EN73)
> > www.rogerhalstead.com
> > N833R World's oldest Debonair? (S# CD-2)
>
> Hi Roger,
>
> 2.4 GHz EME is sparsely populated. You would be much better off to pursue
23cM
> EME. With even a small dish (12') it is not unusual to hear guys
ragchewing on
> SSB.
> You will need a minimum of 100W at the feed. We use circular polarity, so

Unfortunately, unless the regs have changed we are limited to 50 watts ERP
on 23 CM here in Michigan.

Thanks,

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

> Faraday rotation is not an issue. Typical LNA NF's are as low as 0.2dB.
> Do a Google search under Moon-net, and pick up copies of the ARRL
Microwave
> Project Manual And UHF/Microwave Experimenters Manual.
>
> I currently run 250W at the feed to a 14' surface- echoes are very
readable on
> SSB and CW.
>
> GL,
>
> Dale W4OP
>

3596. Toroid Markings

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 23:40:57 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <5CDx9.50$T21.62069@newsfep2-win.server.ntli.net>
Source record: 40160

I have 8 toroids with an outer diameter of 90mm (3.5 inches) and an inner diameter of 57mm(2.5 inches)
With 4x2pairs positioned in a square ,they form a balanced to balanced sort of antenna choke.
The toroids are marked with a white and a red painted dot.
Is this colour coding indicating a specific type of 'powdered iron mix' or a type of 'ferrite'.

It is my intention to use a pair for a 4 : 1 (Ruthroff design) balun .
I do have Jerry Sevick's (W2FMI) book : 'Building and using Baluns and Ununs
'

TIA for any advice re colour coding.

Frank gm0csz.kn6wh@ntlworld.com

3597. Re: 2.4 Gig infor needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-04 23:48:26 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <eHDx9.2177$Ve3.1711012@monger.newsread.com>
Source record: 40159

"KC8PMX" <kc8pmx@NOSPAMdiamondcs.net> wrote in message
news:aq5t2p71nao@enews4.newsguy.com...
> Hello there Roger...
>
> Was good to talk with ya on the air, and I am glad to see that the
> suggestion of checking online like this may actually yield some positive
> results. Lemme know what ya find out.
>
> From time to time I even see WB8RCR here!

I keep hoping<:-))

On 440 we have the power limitation and on 2.4 Gig we have wireless networks
...
<sigh>

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

>
>
>
> --
> Ryan, KC8PMX
> FF/MFR
> REMOVE "NOSPAM" in email address to reply.
>
>
>
> > > >So far the highest I've been has been the 23 CM band.
> > > >
> > > >I think we're limited to 50 watts out plus antenna gain, but I
haven't
> > been
> > > > >able to find much in the way of information on the band.
> > > > >
> > > > >73
> > > >
> > > You can buy those 2.4 Ghz X10 video relays, and hack them for Amatuer
> > > use.
> > >
> > Thanks, but they dont run near enough power...I'm looking at running
about

> > 50 watts, or what ever is max legal limit right at the feed horn.
> > Besides, with all the X-10 pop ups, I swore I'd never purchase any of
> their
> > equipment.
> >
> >
> > --
> > Roger Halstead (K8RI EN73)
> > www.rogerhalstead.com
> > N833R World's oldest Debonair? (S# CD-2)
> >
> >
>
>

3598. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-05 00:33:04 UTC
From: john@jjdesigns.fsnet.co.uk
Message-ID: <871568ec.0211041633.28f27c6e@posting.google.com>
Source record: 40161
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

pyr@zyan.takethisoff.org wrote in message news:<87bs55oowv.fsf@zyan.org>...
> 1943 first edition Radio Engineers' handbook by Frederick Emmons Terman
>
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1578866409

Got his 1937 "Radio Engineering" for 1.0 UKP. Altogether rather
tedious. Much more informative was Ulrich Rohde's 1988 "Communications
Receivers" at 1.50 UKP.

3599. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-05 02:50:20 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <aq7blc0m1l@drn.newsguy.com>
Source record: 40162
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

john@jjdesigns.fsnet.co.uk wrote...
>
> Got his 1937 "Radio Engineering" for 1.0 UKP. Altogether
> rather tedious. ...

I'm sorry, but you massively got the wrong book. :-)
Terman's "Radio Engineers' Handbook" is the right stuff.
Altogether a different and massively more powerful beast.

Thanks,
- Win

3600. Homebrew a CTCSS Encoder

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-05 04:05:17 UTC
From: Norman Franklin <normanf@pacbell.net>
Message-ID: <3DC743FE.B34FA66F@pacbell.net>
Source record: 40163

Anyone out there homebrew a CTCSS Encoder and/or decoder for there
rig?
I would think you could do this with one of the PIC or AVR micros. The
hard part
for me would be the code. If some one has done this I would appriciate
some hints
or pointers to source information on how this is done.
Thanks in advance.

Norman KG6NMT

3601. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-05 05:10:41 UTC
From: novatech@eskimo.com
Message-ID: <aq7jshqgh1@eskinews.eskimo.com>
Source record: 40164
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Winfield Hill <whill@picovolt.com> writes:

>john@jjdesigns.fsnet.co.uk wrote...
>>
>> Got his 1937 "Radio Engineering" for 1.0 UKP. Altogether
>> rather tedious. ...

> I'm sorry, but you massively got the wrong book. :-)
> Terman's "Radio Engineers' Handbook" is the right stuff.
> Altogether a different and massively more powerful beast.

I rather enjoy Terman's "Radio Engineering" because it is a good college level text-- someone in Electrical Engineering on the GI bill just after the war would be studying this book. I have pre-war and post war editions. The post-war information makes the editions a lot larger. My latest edition even has transistors in it.

The Radio Engineers' Handbook is good for quick answers when you don't need to know why and how it works. Radio Engineering is a better read.

> Thanks,
> - Win

Steve.

--
Steven D. Swift, novatech@eskimo.com, http://www.novatech-instr.com
NOVATECH INSTRUMENTS, INC. P.O. Box 55997
206.301.8986, fax 206.363.4367 Seattle, Washington 98155 USA

3602. Re: Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-05 06:36:33 UTC
From: k7itm@aol.com
Message-ID: <3200347.0211042236.31a22935@posting.google.com>
Source record: 40165

dinoal7lz@aol.com (Dino AL7LZ) wrote in message
news:<20021104132725.23961.00003695@mb-md.aol.com>...
> Tom---Here's the info from the ARRL web site:
>
...etc

Thanks Dino!

At about 7:30 this evening here in Western Washington, which is about 45 minutes past the time-of-day of the test, I could receive W1AW well enough to make a decent measurement but only on 40 meters. They were pretty weak on 80 and 20. I'll probably concentrate on 40 for the measurement.

But also, WWV was pretty wide at that time, which is understandable, since it's not too long after sundown. WWV on 5, 10 and 15MHz all showed a double peak, spectrally, and were on the order of a couple Hz wide. The double peak is most probably WWV and WWVH, but they weren't very distinct and also weren't very stable. Not good conditions to make accurate frequency measurements! In the middle of a stable day here, WWV will be a fraction of a Hz wide, and you can be pretty sure of nailing the frequency to a part in about 10^8...that's better than they recommend, but I don't think their recommendation assumes you'll have equipment that can tell you that much detail about the spectrum. Based on what I saw on WWV and also on W1AW, I don't expect to be able to find the FMT frequency much better than 1Hz.

For comparison, a TV visual carrier up around 77MHz was around 1/10 Hz wide, and AM broadcast carriers could be resolved down to better than 1/100Hz, given enough measurement time. But the measurement time doesn't help much when the propagation broadens the signal.

Cheers,
Tom

3603. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-05 07:28:28 UTC
From: David Walker <no_spam@hotmail.com>
Message-ID: <3dc77318$1@news.comindico.com.au>
Source record: 40166

Okay... that answers that question...

Does the K2 have a squelch control. I haven't come across it in some of the documents I've seen on the net.

Note; The email below is completely fictitious.
"David Walker" <roger@hotmail.com> wrote in message
news:3dc23198@news.comindico.com.au...
> Any K2 Owners read this group?
>
>
>
>

3604. Re: need help using spectrum analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-05 07:52:18 UTC
From: Norm Waterston <nospamnail@nospam.com>
Message-ID: <aq7tac$h90$1@slb7.atl.mindspring.net>
Source record: 40167
Cross-posted to: alt.ham-radio.marketplace,alt.ham-radio.mods,alt.ham-radio.vhf-uhf,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

With a little help from the group, I was able to figure it out. The operation is a lot less complicated than I thought. I re-read the manuals and everything was clearer. This is one nice unit! I'm able to see all kinds of signal phenomena with it.

Norm

"LoneSloane" <temple@karvul.zzz> wrote in message news:3dc68c9d.2339487@news.attcanada.ca...
> I remember that one!
>
> As I recall, the original manuals were not that helpful if you were
> unfamiliar with basic S/A use. I had an Elmer when I worked in the
> lab.
>
> Have you tried HP's web site directly?
>
> I've noticed that a lot of equipment manufacturers have become much
> less anal-retentive about documentation in recent years.
>
> >I just purchased a used HP141T with plug-ins. Although it didn't have
> >manuals, I was able to obtain some military technical manuals, but these
> >seem more suited to maintenance than actual use. There is an operational
> >section, but unclear, at least to me. I'd just like to get stated using
the
> >analyzer. Are there any places on the web with tutorials?
> >
> >Thanks, in advance.
> >
> >Norm
> >
> >
> >
> >
>

3605. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-05 09:53:22 UTC
From: Claude Frantz <claude@pc0312a.rz.unibw-muenchen.de>
Message-ID: <3DC79512.B301F869@pc0312a.rz.unibw-muenchen.de>
Source record: 40170
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

J M Noeding wrote:
>
> Capacitors for ATU are difficult to find nowadays, and a friend are
> travelling to Taiwan with one of the purpose of finding variable
> capcitors for ATU projects.

Please consider this commercial site:
http://www.mainlinegroup.co.uk/jacksonbrothers/index.htm

3606. Re: Detect direction of radio transmitter??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-05 09:54:08 UTC
From: Frithiof Andreas Jensen <frithiof.jensen@removethis.ted.ericsson.dk>
Message-ID: <aq8414$98n$1@newstoo.ericsson.se>
Source record: 40168
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.basics

"Marcus" <holysmokes99@hotmail.com> wrote in message
news:1783abaf.0211031748.f234799@posting.google.com...

> transmitting source a few hundred feet away, would I be able to
> determine the direction of the source of the radio waves by turning
> the 360 degrees in all directions, with the direction of the strongest
> reception being the direction of the source?

You could with a Ferrite antenna working in the short-wave band; Radio
Amateurs use the term "Fox Hunting".

The signal from the ferrite antenna drops very sharply when the ferrite is
pointed at the source, so you search for "nulls" in the signal. A map and a
compass helps too.

3607. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-05 12:24:10 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <usfe46n3kg0h7b@corp.supernews.com>
Source record: 40169

Since it's an HF only radio, it would be pretty surprising.

..

"David Walker" <no_spam@hotmail.com> wrote in message
news:3dc77318$1@news.comindico.com.au...
> Okay... that answers that question...
>
> Does the K2 have a squelch control. I haven't come across it in some of
the
> documents I've seen on the net.

3608. Re: 2.4 Gig infor needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-05 14:54:46 UTC
From: Gary Tait <taitg@hurontel.on.ca>
Message-ID: <gsmfsuk4ncm7knjm66m3g0d7bk4r16vul0@4ax.com>
Source record: 40171

On Sun, 03 Nov 2002 19:16:02 GMT, "Roger Halstead" <rdhalste@tm.net>
wrote:

>
>"Gary Tait" <taitg@hurontel.on.ca> wrote in message
>news:nigasuou7uv3bd8vfg6jq6mksq6m8oo6t0@4ax.com...
>> On Sun, 03 Nov 2002 03:59:29 GMT, "Roger Halstead" <rdhalste@tm.net>
>> wrote:
>>
>> >I'm looking for some 2.4 gig equipment to try both EME, ATV, and digital.
>> >
>> >I've not worked on the 2.4 gig band before, so I know very little about
>it.
>> >The ARRL handbook does little more than aknowledge it exists. With all
>the
>> >shairing, it's difficult to find what frequencys I can use and what
>power.
>> >
>> >I'm also looking for just plain information, or scematics. Something to
>> >build, buy, or modify for RX, and TX.
>> >
>> >So far the highest I've been has been the 23 CM band.
>> >
>> >I think we're limited to 50 watts out plus antenna gain, but I haven't
>been
>> >able to find much in the way of information on the band.
>> >
>> >73
>>
>> You can buy those 2.4 Ghz X10 video relays, and hack them for Amatuer
>> use.
>>
>Thanks, but they dont run near enough power...I'm looking at running about
>50 watts, or what ever is max legal limit right at the feed horn.
>Besides, with all the X-10 pop ups, I swore I'd never purchase any of their
>equipment.

You can use an amp, and there are other brands.

3609. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-05 15:46:37 UTC
From: "Marc H.Popek" <LVMarc@worldnet.att.net>
Message-ID: <xJRx9.27314$VJ5.1653273@bgtnsc05-news.ops.worldnet.att.net>
Source record: 40172
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

antenna design, speeding up Ft limited devices, materials science,
measurement technique... all the things were knowledge then and now is trade
secrets! Then everything they faced was unknown, so by studying the
technique you can apply he process to understanding and furthering
knowledge.
"John Todd" <john@Neopha.44in88.net> wrote in message
news:slrnasd9jv.lc.john@Neopha.44in88.net...
> On 4 Nov 2002 08:03:11 -0800, Winfield Hill <whill@picovolt.com> wrote:
> >pyr@zyan.takethisoff.org wrote...
> >>
> >> 1943 first edition Radio Engineers' handbook by Frederick Emmons Terman
> >> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1578866409
> >>
> > No takers yet? I recommend this book and own two copies,
> > one for home and one for work. I also got one for the
> > Institute's library. IIRC, I paid between $25 and 40.
> >
> > Thanks,
> > - Win
> >
>
> I always wonder what they left out because of wartime secrecy.
> What was the last thing you used yours for?
>
>
>
> --
> _____________________________________
> John E. Todd <> jtodd@island.net
>
> Note: Ensure correct polarity prior to connection.

3610. FS: TUBES, receiving, TV & NIXIE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-05 17:49:46 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <_wTx9.400477$o.4576441@news1.west.cox.net>
Source record: 40173
Cross-posted to: misc.invest.marketplace,rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

email w6krc@arrl.net for a detailed list.

3611. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-05 17:58:14 UTC
From: "Sverre Holm (LA3ZA)" <0junk4me@qsl.net>
Message-ID: <WETx9.401$sP2.6181@news4.ulv.nextra.no>
Source record: 40174

The K2 does have a squelch control.

The threshold can be accessed and set from the menu system, and it is nice
to use for instance when scanning. But it can of course be used any time the
radio is on.

73 Sverre
www.qsl.net/la3za

"David Walker" <no_spam@hotmail.com> wrote in message
news:3dc77318$1@news.comindico.com.au...
> Okay... that answers that question...
>
> Does the K2 have a squelch control. I haven't come across it in some of
the
> documents I've seen on the net.
>
> Note; The email below is completely fictitious.
> "David Walker" <roger@hotmail.com> wrote in message
> news:3dc23198@news.comindico.com.au...
> > Any K2 Owners read this group?
> >
> >
> >
> >
>
>

3612. Re: Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-05 19:24:32 UTC
From: gc@radix.net
Message-ID: <aq95tg$o2b$1@news1.radix.net>
Source record: 40175

I have been working on getting ready for the FMT over the past month.
It has been interesting having an excuse to get out some of neat test
equipment that I have acquired and make some actual use of it. Making
accurate frequency measurements is not a big deal these days, but measureing
frequency for an HF signal over the air is a bit more effort. This has
also provided a topic of discussion on the local repeater during
morning drive time.

In article <20021103133721.25072.00001377@mb-dh.aol.com>,
Dino AL7LZ <dinoal7lz@aol.com> wrote:
>You can attempt to account for the propagation error by monitoring the standard
>time signal stations closest to the ARRL FMT transmission frequencies, i.e. CHU
>at 3.33 and 7.335 and WWV at 15 MHz and tracking the error over time at
>approximately the same time the test will be conducted. If the radio you use

This is interesting. I didn't know that ionospheric variations correlated
over different paths that well. From my location W1AW is northeast
and WWV is west.

>accepts an external reference (the HP Z3801A for example) and you offset your
>BFO (also locked) to a known value you can then measure the frequency of the
>audio signal then use the radio's displayed frequency, the average of audio
>counts recorded during the test and the correction factor already noted to
>determine the received signal's frequency. At least that all sounds good in
>theory---we're going to use this methodololgy during the FMT and see what
>happens.
>

That's about what I planned to do. Good thing I started early, as
that receiver quit on me. Now I am feeding a RF signal into the antenna
to beat with the received signal, then measure RF signal generator and
the audio beat note. This works with any receiver, but requires
a stable signal generator. I am hoping for better than 1Hz.

3613. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-05 19:25:02 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <iWUx9.2234$Ve3.1757330@monger.newsread.com>
Source record: 40176

"David Walker" <no_spam@hotmail.com> wrote in message
news:3dc77318$1@news.comindico.com.au...
> Okay... that answers that question...
>
> Does the K2 have a squelch control. I haven't come across it in some of
the
> documents I've seen on the net.

I don't know what a K2 is, other than an HF rig, but most of the newer rigs
have squelch. The Icom 756 Pro does and "I think" the Yaesu. Not sure about
Kenwood.

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
>
> Note; The email below is completely fictitious.
> "David Walker" <roger@hotmail.com> wrote in message
> news:3dc23198@news.comindico.com.au...
> > Any K2 Owners read this group?
> >
> >
> >
> >
>
>

3614. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-05 19:44:41 UTC
From: James Horn <jimhorn@svn.net>
Message-ID: <3dc82db9@news.svn.net>
Source record: 40178

Claude Frantz <claude@pc0312a.rz.unibw-muenchen.de> wrote:
> Please consider this commercial site:
> http://www.mainlinegroup.co.uk/jacksonbrothers/index.htm

Thank you very much, Claude! I'd never heard of them - a fine resource indeed!

Jim Horn, WB9SYN/6

3615. Re: Detect direction of radio transmitter??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-05 20:34:37 UTC
From: averyfineman@aol.com
Message-ID: <20021105153437.16646.00000194@mb-cr.aol.com>
Source record: 40177

In article <aq8414$98n$1@newstoo.ericsson.se>, "Frithiof Andreas Jensen"
<frithiof.jensen@removethis.ted.ericsson.dk> writes:

>"Marcus" <holysmokes99@hotmail.com> wrote in message
>news:1783abaf.0211031748.f234799@posting.google.com...
>
>> transmitting source a few hundred feet away, would I be able to
>> determine the direction of the source of the radio waves by turning
>> the 360 degrees in all directions, with the direction of the strongest
>> reception being the direction of the source?
>
>You could with a Ferrite antenna working in the short-wave band; Radio
>Amateurs use the term "Fox Hunting".
>
>The signal from the ferrite antenna drops very sharply when the ferrite is
>pointed at the source, so you search for "nulls" in the signal. A map and a
>compass helps too.

If the whole purpose of the original question was fox hunting, then
the choice could be a loop or ferrite/iron-powder core antenna for
HF and a multi-element Yagi for VHF and higher. This has been
documented in amateur radio literature.

As has already been pointed out, a metal tube is a "waveguide
below cutoff" attenuator. Such attenuators were quite standard in
signal generators for years, even in precision attenuation standards
made by Bruno Weinschel. For distances of a "few hundred feet"
or about 100 meters, the directionality might be useful if the metal
tube is not too long (offhand guess is about a third of a meter?).

The EM theory behind all of this can be quite complex. It has to
take in the inside diameter of the metal tube, its length, the
signal frequency. The opening of the metal tube will be, in effect,
an "aperture antenna" of sorts and its characteristics would depend
on the physical dimensions and frequency. Note: So-called "slot"
antennas have been used on aircraft and spacecraft for decades
where the antenna is just a slot or other aperture in a continuous
metal plane. RCA Corporation made a waveguide slot antenna
array that replaced their conventional metal cloth in fiberglass
parabolic X-band commercial general aviation radar...it was lighter
and more stable.

The origin of the question might lie in the similarity to a "shotgun
microphone" used for very directional audio pickup at sports
events on TV. That one can be a series of different-length tubes
bundled together (for broad-band audio). Those tubes don't have

to be metallic.

Whether or not such a directional antenna could be made can be solved by a simple experiment. Get a length of metal tube or some ABS plastic waste line pipe. If ABS, run some aluminum cooking foil the length of it with edges overlapping. Insert receiver or small probe for same in one end. Find a signal source at a nearby location and see if it is directional...or even if it can pick up any signal. It may not...or it may. This takes far less time than trying to go into all the theory of fields and waves and necessary calculation.

[ABS = Acrylonitrile Butadiene Styrene, stiffer than PVC water pipe and sold in USA do-it-yourself stores usually dyed black]

The waveguide-below-cutoff effect has been used to reduce EMI from large metal chassis and panel apertures...especially so in front panel meter holes where the cure was a three to four inch metal tube around the meter body behind the panel. That was good for an additional 20 to 30 db of attenuation versus the un-shielded meter hole.

Len Anderson
retired (from regular hours) electronic engineer person

3616. Re: Oscilloscope mixer ....was: need an elmer...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 00:07:58 UTC
From: la8ak.xnd@online.no
Message-ID: <3dc85ba3.108941425@news.online.no>
Source record: 40179

On Mon, 4 Nov 2002 20:35:30 -0000, "Alexander S. Wood"
<alec_wood@dont.spam.me.ntlworld.com> wrote:

>Guys, a reality check is in order here.
>
>If the guy cannot use a scope, he is unlikely to posses the necessary
>technical knowledge to correctly build and aliign such a mixer.
>

it is not so difficult to use the mixer, it may work even if some
levels or terminations are wrong, and he could correct it later using
the oscilloscope

73
LA8AK
--
remove ,xnd to reply

3617. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 00:07:58 UTC
From: la8ak.xnd@online.no
Message-ID: <3dc85ac6.108719856@news.online.no>
Source record: 40180
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On 4 Nov 2002 16:33:04 -0800, john@jjdesigns.fsnet.co.uk (john
jardine) wrote:

>pyr@zyan.takethisoff.org wrote in message news:<87bs55oowv.fsf@zyan.org>...
>> 1943 first edition Radio Engineers' handbook by Frederick Emmons Terman
>>
>> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1578866409
>
>Got his 1937 "Radio Engineering" for 1.0 UKP. Altogether rather
>tedious. Much more informative was Ulrich Rohde's 1988 "Communications
>Receivers" at 1.50 UKP.

Still very interesting to read old books like "The technique of Radio
Design"(1943) by E.E.Zepler, and learn about all the solutions which
were re-invented in America 50 years later

Jan-Martin
LA8AK
--
remove ,xnd to reply

3618. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 00:12:56 UTC
From: jfields@texas.net
Message-ID: <3dca5c7a.13797472@news.texas.net>
Source record: 40181
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Wed, 06 Nov 2002 00:07:58 GMT, la8ak.xnd@online.no (J M Noeding)
wrote:

>Still very interesting to read old books like "The technique of Radio
>Design"(1943) by E.E.Zepler, and learn about all the solutions which
>were re-invented in America 50 years later

For a slightly different perspective I recommend the March 10, 1924
US Department of Commerce's Circular C74, "Radio Instruments and
Measurements".

John Fields
Professional circuit designer
http://www.austininstruments.com

3619. Re: Oscilloscope mixer ....was: need an elmer...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 00:55:33 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <usgpu07d9mjjde@corp.supernews.com>
Source record: 40182

Better yet, buy the proper scope for the job.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3dc85ba3.108941425@news.online.no...
> On Mon, 4 Nov 2002 20:35:30 -0000, "Alexander S. Wood"
> <alec_wood@dont.spam.me.ntlworld.com> wrote:
>
> >Guys, a reality check is in order here.
> >
> >If the guy cannot use a scope, he is unlikely to posses the necessary
> >technical knowledge to correctly build and aliign such a mixer.
> >
>
> it is not so difficult to use the mixer, it may work even if some
> levels or terminations are wrong, and he could correct it later using
> the oscilloscope
>
> 73
> LA8AK
> --
> remove ,xnd to reply

3620. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 01:51:06 UTC
From: la8ak.xnd@online.no
Message-ID: <3dc85d6f.109400998@news.online.no>
Source record: 40183

On 5 Nov 2002 12:44:41 -0700, James Horn <jimhorn@svn.net> wrote:

>Claude Frantz <claude@pc0312a.rz.unibw-muenchen.de> wrote:
>> Please consider this commercial site:
>> http://www.mainlinegroup.co.uk/jacksonbrothers/index.htm
>
>Thank you very much, Claude! I'd never heard of them - a fine resource
>indeed!
>
>Jim Horn, WB9SYN/6
Jackson brothers used to run good service in the Midlands, as radio
amateur I could order a capacitor and have it delivered at my QTH in
Sttratford/Avon few days later with very little cost

73
LA8AK (then G5BFV)
--
remove ,xnd to reply

3621. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 01:51:07 UTC
From: la8ak.xnd@online.no
Message-ID: <3dc85e35.109599643@news.online.no>
Source record: 40184

On Tue, 05 Nov 2002 19:25:02 GMT, "Roger Halstead" <rdhalste@tm.net>
wrote:

>
>"David Walker" <no_spam@hotmail.com> wrote in message
>news:3dc77318$1@news.comindico.com.au...
>> Okay... that answers that question...
>>
>> Does the K2 have a squelch control. I haven't come across it in some of
>the
>> documents I've seen on the net.
>
>I don't know what a K2 is, other than an HF rig, but most of the newer rigs
>have squelch. The Icom 756 Pro does and "I think" the Yaesu. Not sure about
>Kenwood.
>
and many old rigs had. Remember an article I read in CQ back around
1960, but it seems to have been forgotten in the years between(?)

73
LA8AK
--
remove ,xnd to reply

3622. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 02:58:58 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ush1c6ppff22c6@corp.supernews.com>
Source record: 40185

"Roger Halstead" <rdhalste@tm.net> wrote in message
news:iWUx9.2234$Ve3.1757330@monger.newsread.com...

>
> I don't know what a K2 is,

Boy Roger, a little out of touch! You need to come down from that tower and
catch up on your QSTs.

It's one of the very few (2, to my knowledge) radios whose receiver will
beat out your 756.

..

3623. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 03:37:13 UTC
From: rfwilson@intergate.nospam.bc.ca
Message-ID: <ush3j9dsb3n09@corp.supernews.com>
Source record: 40186
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

In article <871568ec.0211041633.28f27c6e@posting.google.com>,
john@jjdesigns.fsnet.co.uk says...
>
>pyr@zyan.takethisoff.org wrote in message news:<87bs55oowv.fsf@zyan.org>...
>> 1943 first edition Radio Engineers' handbook by Frederick Emmons Terman
>>
>> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1578866409
>
>Got his 1937 "Radio Engineering" for 1.0 UKP. Altogether rather
>tedious. Much more informative was Ulrich Rohde's 1988 "Communications
>Receivers" at 1.50 UKP.

Intersting. I have an early 1930s copy of a 2-inch thick book called "Radio Physics". Much of is is still amazingly still relevant. Another one that dates from around 1938 is called "Mathematics for Radiomen". Interesing title. Now here in Canada, that title would get half the population whining about sexism, and one would be pressured into callinng it "Mathematics for Radiopersons".

Bob.

3624. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 04:12:13 UTC
From: Fred Bloggs <nospam@nospam.com>
Message-ID: <3DC89687.4020902@nospam.com>
Source record: 40187
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

J M Noeding wrote:

>
>
> Still very interesting to read old books like "The technique of Radio
> Design"(1943) by E.E.Zepler, and learn about all the solutions which
> were re-invented in America 50 years later

Fifty years later would be 1993. Are you saying that the state of radio engineering in 1993 was just catching up to 1943 Europe? You're a bit of a lame-brained ass aren't you?

3625. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 07:29:40 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <ZdPQecDkTMy9EAON@ifwtech.co.uk>
Source record: 40191

J M Noeding wrote:
>On 5 Nov 2002 12:44:41 -0700, James Horn <jimhorn@svn.net> wrote:
>
>>Claude Frantz <claude@pc0312a.rz.unibw-muenchen.de> wrote:
>>> Please consider this commercial site:
>>> http://www.mainlinegroup.co.uk/jacksonbrothers/index.htm
>>
>>Thank you very much, Claude! I'd never heard of them - a fine resource
>>indeed!
>>
>>Jim Horn, WB9SYN/6
>Jackson brothers used to run good service in the Midlands, as radio
>amateur I could order a capacitor and have it delivered at my QTH in
>Sttratford/Avon few days later with very little cost
>
>73
>LA8AK (then G5BFV)

The story in the years between has been a sad one, as you'll see from the web site. After having been asset-stripped, the company has now been rescued and seems to be in good shape. Many of the products are back in stock, and JB are also making 'specials' which are not in the catalogue, such as large bandswitches.

A pity about the prices, but that's what metal/ceramic components cost these days. It's much better to have them available at some price than not at all.

BTW, large transmitting variable capacitors are also available in the UK from Nevada and Linear Amp UK.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3626. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 09:28:41 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <dh5y9.2224$vZ6.2061755@newshog.newsread.com>
Source record: 40188

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:ush1c6ppff22c6@corp.supernews.com...
> "Roger Halstead" <rdhalste@tm.net> wrote in message
> news:iWUx9.2234$Ve3.1757330@monger.newsread.com...
>
> >
> > I don't know what a K2 is,
>
> Boy Roger, a little out of touch! You need to come down from that tower
and
> catch up on your QSTs.
>
> It's one of the very few (2, to my knowledge) radios whose receiver will
> beat out your 756.
>

Between living on the tower, or out in the shop building the G-III, I
haven't read QST in years and I've been getting it free for over 25 years.
Been a life member since around 1962 when it was $150 . <:-))
> ..
But no, I'd never heard of it. Who makes it and where's it made?

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
>
>

3627. Re: 2.4 Gig infor needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 09:31:13 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <Bj5y9.2225$vZ6.2061816@newshog.newsread.com>
Source record: 40189

```
"Gary Tait" <taitg@hurontel.on.ca> wrote in message
news:gsmfsuk4ncm7knjm66m3g0d7bk4r16vul0@4ax.com...
> On Sun, 03 Nov 2002 19:16:02 GMT, "Roger Halstead" <rdhalste@tm.net>
> wrote:
>
> >
> >"Gary Tait" <taitg@hurontel.on.ca> wrote in message
> >news:nigasuou7uv3bd8vfg6jq6mksq6m8oo6t0@4ax.com...
> >> On Sun, 03 Nov 2002 03:59:29 GMT, "Roger Halstead" <rdhalste@tm.net>
> >> wrote:
> >>
> >> >I'm looking for some 2.4 gig equipment to try both EME, ATV, and
digital.
> >> >
> >> >I've not worked on the 2.4 gig band before, so I know very little
about
> >it.
> >> >The ARRL handbook does little more than aknowledge it exists. With
all
> >the
> >> >shairing, it's difficult to find what frequencys I can use and what
> >power.
> >> >
> >> >I'm also looking for just plain information, or scematics. Something
to
> >> >build, buy, or modify for RX, and TX.
> >> >
> >> >So far the highest I've been has been the 23 CM band.
> >> >
> >> >I think we're limited to 50 watts out plus antenna gain, but I haven't
> >been
> >> >able to find much in the way of information on the band.
> >> >
> >> >73
> >>
> >> You can buy those 2.4 Ghz X10 video relays, and hack them for Amatuer
> >> use.
> >>
> >Thanks, but they dont run near enough power...I'm looking at running
about
> >50 watts, or what ever is max legal limit right at the feed horn.
> >Besides, with all the X-10 pop ups, I swore I'd never purchase any of
their
> >equipment.
```

>
> You can use an amp, and there are other brands.

I might, if I can find one that comes with a full manual and schematic.
Don't know about the amp. Power can be expensive at 2.4 and above.

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
>

3628. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 10:28:54 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aqaqt5$q3i$1@venus.btinternet.com>
Source record: 40190
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I have in my possession in good condition the book -

"Wireless Telegraphy and Telephony" by Prof. Domenico Mazzotto.

Translated into English from the original Italian by S.R.Bottone.

415 pages including 253 illustrations, circuit diagrams, beautiful drawings
and photographs of equipment and aerials.

Published by Whitaker & Co., 2 White Hart Street, Paternoster Square,
London, E.C. in AD 1906.

==========

From the preface by the translator -

"Prof. Mazotto has executed his task so thoroughly as to leave no important
facts or theories connected with Radiotelegraphy unnoticed; and has clothed
his thoughts in language at once so simple and so forcible, as to render the
comprehension of the subject easy to the merest tyro."

==========

I am in my 77th year. What should I do with this book?

==========
Regards from Reg G4FGQ
For Free Radio Design Software
Go to http://www.g4fgq.com
==========

3629. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 10:40:00 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <keWvO+BAGPy9EAZ$@ifwtech.co.uk>
Source record: 40097

xpyttl wrote:
>"Roger Halstead" <rdhalste@tm.net> wrote in message
>news:iWUx9.2234$Ve3.1757330@monger.newsread.com...
>
>>
>> I don't know what a K2 is,
>
>Boy Roger, a little out of touch! You need to come down from that tower and
>catch up on your QSTs.
>
>It's one of the very few (2, to my knowledge) radios whose receiver will
>beat out your 756.

And the other one would be...?

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3630. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 11:07:02 UTC
From: n2ey@aol.com
Message-ID: <20021106060702.00112.00000291@mb-fz.aol.com>
Source record: 40192

In article <dh5y9.2224$vZ6.2061755@newshog.newsread.com>, "Roger Halstead" <rdhalste@tm.net> writes:

>Who makes it and where's it made?
>
Small company called Elecraft out in Aptos, CA. Modular design starts out as a basic QRP CW rig to which you add whatever options you desire - noise blanker, SSB, 100 watt final, audio filter, ATU, internal battery, etc. Even the basic unit has lots of features and high performance. And it's a kit!

http://www.elecraft.com

73 de Jim, N2EY

3631. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 11:09:48 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3dc8f7fd.1008530@news.freeserve.net>
Source record: 40193

On Wed, 06 Nov 2002 09:28:41 GMT, "Roger Halstead" <rdhalste@tm.net>
wrote:

>
>"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
>news:ush1c6ppff22c6@corp.supernews.com...
>> "Roger Halstead" <rdhalste@tm.net> wrote in message
>> news:iWUx9.2234$Ve3.1757330@monger.newsread.com...
>>
>> >
>> > I don't know what a K2 is,
>>
>> Boy Roger, a little out of touch! You need to come down from that tower
>and
>> catch up on your QSTs.
>>
>> It's one of the very few (2, to my knowledge) radios whose receiver will
>> beat out your 756.
>>
>
>Between living on the tower, or out in the shop building the G-III, I
>haven't read QST in years and I've been getting it free for over 25 years.
>Been a life member since around 1962 when it was $150 . <:-))
>> ..
>But no, I'd never heard of it.
why not ?
>Who makes it
you do !
>where's it made?
Wherever you can find the space
>
;-)

go to http:\\www.elecraft.com for details

3632. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 11:55:06 UTC
From: Tony Williams <tonyw@ledelec.demon.co.uk>
Message-ID: <4b911e9f38tonyw@ledelec.demon.co.uk>
Source record: 40194
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

In article <aqaqt5$q3i$1@venus.btinternet.com>,
Reg Edwards <g4fgq.regp@btinternet.com> wrote:
> I have in my possession in good condition the book -

> "Wireless Telegraphy and Telephony" by Prof. Domenico Mazzotto.

> Published by Whitaker & Co., 2 White Hart Street, Paternoster Square,
> London, E.C. in AD 1906.

> I am in my 77th year. What should I do with this book?

All us BoFs have a similar (approaching) problem Reg.

The only home I can think of is the technical library
of the nearest university or technical college.

--
Tony Williams.

3633. Rotator Controller query

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 12:02:12 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3dc902f2.3813805@news.freeserve.net>
Source record: 40195

Hi Folks, a simple query.. ;-)

rotators like the CD44 and Yeasu KR series use an AC supply of 26v.
What I would like to know is the ballpark figure for current that they
draw under maximum load or inital start conditions. I've got a KR600
for which I need to build a controller and I need to know what
transformer and switch rating to use before I start construction.

thanks Mike W

3634. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 12:13:15 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <TyBxqjAbdQy9Ew94@jmwa.demon.co.uk>
Source record: 40098
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Reg Edwards
<g4fgq.regp@btinternet.com> wrote (in <aqaqt5$q3i$1@venus.btinternet.com
>) about 'First Edition 1943 Radio Engineers Handbook', on Wed, 6 Nov
2002:
>I am in my 77th year. What should I do with this book?

Ask Imperial College Library if they would like to have it?
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

3635. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 12:34:54 UTC
From: john@jjdesigns.fsnet.co.uk
Message-ID: <871568ec.0211060434.48afff81@posting.google.com>
Source record: 40196
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

rfwilson@intergate.nospam.bc.ca (Bob Wilson) wrote in message
news:<ush3j9dsb3n09@corp.supernews.com>...
> In article <871568ec.0211041633.28f27c6e@posting.google.com>,
> john@jjdesigns.fsnet.co.uk says...
> >
> >pyr@zyan.takethisoff.org wrote in message news:<87bs55oowv.fsf@zyan.org>...
> >> 1943 first edition Radio Engineers' handbook by Frederick Emmons Terman
> >>
> >> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1578866409
> >
> >Got his 1937 "Radio Engineering" for 1.0 UKP. Altogether rather
> >tedious. Much more informative was Ulrich Rohde's 1988 "Communications
> >Receivers" at 1.50 UKP.
>
> Intersting. I have an early 1930s copy of a 2-inch thick book called "Radio
> Physics". Much of is is still amazingly still relevant. Another one that
> dates from around 1938 is called "Mathematics for Radiomen". Interesing
> title. Now here in Canada, that title would get half the population whining
> about sexism, and one would be pressured into callinng it "Mathematics for
> Radiopersons".
>
> Bob.

Yes ... I turn first to the old books if I'm after something really
basic. They tell it as it is without having to wade through endless
modern discourses on electron physics etc. (this was a time when 'men
were men').
Had figured out a method of electrolytically etching PCB's using a
stepper motor scanning arrangement and pumped electrolyte. Needed
Faradays electroplating constant. First port of call was Ayrton's
1898 tome on 'Practical electricity'!.
regards
john

3636. Re: Rotator Controller query

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 14:38:56 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <Ax6cnUh1BOZDsVSgXTWcpg@comcast.com>
Source record: 40099

My ancient CDR rotator controller says 2 amps.

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3dc902f2.3813805@news.freeserve.net...
> Hi Folks, a simple query.. ;-)
>
> rotators like the CD44 and Yeasu KR series use an AC supply of 26v.
> What I would like to know is the ballpark figure for current that they
> draw under maximum load or inital start conditions. I've got a KR600
> for which I need to build a controller and I need to know what
> transformer and switch rating to use before I start construction.
>
> thanks Mike W

3637. Re: Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 15:17:09 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3DC93275.7BCF6EF4@ix.netcom.com>
Source record: 40100

Tom Bruhns wrote:

>
> My experience tells me that on HF, the accuracy of the standard isn't
> really much of a problem, it's the propagation that will limit the
> overall measurement accuracy. Also, I wonder what the phase noise
> characteristics of the transmitter will be...how broad will the
> transmitted signal be? Will it be just one of the standard ARRL
> transmitters?

Just for fun I checked the W1AW CW signals yesterday two or three times during the afternoon and
evening. The doppler shift, (or should it be phase shift more correctly?) was of the order of 1 Hz
maximum on the 40, 20 and 15 meter signals, here in southern California. There is also some slight
frequency variation over the course of a code element of that order, I hesitate to call it chirp :^) I
don't know how one could separate any possible spectral impurity from this kind of effect.

Given that a lot of folk now have the capability to measure off air down to fractions of a Hertz, to
reach the maximum accuracy, we will need a lot longer time to average out a number of measurements than
the FMT provides, in it's current form.

FWIW 7,047,533 1642 local 7,047,521 at 1930 local
between 14,047,532 and 14,047,534;
21,067,531 and 28,067,486 Hz, were the numbers.

(Racal RA1792 Rx, frequency measuring version, Racal 9475 Rubidium set from GPS)

Cheers
Dan ac6ao g3ncr

3638. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 15:25:24 UTC
From: Joe McElvenney <ximac@btinternet.com>
Message-ID: <VA.0000020b.01669e76@btinternet.com>
Source record: 40101
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Hi,

When you read the semiconductor physics in the "MIT Radiation Lab" series, and with the realisation that the theory went back well before the start of WWII, it makes you wonder why it took Bardeen, Brattain and Shockley so long to connect the 'third' wire.

Factoid : William Shockley was born in London in 1910.

So that's were he got it all from!

Cheers - Joe

3639. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 15:36:04 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <kldisuo4heo4le3u1gqdp6m7ut2v00628h@4ax.com>
Source record: 40104

On Wed, 6 Nov 2002 10:40:00 +0000, "Ian White, G3SEK"
<G3SEK@ifwtech.co.uk> wrote:

>>"Roger Halstead" <rdhalste@tm.net> wrote in message
>>news:iWUx9.2234$Ve3.1757330@monger.newsread.com...
>>
>>Boy Roger, a little out of touch! You need to come down from that tower and
>>catch up on your QSTs.
>>
>>It's one of the very few (2, to my knowledge) radios whose receiver will
>>beat out your 756.
>
>And the other one would be...?

You'll find it at: http://www.tentec.com/TT565.htm

Danny

3640. Re: need a spark gap transmitter for experiment

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 15:58:55 UTC
From: tagangchiou@yahoo.com.tw
Message-ID: <6a3d2a74.0211060758.3d81e638@posting.google.com>
Source record: 40102

Hi guys,

Thank you for all your kind advice, which are very helpful.

I will probably start from simulating and be very careful with the experiment. I don't actually need a real thing but to test spark as a switch.

Thanks to Roy, Tom, and all of you who warned and advised.

Sincerely,
David

3641. Re: Homebrew a CTCSS Encoder

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 16:00:11 UTC
From: ronayling@hotmail.com
Message-ID: <3dc93be1.27798885@news.freeserve.co.uk>
Source record: 40103

Why bother with all that an FX335 will do it all on one chip
I've made quite a few..

On Tue, 05 Nov 2002 04:05:17 GMT, Norman Franklin
<normanf@pacbell.net> wrote:

> Anyone out there homebrew a CTCSS Encoder and/or decoder for there
>rig?
>I would think you could do this with one of the PIC or AVR micros. The
>hard part
>for me would be the code. If some one has done this I would appriciate
>some hints
>or pointers to source information on how this is done.
> Thanks in advance.
>
>Norman KG6NMT

3642. Re: Mercury Wetted Relay as input relay in a linear amp ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 16:29:41 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0211060829.771e963b@posting.google.com>
Source record: 40105

It also depends on how the relays are constructed.

If the coil is wound so that the contacts pass through the center of the coil, the coil will act like a choke at RF---signal goes in, nothing comes out.

I learned this the hard way many years ago when I was a Novice Class, except I was trying to use a reed relay on 2 meters. The kind with the contacts outside the coil would probably work, but the ones I had had the coil wound around the contacts.

With the mercury relay how what would the HV RF do?

Jim
N8EE

3643. Re: need a spark gap transmitter for experiment

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 16:46:06 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3DC9474E.52B830A8@clifto.com>
Source record: 40106

JGBOYLES wrote:
> Holy cow, are you not aware that at any time there are perhaps 100 million
> spark gap transmitters on the air in the USA. They are internal combustion
> engine spark plugs and they generally do not cause the severe amount of
> interference to vital police and medical interference you refer.

Golly Moses, are you not aware that nearly every one of them is 95%
shielded by up to an inch of steel or aluminum, then additionally 80%
shielded by thick sheet metal? Are you not aware that they don't run
a continuous spark, but pulsed on a very low duty cycle? Are you not
aware that there are no antennas connected to them (the spark plug wires
don't count, they're dummy-load resistors)?

--
It is better to light just one little candle than to curse the darkness.
If everyone lit just one little candle, the EPA would outlaw candles.

3644. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 17:05:56 UTC
From: tdonaly@aol.com
Message-ID: <20021106120556.12057.00003680@mb-fj.aol.com>
Source record: 40107

```
>
>==============================
>
>I am in my 77th year. What should I do with this book?
>---
>==========================
>Regards from Reg G4FGQ
>For Free Radio Design Software
>Go to http://www.g4fgq.com
>==========================
>
```

Keep it. It will improve your mind, and, most likely, you'll
be needing it for the next 20 to 25 years, anyway.

Tom Donaly, KA6RUH

3645. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 17:32:44 UTC
From: "Sverre Holm (LA3ZA)" <0junk4me@qsl.net>
Message-ID: <0ncy9.771$sP2.10323@news4.ulv.nextra.no>
Source record: 40108

> >>It's one of the very few (2, to my knowledge) radios whose receiver will
> >>beat out your 756.
> >
> >And the other one would be...?
>
> You'll find it at: http://www.tentec.com/TT565.htm
>

... and the third one could be the upcoming Norcal NC30, see
http://www.redhotradio.com/NC30.html

Sverre, LA3ZA
Happy Elecraft K2 owner / builder
www.qsl.net/la3za

3646. Re: Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 18:37:43 UTC
From: k7itm@aol.com
Message-ID: <3200347.0211061037.7223e48c@posting.google.com>
Source record: 40109

gc@radix.net (Zed**3) wrote in message news:<aq95tg$o2b$1@news1.radix.net>...
...
> This is interesting. I didn't know that ionospheric variations correlated
> over different paths that well. From my location W1AW is northeast
> and WWV is west.

They don't. Using spectral analysis, at certain times of the day, I
can resolve multiple peaks on 10MHz or 15MHz. I'm quite sure they
come from WWV (to the SE from me) and WWVH (to the SW), and smaller
ones (generally down 30-50dB from those two) come from other stations
transmitting time and frequency reference signals, or from distinct
separate paths from WWV/WWVH. In fact, a bit after sunrise here, I
can typically see one peak on 10MHz +/- 0.05Hz, presumably WWV, and
another perhaps 2Hz higher, presumably WWVH.

I wish I had a friend in Hartford that could transmit a known-accurate
frequency at the time of the FMT. Failing that, CHU will have to
suffice. It's at least in the neighborhood of Newington, relative to
where I am.

For Harold: of course, it's simply for the fun and/or challenge
(and/or ??) of doing it. Why do people climb more than one mountain?
Why do people climb a given mountain more than once?

Cheers,
Tom

3647. Re: Oscilloscope mixer ....was: need an elmer...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 18:42:45 UTC
From: la8ak.xnd@online.no
Message-ID: <3dc87598.115587280@news.online.no>
Source record: 40110

On Tue, 5 Nov 2002 18:55:33 -0600, "M.E." wrote:

>Better yet, buy the proper scope for the job.

>"J M Noeding" <la8ak.xnd@online.no> wrote:
>> On Mon, 4 Nov 2002 20:35:30 -0000, "Alexander S. Wood"
>>
>> >Guys, a reality check is in order here.
>> >
>> >If the guy cannot use a scope, he is unlikely to posses the necessary
>> >technical knowledge to correctly build and aliign such a mixer.
>> >
>>
>> it is not so difficult to use the mixer, it may work even if some
>> levels or terminations are wrong, and he could correct it later using
>> the oscilloscope

And I thought the newsgroup was for amateur radio, not the job (?)
I used mixers and other solutions with my Telequipment D52 5MHz scope
to check signals on 432 and higher. And I was told that OZ2BB
reconstructed some of his transmitters after reading my notes on using
mixers ahead of oscilloscopes around 1985

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

3648. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 19:10:17 UTC
From: john@jjdesigns.fsnet.co.uk
Message-ID: <871568ec.0211061110.267618bc@posting.google.com>
Source record: 40111
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:<aqaqt5$q3i$1@venus.btinternet.com>...
> I have in my possession in good condition the book -
>
> "Wireless Telegraphy and Telephony" by Prof. Domenico Mazzotto.
>
> Translated into English from the original Italian by S.R.Bottone.
>
> 415 pages including 253 illustrations, circuit diagrams, beautiful drawings
> and photographs of equipment and aerials.
>
> Published by Whitaker & Co., 2 White Hart Street, Paternoster Square,
> London, E.C. in AD 1906.
>
> ==========
>
> From the preface by the translator -
>
> "Prof. Mazotto has executed his task so thoroughly as to leave no important
> facts or theories connected with Radiotelegraphy unnoticed; and has clothed
> his thoughts in language at once so simple and so forcible, as to render the
> comprehension of the subject easy to the merest tyro."
>
> ==========
>
> I am in my 77th year. What should I do with this book?
> ---
> ==========
> Regards from Reg G4FGQ
> For Free Radio Design Software
> Go to http://www.g4fgq.com
> ==========
Allow *any* 2nd hand book seller to acquire it. They *will* look
after it because it's relatively old. Someone like me will then spot
it from about 10 miles away, take it home and subsequently treasure
it, until in turn, my time comes and the process can then repeat.
The trick, is to know that these book sellers do really love and
appreciate good books (even technical ones!).
regards
john

3649. Re: need a spark gap transmitter for experiment

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 20:06:01 UTC
From: jgboyles@aol.com
Message-ID: <20021106150601.10722.00003986@mb-mq.aol.com>
Source record: 40112

>Golly Moses, are you not aware that nearly every one of them is 95%
>shielded by up to an inch of steel or aluminum, then additionally 80%
>shielded by thick sheet metal? Are you not aware that they don't run
>a continuous spark, but pulsed on a very low duty cycle?

>Are you not
>aware that there are no antennas connected to them (the spark plug wires
>don't count, they're dummy-load resistors)?

Hi Cliff, Of course I am aware of all that, I used a spark plug as an example of a spark transmitter that won't wipe out radio receivers all over town. On the other hand I remember 1950s vintage Fords that put out a good signal in excess of 100 yards. You could always tell when one was going down the street if you had on the am radio, or bw TV set.

I was responding to advice not to build a spark transmitter because it will interfer with all types of necessary communications. Certainly a spark can readily do that, as can an improperly built tube or solid state transmitter. All depends on how you build them, where you put them, and what kind of antenna you plan on using.

73 Gary N4AST

3650. Re: Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 21:15:56 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <gEfy9.130009$wG.483711@rwcrnsc51.ops.asp.att.net>
Source record: 40113

> For Harold: of course, it's simply for the fun and/or challenge
> (and/or ??) of doing it. Why do people climb more than one mountain?
> Why do people climb a given mountain more than once?

Dunno, that always seemed kind of silly too. (Apologies to Edmund)
Personally, I still think I'd get more pure satisfaction out of measuring something, making my own determination as to how close I was, instead of taking someone else's word for it, and thinking about whether I could improve or not. Of course, NEEDING to improve is another ballgame. I phase lock to WWVB maybe once or twice a year to lock my Austron down. That's my clock for the shop counter. Suspect it's probably an order of magnitude less accurate than what you and Dan do, KNOW it's about 3-4 orders of magnitude better than I NEED.

In the grand scheme of things, and given a finite lifetime, we all have to assess what's important to ourselves. I never heard anyone ask at 1FB's memorial service "How close did he ever get in the FMT"?

Regards

W4ZCB

3651. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 21:36:46 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <usj2s9hn91bic8@corp.supernews.com>
Source record: 40114

Well, I was thinking of one of the Yaesu's, I think it was the FT10000D or something like that (I'm not really up on them), based on Adventure Radio Society's excellent lab comparisons. In fact, the ProII was very close, and everything else was far behind those three. (But I haven't seen their results for the new TenTec).

..

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message news:keWvO+BAGPy9EAZ$@ifwtech.co.uk...
>
> And the other one would be...?
>

3652. Re: PCB software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-06 22:07:10 UTC
From: Simon <st599@ecs.soton.ac.uk>
Message-ID: <kh4jsussk0pe3qblj1do38gu4698bapvkl@4ax.com>
Source record: 40115

Have a look at www.pcb-pool.com they let you download full version
commercial windows software (and are cheap at RF boards)

Used them for a Uni project, excellent quality.

On Mon, 28 Oct 2002 20:02:43 GMT, p.mooney2@ntlworld.com wrote:

>There was a request about a week back asking about PCB software,
>unfortunatly I just acciudently deleted it.
>
>PCB (currently v1.6.3) is a program for designing PCBs (surprise)
>under the X-window system (e.g. Unix (including Linux, Hp, Solaris,
>etc. but NOT M$ Windows) and is issued with no charge under the GPL
>licence.
>
>Home page is at:
>
>http://bach.ece.jhu.edu/~haceaton/pcb/
>
>taken from home page is:
>
>
>FEATURES
>
>Multi-Layer: Up to 8 layers plus silkscreen
>Parts Libraries:
>TTL 74xx
>connectors
>crystals
>linear series
>voltage regulators
>resistors: discrete and arrayed
>capacitors
>transistors
>PALs
>LEDs
>RAM ICs
>easy to generate user-defined parts
>Output formats:
>PostScript
>Color for design checking
>B/W for mask generation
>Gerber (RS-274X)
>Output layers:
>up to 8 routing layers

>component mask
>solder mask
>silkscreen(s)
>drill file(s)
>solder paste
>Design Rule Checking (DRC)
>Complex ground/power planes
>Show electrical connectivity
>Netlist comparison
>Drill report
>
>
>
>Hope this is of help,
>
>Paul M.

3653. K2 Transceiver Completely Updated!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 00:15:40 UTC
From: Eric Swartz WA6HHQ - Elecraft <eric@elecraft.com>
Message-ID: <3DC9B0AC.BDF4F336@elecraft.com>
Source record: 40117

We're pleased to announce we are now shipping a major update to the K2 transceiver (and K2/100), starting with serial number 3000. We have been shipping this version for a couple of weeks and all new orders will receive it. If you've been waiting to buy a K2, you'll find many new reasons to take the plunge. If you already own one, you'll be happy to know that you can also obtain a complete update kit. (Please hold any e-mail or phone calls until we post additional details on the update kit later this month.)

Designs evolve, and the K2 is no exception. During Elecraft's first three years, K2 owners suggested a number of useful changes, and we've added nearly all of them into the updated kit. (We'd like to express our appreciation to everyone who helped with these improvements.) All modifications that were required for the installation of K2 options have also been added.

The updated K2 offers new features, improved basic performance, and simplified assembly. The most important changes are listed below. These changes make the K2--already one of the highest-performance ham-band transceivers you can buy--an even better value.

New Features and Performance Improvements:

-All of the most-requested modifications now incorporated into the design
-Improved temperature stability; includes new pre-wound T44-7 BFO inductor
-Increase in nominal receiver gain possible using new AGC threshold control
-Improved image rejection on 17 through 10 meters
-Better LSB/USB pitch matching and flatter 2nd I.F. crystal filter
-Smoother AF GAIN control
-More pleasant sidetone sound
-Speaker grille cloth supplied
-Support for KAT100 150-watt ATU
-Support for upcoming K60XV 60 meter/low-level transverter I/O option

Changes that affect Assembly, Alignment, and Operation:

-Complete RF probe kit now included (switch spacing tool now doubles as RF probe PCB)
-Many improvements to PC board layouts; all required or recommended board mods added
-Crystal filter grounding instructions improved to increase ultimate rejection
-Owner's manual completely updated based on suggestions from builders
-Operation section of manual now covers all recent firmware features, including all entries in the secondary menu

Other Changes/Enhancements:

-Reverse-polarity protection diode is now ultra-low-drop type (only 0.1V in RX mode)
-Improved FINE RIT resolution and better tuning linearity on highest bands
-12 pF caps in parallel w/20/30 BPF trimmers eliminates 20/30 alignment difficulties
-Post-mixer amp collector choke is now a toroid, reducing unwanted S-meter activation from out-of-band signals (most often reported on 17 m)
-VFO ALC changes included (in support of KPA100)
-Voltage source selector switch on Control board is now a jumper--eliminates unexpected "0.0 V" reading in voltage/current display mode

73,
Eric - WA6HHQ, and Wayne - N6KR

3654. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 00:20:19 UTC
From: eric@elecraft.com
Message-ID: <ad8a96ee.0211061620.29dc7f01@posting.google.com>
Source record: 40116

Yes, we included a squelch function in the later firmware releases for the K2.

73, Eric WA6HHQ
http://www.elecraft.com

"Roger Halstead" <rdhalste@tm.net> wrote in message
news:<iWUx9.2234$Ve3.1757330@monger.newsread.com>...
> "David Walker" <no_spam@hotmail.com> wrote in message
> news:3dc77318$1@news.comindico.com.au...
> > Okay... that answers that question...
> >
> > Does the K2 have a squelch control. I haven't come across it in some of
> the
> > documents I've seen on the net.

3655. Re: Motorola Channel Elements

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 00:38:38 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <iCiy9.532826$vq2.3506536@news1.east.cox.net>
Source record: 40118

"carltons" <motsteve@attbi.com> wrote in message
news:motsteve-01110223045200001@c-66-176-144-254.se.client2.attbi.com...
> In article <SE%v9.3227$b5.16416@news1.mts.net>, "Kent Haase"
> <ijeh99@mb.sympatico.ca> wrote:
>
> > I have a few of these - various models. Where can I get info on how to
use
> > them (other than sticking them in a Motorola radio)? Seems like pinout
data
> > is not readily available on the Internet.
> >
> > Kent VE4KEH
>
> Do they have solid pins or do they have pins that look like stranded
> wire? Send me an email or do another post and I'll get you the info.
> BTW, you'll need a 7.5 vdc supply to power them, no matter what. As I
> recall, they don't draw more than about 2 mA even for the UHF ones.
>
>
> Steve ex Moto wheenie

Most of the Motorola elements are entirely passive...

Pete

3656. Re: K2 Transceiver Completely Updated!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 00:47:31 UTC
From: Eric Swartz WA6HHQ - Elecraft <eric@elecraft.com>
Message-ID: <3DC9B823.66D1A593@elecraft.com>
Source record: 40119

Sorry - I forgot to include the web site:
http://www.elecraft.com

73, Eric WA6HHQ

Eric Swartz WA6HHQ - Elecraft wrote:
>
> We're pleased to announce we are now shipping a major update to the K2
> transceiver (and K2/100), ...

3657. Re: Motorola Channel Elements

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 01:08:01 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0611022009160001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40120

In article <iCiy9.532826$vq2.3506536@news1.east.cox.net>, " Uncle Peter"
<radioconnectionNO@cox.netSPAM> wrote:

> "carltons" <motsteve@attbi.com> wrote in message
> news:motsteve-0111022304520001@c-66-176-144-254.se.client2.attbi.com...
> > In article <SE%v9.3227$b5.16416@news1.mts.net>, "Kent Haase"
> > <ijeh99@mb.sympatico.ca> wrote:
> >
> > > I have a few of these - various models. Where can I get info on how to
> use
> > > them (other than sticking them in a Motorola radio)? Seems like pinout
> data
> > > is not readily available on the Internet.
> > >
> > > Kent VE4KEH
> >
> > Do they have solid pins or do they have pins that look like stranded
> > wire? Send me an email or do another post and I'll get you the info.
> > BTW, you'll need a 7.5 vdc supply to power them, no matter what. As I
> > recall, they don't draw more than about 2 mA even for the UHF ones.
> >
> >
> > Steve ex Moto wheenie
>
> Most of the Motorola elements are entirely passive...
>
> Pete

Those are called crystals and not channel elements. Channel elements buy
you a temp comp that gives you 5 ppm or better. You can't get that with a
crystal by itself even if you team it up with a matched tc cap. The CE's
for both the MT and MX radios were cascode Colpitts oscillators and
included warp and mod sense tuning coils. If you don't believe me, rip
one open and look. If you're careful, you'll do no harm. I would be
willing to bet that the transistors will be M9570's also. You also may be
referring to mobile CE's which may have had all kinds of stuff in them
other than just the crystal and tc cap. I can't address what mobile did.

Steve Carlton WB4CZR

3658. WTB: microphone cable

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 01:19:41 UTC
From: k9sqg@aol.com
Message-ID: <20021106201941.00246.00001926@mb-de.aol.com>
Source record: 40121

I'm trying to find a source for high quality microphone cable, 2-3 or 4 conductors, shielded, flexible, and easy to work with. Have found sources that sell it in 100-500 ft spools but that is a bit too much.

Thanks for reading the posting.

Evan

3659. Re: WTB: microphone cable

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 02:58:54 UTC
From: NCS Radio <ncs@ncsradio.com>
Message-ID: <usjlnlcll8a894@corp.supernews.com>
Source record: 40122

Evan,
We sell some really nice shielded microphone cable (custom made for us) in 10 ft minimum length. As you asked, it's very flexible and easy to work with.

Check out our website at: www.ncsradio.com and go to the Accessories page.

73,

Carey Fisher, K8VZ
Chief Technical Officer
New Communications Solutions, LLC
5364 Valley Mist Trace
Norcross, GA 30092
k8vz@ncsradio.com
Toll Free Tel & Fax: 888-883-5788
Cell: 770-778-2132
Local: 770-814-0683
www.ncsradio.com

"K9SQG" <k9sqg@aol.com> wrote in message
news:20021106201941.00246.00001926@mb-de.aol.com...
> I'm trying to find a source for high quality microphone cable, 2-3 or 4
> conductors, shielded, flexible, and easy to work with. Have found sources
that
> sell it in 100-500 ft spools but that is a bit too much.
>
> Thanks for reading the posting.
>
> Evan

3660. Re: WTB: microphone cable

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 03:31:16 UTC
From: Lou <tech@dp.net>
Message-ID: <aqcp49$1pqa$1@news.dp.net>
Source record: 40123

You looking for the gray stuff as in "PA" type work or 2 way radio or? New
or used?

--
****

C.L. FURLONG ENTERPRISES
514 RAILROAD STREET
P.O. BOX 289
STOCKDALE, PA 15483
PHONE: 724-938-7808
E: MAIL: TECH@DP.NET
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Whatever your needs, ask! We may have it. Also, ask about our specials. We
sell out of shop,
via newsgroups and e-bay.

WE APPRECIATE OUR CUSTOMERS!
"K9SQG" <k9sqg@aol.com> wrote in message
news:20021106201941.00246.00001926@mb-de.aol.com...
> I'm trying to find a source for high quality microphone cable, 2-3 or 4
> conductors, shielded, flexible, and easy to work with. Have found sources
that
> sell it in 100-500 ft spools but that is a bit too much.
>
> Thanks for reading the posting.
>
> Evan

3661. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 03:56:09 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <tvly9.2296$vZ6.2129417@newshog.newsread.com>
Source record: 40124

"Dan Richardson" <k6mhe@mendolink.com> wrote in message
news:kldisuo4heo4le3u1gqdp6m7ut2v00628h@4ax.com...
> On Wed, 6 Nov 2002 10:40:00 +0000, "Ian White, G3SEK"
> <G3SEK@ifwtech.co.uk> wrote:
>
> >>"Roger Halstead" <rdhalste@tm.net> wrote in message
> >>news:iWUx9.2234$Ve3.1757330@monger.newsread.com...
> >>
> >>Boy Roger, a little out of touch! You need to come down from that tower
and
> >>catch up on your QSTs.
> >>
> >>It's one of the very few (2, to my knowledge) radios whose receiver will
> >>beat out your 756.
> >
> >And the other one would be...?
>
> You'll find it at: http://www.tentec.com/TT565.htm
>
I have a fond place in my heart for Ten-Tec. I've used a lot of their
equipment over the years. I was also a dealer back in the 70s. That final
is rugged. I used to loan out an Omni or two for events. I only lost one
final in those years and I only had one customer lose a final. (Not sure how
he did it).

One group wanted to run 15 meters, but didn't have an antenna cut for 15 or
a tuner. I told them to try the 40 meter dipole (3rd harmonic) and if all
else failed use their 20 meter to see if it would work. The 40 meter
antenna worked fairly well. The 20 was nothing to brag about, bit it did
work. the rig was still working fine when I got it back.

I'd like to set that 565 next to my Icom. If it's anything like the earlier
rigs it's going to be great on QSK.

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)
> Danny
>
>

3662. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 03:59:09 UTC
From: Roger Halstead <rdhalste@tm.net>
Message-ID: <hyly9.2298$vZ6.2129351@newshog.newsread.com>
Source record: 40125

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3dc8f7fd.1008530@news.freeserve.net...
> On Wed, 06 Nov 2002 09:28:41 GMT, "Roger Halstead" <rdhalste@tm.net>
> wrote:
>
> >
> >"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
> >news:ush1c6ppff22c6@corp.supernews.com...
> >> "Roger Halstead" <rdhalste@tm.net> wrote in message
> >> news:iWUx9.2234$Ve3.1757330@monger.newsread.com...
> >>
> >> >
> >> > I don't know what a K2 is,
> >>
> >> Boy Roger, a little out of touch! You need to come down from that
tower
> >and
> >> catch up on your QSTs.
> >>
> >> It's one of the very few (2, to my knowledge) radios whose receiver
will
> >> beat out your 756.
> >>
> >
> >Between living on the tower, or out in the shop building the G-III, I
> >haven't read QST in years and I've been getting it free for over 25
years.
> >Been a life member since around 1962 when it was $150 . <:-))
> >> ..
> >But no, I'd never heard of it.
> why not ?
> >Who makes it
> you do !
> >where's it made?
> Wherever you can find the space

Unfortunately it'd have to come with some extra time as well.<sigh>

After going to the site below, I remember seeing pictures of it, but not
recognizing the name, never bothered to read the adds.

--
Roger Halstead (K8RI EN73)
www.rogerhalstead.com
N833R World's oldest Debonair? (S# CD-2)

> >
> ;-)
>
> go to http:\\www.elecraft.com for details

3663. Re: Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 06:46:58 UTC
From: k7itm@aol.com
Message-ID: <3200347.0211062246.5a9bb86a@posting.google.com>
Source record: 40126

"Harold E. Johnson" <W4ZCB@mchsi.com> wrote in message
news:<gEfy9.130009$wG.483711@rwcrnsc51.ops.asp.att.net>...
> > For Harold: of course, it's simply for the fun and/or challenge
> > (and/or ??) of doing it. Why do people climb more than one mountain?
> > Why do people climb a given mountain more than once?
>
> Dunno, that always seemed kind of silly too. (Apologies to Edmund)
> Personally, I still think I'd get more pure satisfaction out of measuring
> something, making my own determination as to how close I was, instead of
> taking someone else's word for it, and thinking about whether I could
> improve or not. Of course, NEEDING to improve is another ballgame. I phase
> lock to WWVB maybe once or twice a year to lock my Austron down. That's my
> clock for the shop counter. Suspect it's probably an order of magnitude less
> accurate than what you and Dan do, KNOW it's about 3-4 orders of magnitude
> better than I NEED.
>
> In the grand scheme of things, and given a finite lifetime, we all have to
> assess what's important to ourselves. I never heard anyone ask at 1FB's
> memorial service "How close did he ever get in the FMT"?

Yeah, well, I'd hope nobody asks anything like that at mine either!

Of course, for me, it's also related to the work I do. I don't view the transmission (and especially as received) as one frequency, but rather as a spectrum, and I'm always curious how well our equipment can measure that spectrum. Here, tonight, W1AW's spectrum on 40 meters was decent, and the one on 20 was really ugly. I'd say their spectrum on 20 was significantly worse than what I saw for CHU on 14.670, at similar signal level.

Cheers,
Tom

3664. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 08:11:52 UTC
From: la8ak.xnd@online.no
Message-ID: <3dc9a1f5.16949016@news.online.no>
Source record: 40127

On Wed, 6 Nov 2002 16:36:46 -0500, "xpyttl"
<xpyttl_nospam@earthling.net> wrote:

>Well, I was thinking of one of the Yaesu's, I think it was the FT10000D or
>something like that (I'm not really up on them), based on Adventure Radio
>Society's excellent lab comparisons. In fact, the ProII was very close, and
>everything else was far behind those three. (But I haven't seen their
>results for the new TenTec).
>
and I was hoping for my 34 years old FT-100...

--
remove ,xnd to reply

3665. COP8782C microcontroller

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 09:05:04 UTC
From: Peter Koch <pk@kom.auc.dk>
Message-ID: <3DCA2CC0.3AB9A2B7@kom.auc.dk>
Source record: 40128
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Hi all,

Anybody who can guide me to / provide me with a datasheet of
the old COP8782C microcontroller from National Semiconductors...???

Nothing is available on the National's homepage and my Internet
search gave no usefull results...:-(

Also, I would be very much interested in circuit diagrams for a
programmer for these devises.

Thanks a lot in advance.

-Peter

OZ1LFI

pk@kom.auc.dk

3666. Re: Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 10:19:06 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <u6ry9.43427$Lu1.45924@sccrnsc01>
Source record: 40129

Here, tonight, W1AW's spectrum on 40
> meters was decent, and the one on 20 was really ugly. I'd say their
> spectrum on 20 was significantly worse than what I saw for CHU on
> 14.670, at similar signal level.
>
> Cheers,
> Tom

Well, that's a relief. It appears to indicate that it's a path thing as opposed to a phase noise in the TX thing. Or else they're using two different rigs for the two bands and one is really lousy. Back to the soldering iron.

W4ZCB

3667. Re: K2 Transceiver Completely Updated!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 10:56:52 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <UFry9.3371$SY3.244215@bgtnsc04-news.ops.worldnet.att.net>
Source record: 40130

It's good to see a manufacturer who cares about the customers. Keep up the good work!

Pete KE9OA

3668. hp8444 tracking generator info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 11:29:50 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <O8sy9.3393$SY3.246041@bgtnsc04-news.ops.worldnet.att.net>
Source record: 40131

Does anybody have alignment notes for this unit. I picked it up at the Rockwell sale last Wednesday, and it doesn't seem to work. I did measure the gain of the output amp at 20dB, so it seems that this stage might be working, but the variable output control doesn't work. This unit should work with the 8558B Spectrum Analyzer. Am I missing something here? Thanks for any info.

Pete KE9OA

3669. Re: Rotator Controller query

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 12:09:12 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <T2sikELofly9EAct@ifwtech.co.uk>
Source record: 40132

Mike W wrote:
>Hi Folks, a simple query.. ;-)
>
>rotators like the CD44 and Yeasu KR series use an AC supply of 26v.
>What I would like to know is the ballpark figure for current that they
>draw under maximum load or inital start conditions. I've got a KR600
>for which I need to build a controller and I need to know what
>transformer and switch rating to use before I start construction.

The whole KR600 control box is rated to consume 40VA max, so a 26V
1.5-2A transformer rating should be fine (or even 1A, since it's only
intermittent service).

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3670. Re: hp8444 tracking generator info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 14:19:44 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <Sy2iFWTAany9EAc3@ifwtech.co.uk>
Source record: 40133

Pete KE9OA wrote:
>Does anybody have alignment notes for this unit. I picked it up at the
>Rockwell sale last Wednesday, and it doesn't seem to work. I did measure
>the gain of the output amp at 20dB, so it seems that this stage might be
>working, but the variable output control doesn't work. This unit should
>work with the 8558B Spectrum Analyzer. Am I missing something here?

There's a full manual at http://www.logsa.army.mil/etms/find_etm.cfm
Search for 8444 in the ETM box.

No charge - you already paid for it...

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3671. Re: hp8444 tracking generator info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 14:57:19 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3DCA7F4F.74F3A122@ix.netcom.com>
Source record: 40134

Pete KE9OA wrote:

> Does anybody have alignment notes for this unit. I picked it up at the
> Rockwell sale last Wednesday, and it doesn't seem to work. I did measure
> the gain of the output amp at 20dB, so it seems that this stage might be
> working, but the variable output control doesn't work. This unit should
> work with the 8558B Spectrum Analyzer. Am I missing something here?

Possibly.
The 8444 needs to have Option 059 installed to work with the 8558. (and the coax link at the back needs to be in place) Otherwise there is not much to go wrong or adjust, only the frequency of the free running 1500 MHz oscillator; this is tricky to do, so unless the tracking control is at one extreme or other, it's probably best left alone.

You can probably get a manual from: Ed Matsuda (ematsuda@earthlink.net)

Dan ac6ao g3ncr

3672. tsa5511

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 17:53:13 UTC
From: "s@s london" <zenniee@freenet.co.uk>
Message-ID: <3dcabbe3$1_2@mk-nntp-2.news.uk.tiscali.com>
Source record: 40138

Wondering if anyone could help???
tsa5511 pll chip runing micropower 88-108 vco.having trouble in geting
enough
deviation before pll goes out of lock. I have played around with loop filter
but to no avail.the vco works fine with other pll chips...any ideas before i
scrap it.
tnx

3673. mc145170 88-108 pic codes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 17:57:30 UTC
From: "s@s london" <zenniee@freenet.co.uk>
Message-ID: <3dcabbe5_2@mk-nntp-2.news.uk.tiscali.com>
Source record: 40136

has anyone out there got the pic codes (dont care which pic i will use any)
to drive am MC145170 pll AND lcd display ie 1*16 for micro power use between
87.5-108mhz
tnx

3674. SAA1057 + lcd pic codes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 18:01:21 UTC
From: "s@s london" <zenniee@freenet.co.uk>
Message-ID: <3dcabbe9_2@mk-nntp-2.news.uk.tiscali.com>
Source record: 40137

has anyone out there got the pic codes (dont care which pic i will use any)
to drive an SAA1057 pll AND lcd display ie 1*16 for micro power use between
87.5-108mhz
tnx

3675. Re: Rotator Controller query

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 18:01:31 UTC
From: UnTale <i@i.com>
Message-ID: <%Txy9.2499$8E3.64085@twister2.libero.it>
Source record: 40135

> rotators like the CD44 and Yeasu KR series use an AC supply of 26v.
> What I would like to know is the ballpark figure for current that they
> draw under maximum load or inital start conditions. I've got a KR600
> for which I need to build a controller and I need to know what
> transformer and switch rating to use before I start construction.
> thanks Mike W

Hi,
a 40VA transformer is common in many rotators (YAESU G400 and up,
DAIWA DC7011 etc etc..)
24-26 VAC is the voltage needed for the motor..
1-2 A should be OK!
ciao

--
"Nunc est bibendum,
nunc pede libero pulsanda tellus"
Orazio, Odi, I, 37, 1

73 de iz7ath, Talino
http://www.qsl.net/iz7ath

3676. Re: Homebrew a CTCSS Encoder

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 19:29:29 UTC
From: Skipp <getajobnot@yahoo.com>
Message-ID: <aqeeup$e91$1@woodrow.ucdavis.edu>
Source record: 40139

A simple, well working encoder can be made from a 555 timer
skipp

: Norman Franklin <normanf@pacbell.net> wrote:
: Anyone out there homebrew a CTCSS Encoder and/or decoder for there
: rig?
: I would think you could do this with one of the PIC or AVR micros. The
: hard part
: for me would be the code. If some one has done this I would appriciate
: some hints
: or pointers to source information on how this is done.
: Thanks in advance.

: Norman KG6NMT

3677. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 21:28:35 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aqelu2$770$1@venus.btinternet.com>
Source record: 40140
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I have had received some sensible ideas and enquiries on how to dispose of this book. It seems it is of more historical/technical interest than I realised.

Where I DO NOT want it end up is on a collector's bookshelf where nobody except the collector ever sees it, who doesn't understand it anyway, and nobody else ever has the opportunity to read and enjoy it. Even learn from it.

It would be a disaster for it to end in an ignorant house clearer's incinerator.

Thank you all for your suggestions.

==========
Regards from Reg G4FGQ
For Free Radio Design Software
Go to http://www.g4fgq.com
==========

==========

> I have in my possession in good condition the book -
>
> "Wireless Telegraphy and Telephony" by Prof. Domenico Mazzotto.
>
> Translated into English from the original Italian by S.R.Bottone.
>
> 415 pages including 253 illustrations, circuit diagrams, beautiful
drawings
> and photographs of equipment and aerials.
>
> Published by Whitaker & Co., 2 White Hart Street, Paternoster Square,
> London, E.C. in AD 1906.
>
> ==========
>
> From the preface by the translator -
>
> "Prof. Mazotto has executed his task so thoroughly as to leave no
important
> facts or theories connected with Radiotelegraphy unnoticed; and has
clothed
> his thoughts in language at once so simple and so forcible, as to render
the

> comprehension of the subject easy to the merest tyro."
>
> ==========
>
> I am in my 77th year. What should I do with this book?
> ---
> ==========
> Regards from Reg G4FGQ
> For Free Radio Design Software
> Go to http://www.g4fgq.com
> ==========
>
>
>

3678. Re: Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-07 23:49:05 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <usluvkl8cedu74@corp.supernews.com>
Source record: 40141

To make it impartial and transparent the ARRL should allow several
participants into the station so they can measure the tx freq at the
station!
hank wd5jfr
"Harold E. Johnson" <W4ZCB@mchsi.com> wrote in message
news:u6ry9.43427$Lu1.45924@sccrnsc01...
>
> Here, tonight, W1AW's spectrum on 40
> > meters was decent, and the one on 20 was really ugly. I'd say their
> > spectrum on 20 was significantly worse than what I saw for CHU on
> > 14.670, at similar signal level.
> >
> > Cheers,
> > Tom
>
> Well, that's a relief. It appears to indicate that it's a path thing as
> opposed to a phase noise in the TX thing. Or else they're using two
> different rigs for the two bands and one is really lousy. Back to the
> soldering iron.
>
> W4ZCB
>
>

3679. FS: New Uniden BC200XLT

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-08 00:04:55 UTC
From: Gary <garytaylor605@yahoo.com>
Message-ID: <HcDy9.2929$UA4.2683696@news.alltel.net>
Source record: 40142
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.scanner

For Sale: New Uniden BC200XLT handheld scanner with full 800MHZ. Never used, still in the box with all original accessories. Asking $160, obo. If anyone is interested, please email directly.

Thanks,
Gary

3680. Re: Motorola Channel Elements

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-08 01:01:17 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <x1Ey9.646785$vq2.3889293@news1.east.cox.net>
Source record: 40143

"carltons" <motsteve@attbi.com> wrote in message
news:motsteve-06110220091600001@c-66-176-144-254.se.client2.attbi.com...
> In article <iCiy9.532826$vq2.3506536@news1.east.cox.net>, " Uncle Peter"
> <radioconnectionNO@cox.netSPAM> wrote:
>
> > "carltons" <motsteve@attbi.com> wrote in message
> > news:motsteve-01110223045200001@c-66-176-144-254.se.client2.attbi.com...
> > > In article <SE%v9.3227$b5.16416@news1.mts.net>, "Kent Haase"
> > > <ijeh99@mb.sympatico.ca> wrote:
> > >
> > > > I have a few of these - various models. Where can I get info on how
to
> > use
> > > > them (other than sticking them in a Motorola radio)? Seems like
pinout
> > data
> > > > is not readily available on the Internet.
> > > >
> > > > Kent VE4KEH
> > >
> > > Do they have solid pins or do they have pins that look like stranded
> > > wire? Send me an email or do another post and I'll get you the info.
> > > BTW, you'll need a 7.5 vdc supply to power them, no matter what. As I
> > > recall, they don't draw more than about 2 mA even for the UHF ones.
> > >
> > >
> > > Steve ex Moto wheenie
> >
> > Most of the Motorola elements are entirely passive...
> >
> > Pete
>
> Those are called crystals and not channel elements. Channel elements buy
> you a temp comp that gives you 5 ppm or better. You can't get that with a
> crystal by itself even if you team it up with a matched tc cap. The CE's
> for both the MT and MX radios were cascode Colpitts oscillators and
> included warp and mod sense tuning coils. If you don't believe me, rip
> one open and look. If you're careful, you'll do no harm. I would be
> willing to bet that the transistors will be M9570's also. You also may be
> referring to mobile CE's which may have had all kinds of stuff in them
> other than just the crystal and tc cap. I can't address what mobile did.
>
> Steve Carlton WB4CZR

No, they are called channel elements. For example, in the Motorola Micor line, the only element that was active element was the KXN1019, which
was used in the direct FM exciter base stations. The receiver channel elements, and the phase modulated exciter channel elements, were passive. The same receive channel element was used for the both the mobile and base models. The old Motran elements may have been active, as you noted, but my memory isn't that good.

Pete, k1zjh

3681. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-08 01:41:00 UTC
From: pyr@zyan.takethisoff.org
Message-ID: <87u1is96sc.fsf@zyan.org>
Source record: 40144

It surely would be a disaster on a collector's bookshelf. no wonder I
posted it here so someone can appreciate its wonderful teachings and
enjoy the material.

"Reg Edwards" <g4fgq.regp@btinternet.com> writes:

> I have had received some sensible ideas and enquiries on how to dispose of
> this book. It seems it is of more historical/technical interest than I
> realised.
>
> Where I DO NOT want it end up is on a collector's bookshelf where nobody
> except the collector ever sees it, who doesn't understand it anyway, and
> nobody else ever has the opportunity to read and enjoy it. Even learn from
> it.
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> It would be a disaster for it to end in an ignorant house clearer's
> incinerator.
>
> Thank you all for your suggestions.
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> For Free Radio Design Software
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> > "Wireless Telegraphy and Telephony" by Prof. Domenico Mazzotto.
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> >
> > 415 pages including 253 illustrations, circuit diagrams, beautiful
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> > I am in my 77th year. What should I do with this book?
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> > ==========================
> >
> >
> >
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>

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pyr

3682. P.S. Transformer source

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-08 03:08:43 UTC
From: Dale Parfitt <parinc@verizon.net>
Message-ID: <3DCB2B44.EE05EF25@verizon.net>
Source record: 40145

Hi,
I need to generate 150VDC @50mA and 6.3 VAC @1A. Any sources out there
other than Antique Electronics?

Tnx,

Dale W4OP

3683. Re: Homebrew a CTCSS Encoder

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-08 03:12:17 UTC
From: Norman Franklin <normanf@pacbell.net>
Message-ID: <3DCB2C16.52150A26@pacbell.net>
Source record: 40146

Ron,
Thanks for the tip on the FX335. I had found a data sheet on a
different CML device
earlier, (the MX165C). FX335 seems very easy to work with. The data sheet
even give
a good suggestion on how to apply it.
Since you have used these before, were do you get yours. The more
traditional (Digi-Key
and Mouser) do not carry them. Does CML sell small quanties? I have not
had a chance to
call yet.
Also do you make your own PC boards or do you use one of the on-line PCB
houses?
Thanks again for your input to my question.

Norman

Ron wrote:

> Why bother with all that an FX335 will do it all on one chip
> I've made quite a few..
>
> On Tue, 05 Nov 2002 04:05:17 GMT, Norman Franklin
> <normanf@pacbell.net> wrote:
>
> > Anyone out there homebrew a CTCSS Encoder and/or decoder for there
> >rig?
> >I would think you could do this with one of the PIC or AVR micros. The
> >hard part
> >for me would be the code. If some one has done this I would appriciate
> >some hints
> >or pointers to source information on how this is done.
> > Thanks in advance.
> >
> >Norman KG6NMT

3684. Re: hp8444 tracking generator info

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-08 10:57:09 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <9MMy9.7363$SY3.372504@bgtnsc04-news.ops.worldnet.att.net>
Source record: 40047

Thanks folks!

Pete

3685. Re: P.S. Transformer source

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-08 12:22:29 UTC
From: amdx <amdx@att.net>
Message-ID: <90Oy9.1308$hK4.117323@bgtnsc05-news.ops.worldnet.att.net>
Source record: 40048

"Dale Parfitt" <parinc@verizon.net> wrote in message
news:3DCB2B44.EE05EF25@verizon.net...
> Hi,
> I need to generate 150VDC @50mA and 6.3 VAC @1A. Any sources out there
> other than Antique Electronics?
>
> Tnx,
>
> Dale W4OP
>

3686. Re: P.S. Transformer source

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-08 12:29:40 UTC
From: amdx <amdx@att.net>
Message-ID: <U6Oy9.1315$hK4.118032@bgtnsc05-news.ops.worldnet.att.net>
Source record: 40049

If you find a transformer for the 6.3 VAC, get two, connect them
secondary to secondary, you should get about 170 Vdc from the primary of the
second transformer after rectification and filtering.

3687. FS: HV Rectifier Modules for Linear Amp PS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-08 14:37:10 UTC
From: GaryH <garyh@bellsouth.net>
Message-ID: <NWPy9.4861$ds6.680@news.bellsouth.net>
Source record: 40050

I have 4 diode blocks for a HV power supply for a large
HF amp. I don't have the rating but believe they are
10 KV modules based on the size. I took them out of
a Large amp that I restored to stock diode configuration that
used three 3-500z tubes and a 3500 volt plus power supply.

I suspect they are 1 Amp rated. They are 3 3/4" long, 1" deep
and at the highest point, 2" high with screw terminal on each end
and polarity marking on the bottom. They are ideal for a homebrew
project or upgrade the diode bridge on an existing amp. I can
send you a picture if you are interested. These are quite expensive
if purchased from RF parts etc but all I am asking is a reasonable
offer for the 4 modules.

I have been posting such items on Ebay but have been asked to list
items on newsgroup first. If no reasonable offers are made I will
place them on Ebay. Check my ebay feedback for proof that I
only do up fron deals. Ebay id is garyh@bellsouth.net.

Thanks

Gary K4MT

3688. Re: P.S. Transformer source

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-08 14:47:36 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <w9Qy9.1119$Dl2.89352@newsfep1-win.server.ntli.net>
Source record: 40051

> >I need to generate 150VDC @50mA and 6.3 VAC @1A. Any sources out there
> >other than Antique Electronics?

> If you find a transformer for the 6.3 VAC, get two, connect them
> secondary to secondary, you should get about 170 Vdc from the primary of
the
> second transformer after rectification and filtering.

Excellent idea . But please check 6.3 V winding rating of the transformer
connected to the 117V supply system.

For 150 to 170V @ 50 mA the second transformer needs to supply (150 to 170)
* 0.050 = 7.5 to 11.5 Watts ,so the 6.3 V winding rating must not be less
than 2 A in order not to be too marginal
The first transformer 's 6.3 V secondary winding is to supply 1 A for your
valve filament(s) ,plus 2 A for the second transformer ,hence it needs to
have a rating of not less than 3 Amperes. So you are talking about a 20 to
25 VA transformer.
The second transformer needs to be not less than 15 to 20 VA

Frank gm0csz.kn6wh@ntlworld.com

3689. FS: ITEMS FOR SALE

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-08 16:24:33 UTC
From: Heytubeguy <heytubeguy@worllnet.att.net>
Message-ID: <5zRy9.7945$SY3.395945@bgtnsc04-news.ops.worldnet.att.net>
Source record: 40052

Small items now include:2.5v xfmr, 8H choke, Sk-406, BTI & COLLINS original manuals, Variable inductor, Weston DC Mil- meter, old Collins mech filter...COMING filament xfmrs, chokes, hv xfmrs, sockets, Western Electric tubes...check my seller page.

Liquidating three building of 'stuff' including ANTIQUE RADIOS by A-K, Westinghouse, Fada, National (SW-3, FB-7), Splitdorf, EH SCOTT, Silvertone, Masterpiece, Freshman... coming soon - heytubeguy

3690. Re: P.S. Transformer source

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-08 16:52:26 UTC
From: "Harold E. Johnson" <W4ZCB@mchsi.com>
Message-ID: <eZRy9.17523$Dc4.63279@rwcrnsc51.ops.asp.att.net>
Source record: 40053

news:w9Qy9.1119$Dl2.89352@newsfep1-win.server.ntli.net...
> > >I need to generate 150VDC @50mA and 6.3 VAC @1A. Any sources out there
> > >other than Antique Electronics?
> ----------
I have a transformer that's a little overkill for your requirement, 120 volt primary, secondary bridged gives 150 VDC @ 450 mA and other winding 6.8 volts CT @ 700 mA. If size doesn't matter, it's 3 x 2-1/2 x 3 in clamshell, be happy for it to have a new home for postage.

W4ZCB

3691. Need a TU-49 for BC-610

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-08 18:01:29 UTC
From: Sparks W4EAS <sparksw4eas@mindspring.com>
Message-ID: <3DCBFBF9.5928@mindspring.com>
Source record: 40054

I need a Tuning unit for a BC-610 TU-49 3.2 to 4.0 Mcs Sparks W4EAS

3692. Re: Homebrew a CTCSS Encoder

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-08 19:26:23 UTC
From: ronayling@hotmail.com
Message-ID: <3dcc0c58.37818581@news.freeserve.co.uk>
Source record: 40055

Hi Norman
I have never purchased a new FX335 as they are common in lots
of surplus PMR equipment in the UK, so I just do a desoldering job!!
The reason I have made up a few is I fit them to Philips 1200 series
PMR trunking radios which do not have CTCSS, with a few other
mods these radios made excellent 2mtr Amateur sets, and the FX335
is programmed by a serial to parallel shift register which I then
connect to the sets internal data bus with modified firmware.
I've made up my own PCB for this, I only use the encode part of
the chip but it can be made to decode very easily..

from Ron....

>Ron,
> Thanks for the tip on the FX335. I had found a data sheet on a
>different CML device
>earlier, (the MX165C). FX335 seems very easy to work with. The data sheet
>even give
>a good suggestion on how to apply it.
> Since you have used these before, were do you get yours. The more
>traditional (Digi-Key
>and Mouser) do not carry them. Does CML sell small quanties? I have not
>had a chance to
>call yet.
> Also do you make your own PC boards or do you use one of the on-line PCB
>houses?
> Thanks again for your input to my question.
>
>Norman
>
>

3693. broadcast to 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-08 21:08:10 UTC
From: dL <nospam@spamaintgood.nz>
Message-ID: <3DCC27BA.6050907@spamaintgood.nz>
Source record: 40056

I am trying to modify a battery powered fm/am radio to recieve 2m. It uses a Sony CXA1691Bs IC. I have located what i think is the Local oscillator coil. Stretching this coil as much as i can (while still keeping it coiled) results in the top broadcast frequency (104.6) being right at the bottom on the 88Mhz mark of the tuning dial. this is not high enough to pick up 2m.what must i do to be able to reach these frequencies?

3694. Re: P.S. Transformer source

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-08 22:54:31 UTC
From: k7itm@aol.com
Message-ID: <3200347.0211081454.5ab0de65@posting.google.com>
Source record: 40057

"amdx" <amdx@att.net> wrote in message
news:<U6Oy9.1315$hK4.118032@bgtnsc05-news.ops.worldnet.att.net>...
> If you find a transformer for the 6.3 VAC, get two, connect them
> secondary to secondary, you should get about 170 Vdc from the primary of the
> second transformer after rectification and filtering.

Another way to do it (but see safety note below) is to use a
transformer with split primaries. Use one primary to drive the
transformer and bridge-rectify one for the 150V output. Actually, if
you use a smallish input filter cap, the average output voltage will
be somewhat less than the nominal 168V peak...which, with all the
rectifier/filter cap loads we put on our lines typically is a bit less
anyway. You should use a transformer with at least 25VA rating.

The safety issue is that there is typically not as good isolation
between the two primary windings of a split-primary transformer as
there is between primary and secondary. But it needs to be good for
240V plus transients anyway, and if the equipment it's in is properly
grounded and fused, it shouldn't be a problem.

Cheers,
Tom

3695. Re: broadcast to 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 00:44:01 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <usomihc5kpgk44@corp.supernews.com>
Source record: 40058

Even if you manage to reach 2 meters, you have a major problem. Commercial FM broadcasting transmits very wideband FM and has widely spaced channels, while all the communication services at or near 2 meters broadcast a much narrower FM signal with much closer channel spacing. What you'll discover is that the audio is very weak, and you'll hear a lot of stations all at once -- likely dominated by powerful paging transmitter signals. If you do want to see for yourself, you'll have to find the capacitor which resonates the oscillator coil and reduce its value and/or replace the coil with one having fewer turns and/or smaller diameter. There'll also be other tuned circuits you'll need to modify.

Many years ago, I tried something like you're doing now and discovered the problems I mentioned. I ended up building a simple converter with its own oscillator, to convert from 2 meters down to the AM broadcast band. An AM radio was used with it, and the audio was adequately loud. (An AM radio will detect a narrowband FM signal by means of slope detection.) But image response was just about nil, and that approach wouldn't be any good these days in an urban environment where there's a large number of strong signals on nearby frequencies. It would be much easier and better to start with something inherently designed to detect narrowband FM VHF signals, like an old Radio Shack Weatheradio or some such.

Roy Lewallen, W7EL

dL wrote:
> I am trying to modify a battery powered fm/am radio to recieve 2m. It
> uses a Sony CXA1691Bs IC. I have located what i think is the Local
> oscillator coil. Stretching this coil as much as i can (while still
> keeping it coiled) results in the top broadcast frequency (104.6) being
> right at the bottom on the 88Mhz mark of the tuning dial. this is not
> high enough to pick up 2m.what must i do to be able to reach these
> frequencies?
>

3696. Re: broadcast to 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 01:08:51 UTC
From: dL <nospam@spamaintgood.nz>
Message-ID: <3DCC6023.40806@spamaintgood.nz>
Source record: 40059

Thanks for that. I have recieved NFM on a modified FM braodcast reciever
on the New zealand 75Mhz band (police :)) but it was very hard to heear
what they were saying.
I shall try and find an old scanner or somtething...

Roy Lewallen wrote:
> Even if you manage to reach 2 meters, you have a major problem.
> Commercial FM broadcasting transmits very wideband FM and has widely
> spaced channels, while all the communication services at or near 2
> meters broadcast a much narrower FM signal with much closer channel
> spacing. What you'll discover is that the audio is very weak, and you'll
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> paging transmitter signals. If you do want to see for yourself, you'll
> have to find the capacitor which resonates the oscillator coil and
> reduce its value and/or replace the coil with one having fewer turns
> and/or smaller diameter. There'll also be other tuned circuits you'll
> need to modify.
>
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> band. An AM radio was used with it, and the audio was adequately loud.
> (An AM radio will detect a narrowband FM signal by means of slope
> detection.) But image response was just about nil, and that approach
> wouldn't be any good these days in an urban environment where there's a
> large number of strong signals on nearby frequencies. It would be much
> easier and better to start with something inherently designed to detect
> narrowband FM VHF signals, like an old Radio Shack Weatheradio or some
> such.
>
> Roy Lewallen, W7EL
>
> dL wrote:
>
>> I am trying to modify a battery powered fm/am radio to recieve 2m. It
>> uses a Sony CXA1691Bs IC. I have located what i think is the Local
>> oscillator coil. Stretching this coil as much as i can (while still
>> keeping it coiled) results in the top broadcast frequency (104.6)
>> being right at the bottom on the 88Mhz mark of the tuning dial. this
>> is not high enough to pick up 2m.what must i do to be able to reach
>> these frequencies?
>>
>

3697. Re: broadcast to 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 01:27:51 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <usopn0r5rg0gbb@corp.supernews.com>
Source record: 40060

dL:

Roy makes some good points, although I suspect the 2 meter band may not be as crowded in .nz as it is in the shadow of Portland. Don't imagine a lot of sheep operate 2 meters. Here in the U.S. at least, broadcast FM stations are separated by 200 kHz while 2 meter amateur signals are separated by 15 or 20 kHz (again, here in the U.S. it's 15 or 20 depending on the particular state's plan). Even then, most FM broadcast receivers can't really separate 2 stations only 200 kHz apart - the strongest one will win because of the FM "capture effect".

But because of the deviation, even under ideal conditions you will get only a fraction of the audio from a 2 meter amateur signal that you will from a broadcast station.

The problem will be aggravated somewhat by the receiver's front end. Once you've moved the local oscillator, the receiver will be trying to filter out the 2 meter signals in it's front end. If you hear anything at all it will be only the strongest stations, and the odds are good that stronger stations between the broadcast stations and 144 will swamp the amplifiers, so once having moved the LO, you will then need to retune the front end, something which may or may not be simple.

But, if you are relatively close to a repeater, and I would suspect that except in the largest cities there are probably only one or two repeaters, it may make a useable monitoring receiver. But I wouldn't be expecting miracles.

Remember, as Roy pointed out, besides the L you are playing with, there is a C, and you need to reduce the product of the two. Spreading the turns of the inductor will make a tiny difference. Removing a turn or two will do more, and there will be a capacitor (or several) that could be reduced if a turn on the inductor amounts to too much. I'm guessing that there aren't many turns on that coil and a turn less might put you up around 200 MHz instead of 144.

..

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:usomihc5kpgk44@corp.supernews.com...
> Even if you manage to reach 2 meters, you have a major problem.

3698. Re: Motorola Channel Elements

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 02:42:33 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0811022143490001@c-66-176-144-254.se.client2.attbi.com>
Source record: 40061

In article <x1Ey9.646785$vq2.3889293@news1.east.cox.net>, " Uncle Peter"
<radioconnectionNO@cox.netSPAM> wrote:

> "carltons" <motsteve@attbi.com> wrote in message
> news:motsteve-0611022009160001@c-66-176-144-254.se.client2.attbi.com...
> > In article <iCiy9.532826$vq2.3506536@news1.east.cox.net>, " Uncle Peter"
> > <radioconnectionNO@cox.netSPAM> wrote:
> >
> > > "carltons" <motsteve@attbi.com> wrote in message
> > > news:motsteve-0111022304520001@c-66-176-144-254.se.client2.attbi.com...
> > > > In article <SE%v9.3227$b5.16416@news1.mts.net>, "Kent Haase"
> > > > <ijeh99@mb.sympatico.ca> wrote:
> > > >
> > > > > I have a few of these - various models. Where can I get info on how
> to
> > > use
> > > > > them (other than sticking them in a Motorola radio)? Seems like
> pinout
> > > data
> > > > > is not readily available on the Internet.
> > > > >
> > > > > Kent VE4KEH
> > > >
> > > > Do they have solid pins or do they have pins that look like stranded
> > > > wire? Send me an email or do another post and I'll get you the info.
> > > > BTW, you'll need a 7.5 vdc supply to power them, no matter what. As I
> > > > recall, they don't draw more than about 2 mA even for the UHF ones.
> > > >
> > > >
> > > > Steve ex Moto wheenie
> > >
> > > Most of the Motorola elements are entirely passive...
> > >
> > > Pete
> >
> > Those are called crystals and not channel elements. Channel elements buy
> > you a temp comp that gives you 5 ppm or better. You can't get that with a
> > crystal by itself even if you team it up with a matched tc cap. The CE's
> > for both the MT and MX radios were cascode Colpitts oscillators and
> > included warp and mod sense tuning coils. If you don't believe me, rip
> > one open and look. If you're careful, you'll do no harm. I would be
> > willing to bet that the transistors will be M9570's also. You also may be
> > referring to mobile CE's which may have had all kinds of stuff in them
> > other than just the crystal and tc cap. I can't address what mobile did.

> >
> > Steve Carlton WB4CZR
>
> No, they are called channel elements. For example, in the Motorola
> Micor line, the only element that was active element was the KXN1019,
> which
> was used in the direct FM exciter base stations. The receiver
> channel elements, and the phase modulated exciter channel elements,
> were passive. The same receive channel element was used for the
> both the mobile and base models. The old Motran elements may have
> been active, as you noted, but my memory isn't that good.
>
> Pete, k1zjh

Like I said in my previous post, if it's a mobile it may be passive, but if it's a portable, either MT or MX, then it is definitely active. The output was the collector of the Colpitts which went into the emitter of a common base amp which was external to the CE and was usually buffering a tripler or SRD multiplier on the opposite end. This kept the output impedance of the oscillator high and the input to the amp low making the node low at the output of all the CE's. This made multiple frequency operation easy with little interaction and desense. All you did was to bias on the correct channel and away you go. It was a really smart design.

Steve

3699. Re: Detect direction of radio transmitter??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 04:10:16 UTC
From: George Patrick <george@pcb-designer.com>
Message-ID: <3DCC8AA8.4288B443@pcb-designer.com>
Source record: 40062
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.basics

Kevin McMurtrie wrote:

> Lower frequencies require multiple antennas and phase detection, unless
> you want a monster Yagi aerial.

Just how large is illustrated here:

http://www.mindspring.com/~cummings7/wullen.html

--

+--------------------------------+---------------------------------+
George H. Patrick, III	Resources for PCB Designers on
george@pcb-designer.com	the Web - The Designer's Den
George.H.Patrick@tektronix.com	http://www.pcb-designer.com
+--------------------------------+---------------------------------+
| Take what you like and leave the rest... My opinion ONLY. |
+---+

3700. Re: P.S. Transformer source

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 07:00:58 UTC
From: aruder@pipeline.com
Message-ID: <aqif71$h36$1@slb3.atl.mindspring.net>
Source record: 40064

Dale Parfitt <parinc@verizon.net> wrote:

>Hi,
>I need to generate 150VDC @50mA and 6.3 VAC @1A. Any sources out there
>other than Antique Electronics?

Fair Radio, Lima, OH, and www.fairradio.com

3701. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 07:49:36 UTC
From: David Walker <no_spam@hotmail.com>
Message-ID: <3dccbe0c$1@news.comindico.com.au>
Source record: 40063

Is the Omni still available? I've seen pics of it and it looks like a
beautiful rig.

"Roger Halstead" <rdhalste@tm.net> wrote in message
news:tvly9.2296$vZ6.2129417@newshog.newsread.com...
>
> "Dan Richardson" <k6mhe@mendolink.com> wrote in message
> news:kldisuo4heo4le3u1gqdp6m7ut2v00628h@4ax.com...
> > On Wed, 6 Nov 2002 10:40:00 +0000, "Ian White, G3SEK"
> > <G3SEK@ifwtech.co.uk> wrote:
> >
> > >>"Roger Halstead" <rdhalste@tm.net> wrote in message
> > >>news:iWUx9.2234$Ve3.1757330@monger.newsread.com...
> > >>
> > >>Boy Roger, a little out of touch! You need to come down from that
> tower
> and
> > >>catch up on your QSTs.
> > >>
> > >>It's one of the very few (2, to my knowledge) radios whose receiver
> will
> > >>beat out your 756.
> > >
> > >And the other one would be...?
> >
> > You'll find it at: http://www.tentec.com/TT565.htm
> >
> I have a fond place in my heart for Ten-Tec. I've used a lot of their
> equipment over the years. I was also a dealer back in the 70s. That final
> is rugged. I used to loan out an Omni or two for events. I only lost one
> final in those years and I only had one customer lose a final. (Not sure
> how
> he did it).
>
> One group wanted to run 15 meters, but didn't have an antenna cut for 15
> or
> a tuner. I told them to try the 40 meter dipole (3rd harmonic) and if all
> else failed use their 20 meter to see if it would work. The 40 meter
> antenna worked fairly well. The 20 was nothing to brag about, bit it did
> work. the rig was still working fine when I got it back.
>
> I'd like to set that 565 next to my Icom. If it's anything like the
> earlier
> rigs it's going to be great on QSK.

>
>
> --
> Roger Halstead (K8RI EN73)
> www.rogerhalstead.com
> N833R World's oldest Debonair? (S# CD-2)
> > Danny
> >
> >
>
>

3702. Re: broadcast to 2m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 10:14:58 UTC
From: Peter Parker <parkerp@NOSPAMalphalink.com.au>
Message-ID: <3dcce10a@news.alphalink.com.au>
Source record: 40065

I agree with Roy - converting down to an AM receiver is the best way to go. An AM-only car radio is best as it's well shielded and sensitive.

Use a xtal frequency multiplying up to around 145.9 MHz - this will give a very useful 146.4 - 147.4 MHz range, including many popular simplex & repeater freqs. The images will be near 145 MHz, so you might get some packet sigs as images. But unless you're unlucky, the images won't fall on a nearby repeater freq.

Peter VK3YE

3703. Re: Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 11:14:51 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3DCCFC6F.16546186@townsqr.com>
Source record: 40066

"Harold E. Johnson" wrote:

> Here, tonight, W1AW's spectrum on 40
> > meters was decent, and the one on 20 was really ugly. I'd say their
> > spectrum on 20 was significantly worse than what I saw for CHU on
> > 14.670, at similar signal level.
> >
> > Cheers,
> > Tom
>
> Well, that's a relief. It appears to indicate that it's a path thing as
> opposed to a phase noise in the TX thing. Or else they're using two
> different rigs for the two bands and one is really lousy. Back to the
> soldering iron.
>

I understand they use individual transmitters for each band and transmit on
all of them simultaneously.

3704. Re: HV Rectifier Modules for Linear Amp PS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 12:22:26 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <Jv7z9.360$Mj4.73035@newsfep1-win.server.ntli.net>
Source record: 40067

> I have 4 diode blocks for a HV power supply for a large
> HF amp. I don't have the rating but believe they are
> 10 KV modules based on the size. I took them out of
> a Large amp that I restored to stock diode configuration that
> used three 3-500z tubes and a 3500 volt plus power supply.
>
> I suspect they are 1 Amp rated. They are 3 3/4" long, 1" deep
> and at the highest point, 2" high with screw terminal on each end
> and polarity marking on the bottom.
==========
!0 kV in this instance probably means 10 kv peak inverse voltage ,hence max
rms voltage would be 10000 / 2 * 0.7 = 3500 V.
Each module comprises a number of silicon diodes each causing a voltage drop
of approx 0.7 V in forward bias mode.
With each diode normally used for this type of application expected to have
a PIV of 1000 volts you can check the rating by allowing (at a low voltage)
a current of say 50 mA to flow and then measuring the voltage across the
module.
If indeed 10 kV there should be 10 diodes in series resulting in a voltage
of approx. 10 * 0.7 V= 7 Volts .
You then can check the current rating by increasing the forward bias
current to say 0.5 Ampere or even up to 1 Ampere for a few minutes .The
module should NOT get hot.
It is likely that these (usually potted) modules are built with 1Nxxxx
series diodes most of which have a 1A current rating

In the above way I have tested 4 'mystery' HV rectifier modules myself.

Frank gm0csz.kn6wh@ntlworld.com

3705. Re: camnis 050

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 13:49:22 UTC
From: kevcat <kevcat@dodo.com.au>
Message-ID: <3DCD1579.791936C8@dodo.com.au>
Source record: 40068
Cross-posted to:
alt.radio.scanner,alt.radio.scanner.uk,aus.radio.amateur.wicen,aus.radio.scanner,rec.radio.amateur.homebrew,rec.radio.scanner

What the????
where did this come from??

Kev

kevcat wrote:
>
> your not going to pick up ceel phones in Australia anyway
> they are all digital
> all you will hear is a hissing sound
> the freqs are 870Mhz-883MHz or there abouts for the old analog system
> the digital systems are all over the place, 800MHz, 900MHz and 1800Mhz
> give it up
> you wasting your time
>
> Kev
>
> Jillian Irma Fryer wrote:
> >
> > Does anyone have any info re mods for a camnis 050 scanner,the one I've got
> > won't pick up cell traffic,I'm assuming it has been blocked,I've heard it is
> > possible to unblock certain scanners the camnis can be re programmed thru
> > the CPU but I'm unsure what frequencies to put in it other than the factory
> > recomendations. Any help would be great also is there a way of trying to get
> > the same result by changing xtal's???
> > Mark.

3706. searching: data transver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 14:45:13 UTC
From: Ralph Odigio <ra.odigio-news@gmx.net>
Message-ID: <1696217.iDvuYhMxLo@ID-161341.news.dfncis.de>
Source record: 40073
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

To whom it may belong,

I am looking for a possebility to transver data from own PC to an
other via a one-way soundcard to soundcard cable.

mt63 provides this capeability bit is _very_ slow.

I know my question might be a bit off topic but I am that desperated...

Thanks for any ideas,

Ralph Odigio

3707. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 15:07:17 UTC
From: n2ey@aol.com
Message-ID: <20021109100717.00112.00000330@mb-fz.aol.com>
Source record: 40069

In article <3dccbe0c$1@news.comindico.com.au>, "David Walker"
<no_spam@hotmail.com> writes:

>Is the Omni still available? I've seen pics of it and it looks like a
>beautiful rig.
>
The Omni 6 Plus has been replaced by the new Orion.

"Omni" is the family name of a whole series of Ten Tec rigs, from the "ABCD"
analog PTO versions of the early-mid '80s, to the low noise PLL Omni 5, Omni 6
and Omni 6 Plus versions of recent years. (The "Plus" was the addition of DSP
and some other improvements).

The current TenTec HF line is in three levels - the ~$100 monoband QRP CW
transceiver kits, the $800 Argonaut V 20 watter allHFband multimode, and the
$3300-$3600 Orion super rig.

Argonaut V is obviously meant to compete with the K2 and Orion is obviously
meant to compete with the FT-1000. TT doesn't (now) make a moderately priced
100-watt-class-HF rig.

Plenty of clean used Omni 6s out there at good prices, tho. But I'd rather have
my K2.

73 de Jim, N2EY

3708. HP 5340A vs HP 5342A?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 17:06:35 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <usqg5083kosvb0@corp.supernews.com>
Source record: 40070

Looking thru the 1982 HP catalog I noticed that the HP 5342A was priced at $5500.00 and the HP 5340A was priced at $8600.00. A 1989 Tucker show the 5342A at $5675.00 and the 5340A at $7995.00 I'm not a counter expert but they're both 18mHz counters and the 5340 being older has nixie tubes. Why would anyone pay more for theolder technology, I know I must be missing something. What is it? I'm looking at up grading from a 5341A and wonder what the counter experts opinions are on the 5340A vs the 5342A.
tnx
Hank wd5jfr

3709. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 17:24:19 UTC
From: Dan Richardson <k6mhe@mendolink.com>
Message-ID: <g5hqsugui9aksd4ll7398c69bo1lta4l6l@4ax.com>
Source record: 40071

On 09 Nov 2002 15:07:17 GMT, n2ey@aol.com (N2EY) wrote:

>Argonaut V is obviously meant to compete with the K2 and Orion is obviously
>meant to compete with the FT-1000. TT doesn't (now) make a moderately priced
>100-watt-class-HF rig.

Jupiter?

3710. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 19:39:44 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <exdz9.239$5r1.39743@newsfep2-win.server.ntli.net>
Source record: 40072

> >Argonaut V is obviously meant to compete with the K2 and Orion is
obviously
> >meant to compete with the FT-1000. TT doesn't (now) make a moderately
priced
> >100-watt-class-HF rig.
>
> Jupiter?
=========
And what about the blind box working with a PC , the 'Pegasus' ? Adds for
this unit disappeared in QST when the Jupiter was launched.
Apparently ,similar to the now 'deceased' Kachina ham transceiver , radio
amateurs don't want a box linked to their PC ,but a stand-alone unit.

Frank gm0csz.kn6wh@ntlworld.com

3711. Not sure about antenna tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 19:57:50 UTC
From: Dave <local_42@hotmail.com>
Message-ID: <2Ndz9.33061$Dc4.124412@rwcrnsc51.ops.asp.att.net>
Source record: 40074

After doing a quick search I'm still not sure if an antenna tuner is worthwhile for my set up. What good will it really do for my rig? If an antenna tuner might prove useful then that's what I'll whip up this week for the station. Here's the situation; Just put my antenna switch into my system and it has effected SWR by a bit. My dummy load used to read 1.1 or less and my vertical was reading about 1.2. Now with the switch inline I see 1.2 on the dummy and 1.5 on the antenna. I know 1.5 isn't bad but I'd like to squeeze every last bit of power from my little 4 watt CB. Will an antenna tuner help to cut down on the reflected power I'm now seeing or will it just show a nice match to my radio? When I start putting together my next antenna It would be nice to use a tuner inside the shack to fine tune the antenna as opposed to putting it up on the mast, checking SWR and bringing it down again until I get a decent match. I just don't understand if it really helps or just shows a nice match to the radio to prevent damage from a poor match. Any help is greatly appreciated. You guys have been great help with my last two questions and I look forward to any insight you can give. I've already located a couple plans for tuners I like just don't know if I should bother building it or not.

Thanks again,

Dave

3712. Surplus Parts for sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 20:19:36 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <S%dz9.294$pc.56581@news.iquest.net>
Source record: 40075
Cross-posted to: rec.radio.shortwave,rec.radio.amateur.homebrew,rec.radio.swap

```
Junkbox Surplus Parts for Sale as of 11/08/2002
===============================================

Odd Items
============
9.8304 Mhz Crystals, 1/4 in tall - 20 for $5.00
27mH inductors with radial leads - 25 for $3.50

Caps - All new, old stock. No pulls.
====================================
All caps now 50/$3 or 100/$5
====================================
8pf NPO Ceramic - Loose
11pf NPO Ceramic - Loose
12pf NPO ceramics on tape
22pf Kemet Ceramic Caps, 200v, 10%
150pf ceramics, 100v, 10%
470pf Ceramics on paper tape, rated 5% (NPO)
560pf Kemet Ceramic Caps, 200v, 10%
1000pf blue mono caps, 10% 100v
3300pf Kemet Ceramic Caps, 100v, 10%
.01 uF ceramic caps, 10% 100v brand new by Kyocera
and
.01 uF ceramic caps, 20% 50v, new old stock, not used
50/2.50 100/$4

Voltage Regulators
==================
L7805ACV voltage regulators TO220 case. 10/$5 or 15/$7
LM7812 voltage regulators. TO220 case. 5/$4
LM317T Adjust. Positive Voltage Regulator TO220. 10/$5.00 or 15/$7.00
100/$30
LM78L62ACZ Volt(6.2)regulators, TO92 format 5/$3.00 10/$5.00

Transistors - New Parts - No Pulls
==========
TP2222 plastic TO92 NPN (House brand 2N2222)50/$4 100/$7
2N3906's plastic TO92. PNP - 50/$4 100/$7
2N3904's plastic TO92. NPN - 50/$4 100/$7
2N3704's plastic TO92, NPN - 50/$4 100/$7
MRF517 - Motorola Part - Metal Can - 5 for $5

Op AMPS
==========
LM386N-1 - Audio Amps 5 for $2.25
```

LM741CN - Single Op Amp, 8 Pin Dip, 6 for $2.00
http://www.hep.ph.ic.ac.uk/~hallg/Instrumentation/Data/LM741.pdf

Diodes
======
1N4148 - You always need these. 100 for $2.50 These are NEW.
50 FREE with any order over $20.00

Let me know if you're interested. All prices are post paid to the
USA, unless otherwise noted. I will ship to non USA addresses but we
need to discuss the shipping charges first.

3713. Re: Not sure about antenna tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 20:45:55 UTC
From: Marty <vk2umj@NOSPAM.yahoo.com.au>
Message-ID: <2mez9.73339$g9.206403@newsfeeds.bigpond.com>
Source record: 40076

All the tuner will do is show the radio a nice match - it can't change the antenna or feed line, etc. However, let us just examine the dreaded SWR issue a little more.....

Everything you put in line will lose a little power, and the difference between a 1.2:1 and 1.5:1 isn't really worth the trouble - at 1.2:1 you radiate around 99.2% or 3.97 Watts of your 4W, whereas 1.5:1 is around 97% or 3.88 Watts. The added 0.09W would make absolutely no difference at the other end, and you may just lose that amount from insertion loss anyway.

If you want to radiate as much power as possible then take the antenna switch out of line!!

--
Martin, VK2UMJ
vk2umj@NOSPAMyahoo.com.au

Remove NOSPAM from e-mail address to reply

"Dave" <local_42@hotmail.com> wrote in message
news:2Ndz9.33061$Dc4.124412@rwcrnsc51.ops.asp.att.net...
> After doing a quick search I'm still not sure if an antenna tuner is
> worthwhile for my set up. What good will it really do for my rig? If an
> antenna tuner might prove useful then that's what I'll whip up this week
for
> the station. Here's the situation; Just put my antenna switch into my
system
> and it has effected SWR by a bit. My dummy load used to read 1.1 or less
and
> my vertical was reading about 1.2. Now with the switch inline I see 1.2 on
> the dummy and 1.5 on the antenna. I know 1.5 isn't bad but I'd like to
> squeeze every last bit of power from my little 4 watt CB. Will an antenna
> tuner help to cut down on the reflected power I'm now seeing or will it
just
> show a nice match to my radio? When I start putting together my next
antenna
> It would be nice to use a tuner inside the shack to fine tune the antenna
as
> opposed to putting it up on the mast, checking SWR and bringing it down
> again until I get a decent match. I just don't understand if it really
helps
> or just shows a nice match to the radio to prevent damage from a poor
match.
> Any help is greatly appreciated. You guys have been great help with my
last
> two questions and I look forward to any insight you can give. I've already

> located a couple plans for tuners I like just don't know if I should
bother
> building it or not.
>
> Thanks again,
>
> Dave
>
>

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.416 / Virus Database: 232 - Release Date: 06/11/2002

3714. Re: Not sure about antenna tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 20:53:18 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <usqte1iccu0v43@corp.supernews.com>
Source record: 40077

The difference between 1.2:1 and 1.5:1 is so insignificant that there is no reason to even consider it. A tuner located near the transmitter will have no effect on the SWR in the feed line between the tuner and the antenna. It will only affect the SWR on the feed line between the tuner and the transmitter (i.e. it will make the transmitter see a lower SWR).

3715. Thanks for the input (was: Antenna Switch Questions)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 21:15:09 UTC
From: Dave <local_42@hotmail.com>
Message-ID: <xVez9.22486$O71.10924@rwcrnsc53>
Source record: 40078

Thanks for the input guys. I decided to just go with simple but effective and used two rotary switches to control two inputs to four outputs. I'll just have to remember to keep the rigs on different antennas or to switch one over when I want to transmit. Luckily when I forgot to do that on my first test run I was just using an old hand held that can't be putting out more than 1/2 a watt plugged into the switch, doesn't appear anything was damaged on the other rig. The project overall turned out nice. Looks good on the outside, my soldering could use a little more practice but that will come with time. The switch did cause my match to go from 1/1 for the dummy to 1.2/1 and 1.2/1 on the vertical to 1.5/1. Now I think I'll start work on a new antenna.

Dave

"Dave" <local_42@hotmail.com> wrote in message
news:w2Ww9.210819$md1.47658@sccrnsc03...
> I'm about to put together an antenna switch for my shack and I had a few
> questions and I figured the NG could give me a little push in the right
> direction.
>
> Much like a dummy load an antenna switch is very simple. But it is there
> anything special I should take into consideration? My needs are simple. I
> need an output for my Omni, an output for a beam, Output for dummy load,
and
> a spare output for experimental/temporary Antennas. Simple right? Grab a
> project box, some spare SO-239 Connectors and a 4 position rotary
> switch...right? Is there any reason why I cant just switch the center
> conductor of the feeds and then the outer shields are all grounded
together
> right? Am I making sense? I would like any unconnected antennas to be
> grounded (outer shield to center pin) and a position that grounds all
> outputs when my station is off line. But I'm not sure how to do this yet.
> I've been thinking it over, but no good ideas have come to mind. I'd like
> something simple and elegant that keeps the number of components to the
> absolute minimum. With a few switches I know I can do it but I was hoping
> there was a way to keep the switches to a minimum and different settings
> down to the absolute minimum.
>
> I'd also like to be able to plug both my radios into the antenna switch. I
> guess the idea is I'd like to monitor two different freq with two radios
on
> one antenna. But I think when transmitting with one rig is where I would
> have a problem. How could I go about simply and effectively separating the
> rigs during transmission? A radio with a dual band monitoring function is
> just not feasible at this point and really doesn't interest me. I'd like

to
> use the equipment I own now to effectively monitor the freqs I use.
>
> If it makes any difference in construction technique or components I
operate
> on 11 meters and am only broadcasting 4W. I appreciate any suggestions or
> links to give me an idea of my next step. I'm heading out this afternoon
to
> pick up a few parts for other projects and figured if I need something I
> haven't considered now is the time to ask. Course the more trips to the
> parts house the better. I love wandering the aisles, something all ways
> jumps off the shelf and screams "BUY ME! You need me. Just think what you
> can build with me!"
>
>
> Thank you for any ideas,
>
> Dave
>
>

3716. Re: Detect direction of radio transmitter??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 21:30:43 UTC
From: Dave Holford <holford@sympatico.ca>
Message-ID: <3DCD7E83.D21765D6@sympatico.ca>
Source record: 40079
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design,sci.electronics.basics

George Patrick wrote:
>
> Kevin McMurtrie wrote:
>
> > Lower frequencies require multiple antennas and phase detection, unless
> > you want a monster Yagi aerial.
>
> Just how large is illustrated here:
>

Depends how low - a small AM portable can do a pretty good job of DFing the AM broadcast band and the direction finding antennas for aircraft radio compasses operating between 200 and 530kHz can easily be held in one hand.

The HF DF used with much success in WWII against German U Boats were fitted to quite small warships without taking up much of the limited real estate.

Dave

3717. Re: Not sure about antenna tuner (Thanks for the quick replys!!!)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 21:34:21 UTC
From: Dave <local_42@hotmail.com>
Message-ID: <xbfz9.33781$Dc4.130217@rwcrnsc51.ops.asp.att.net>
Source record: 40080

Thanks guys. Seems I was right to question the need for a tuner. I never considered just how little a 1.2 or 1.5 SWR effects things. Instead of wasting time and money building a tuner I really don't need at the moment I can spend that time working on a new antenna. Just wish this blasted rain would quit so I can get out and try a few designs.

Dave

"Dave" <local_42@hotmail.com> wrote in message news:2Ndz9.33061$Dc4.124412@rwcrnsc51.ops.asp.att.net...
> After doing a quick search I'm still not sure if an antenna tuner is
> worthwhile for my set up. What good will it really do for my rig? If an
> antenna tuner might prove useful then that's what I'll whip up this week for
> the station. Here's the situation; Just put my antenna switch into my system
> and it has effected SWR by a bit. My dummy load used to read 1.1 or less and
> my vertical was reading about 1.2. Now with the switch inline I see 1.2 on
> the dummy and 1.5 on the antenna. I know 1.5 isn't bad but I'd like to
> squeeze every last bit of power from my little 4 watt CB. Will an antenna
> tuner help to cut down on the reflected power I'm now seeing or will it just
> show a nice match to my radio? When I start putting together my next antenna
> It would be nice to use a tuner inside the shack to fine tune the antenna as
> opposed to putting it up on the mast, checking SWR and bringing it down
> again until I get a decent match. I just don't understand if it really helps
> or just shows a nice match to the radio to prevent damage from a poor match.
> Any help is greatly appreciated. You guys have been great help with my last
> two questions and I look forward to any insight you can give. I've already
> located a couple plans for tuners I like just don't know if I should bother
> building it or not.
>
> Thanks again,
>
> Dave
>
>

3718. Re: Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 21:49:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <usr0mafcpgvq1c@corp.supernews.com>
Source record: 40081

It's been many years since I was last at ARRL HQ. But the last time I
was there, they had a separate Harris commercial amplifier for each band.

Roy Lewallen, W7EL

Dick Carroll wrote:
>
> "Harold E. Johnson" wrote:
>
>
>> Here, tonight, W1AW's spectrum on 40
>>
>>>meters was decent, and the one on 20 was really ugly. I'd say their
>>>spectrum on 20 was significantly worse than what I saw for CHU on
>>>14.670, at similar signal level.
>>>
>>>Cheers,
>>>Tom
>>
>>Well, that's a relief. It appears to indicate that it's a path thing as
>>opposed to a phase noise in the TX thing. Or else they're using two
>>different rigs for the two bands and one is really lousy. Back to the
>>soldering iron.
>>
>
>
> I understand they use individual transmitters for each band and transmit on
> all of them simultaneously.
>

3719. dc dc converter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 23:23:50 UTC
From: "s@s london" <zenniee@freenet.co.uk>
Message-ID: <3dcd9804_2@mk-nntp-2.news.uk.tiscali.com>
Source record: 40082

has anyone got a simple design for a dc dc converter to generate about 30v from 5-12v.Must not emite rf only needs to give 1ma.tnx

3720. Re: Not sure about antenna tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-09 23:25:26 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aqk5h5$h5c$2@helle.btinternet.com>
Source record: 40083

> Will an antenna
> tuner help to cut down on the reflected power I'm now seeing or will it
just
> show a nice match to my radio? When I start putting together my next
antenna
> It would be nice to use a tuner inside the shack to fine tune the antenna
as
> opposed to putting it up on the mast, checking SWR and bringing it down
> again until I get a decent match. I just don't understand if it really
helps
> or just shows a nice match to the radio to prevent damage from a poor
match.
==========

Dave, you are thinking along the right lines. The purpose of a tuner is to ensure the transmitter sees its correct load impedance (usually 50 ohms). And nothing else. The transmitter then puts out the maximum safe power it is designed for.

Far and away the best place to locate the SWR meter is immediately alongside the transmitter. Permanently. Not only does it ensure the existence of 50 ohms exactly at the place it ought to be, it's convenient to see and adjust.

The tuner should then be in the feedline immediately next to the SWR meter.

When the meter indicates 1-to-1 then the transmitter does indeed see 50 ohms. In general, only when a tuner is used can the 50 ohms be set exactly regardless of what is done to the feedline and antenna.

So I suggest you invest in one. Better still build one yourself. Get it working and THEN think about what box to put it in. Strictly speaking it doesn't really need a box when it's indoors. Keep it compact, all the wires short, straight and bent at right-angles. It's satisfying to show the neat working components to curious visitors.

A tuner never loses its usefulness. If you should change transmitter, antenna, selector switches, or all three, the tuner will always be there to do its job - providing the correct load to the transmitter as indicated by the SWR meter.

By the way, forget about reflected power indications. What you read about on that subject in the magazines and especially on newsgroups is mostly confusing waffle which leads people astray.

Yours, Reg, G4FGQ.

3721. FS: Meters..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 00:07:29 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <5rhz9.661754$vq2.4668059@news1.east.cox.net>
Source record: 40084
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment

> Meters for Sale:
>
> 1. Weston Round 3.5", Scale 0-500 AC Amps, FS=5A, NOS in
> original box --- $15.00 2 available.
>
> 2. Weston Round 3.5", Scale 0-400 AC Amps, FS=5A, NOS in
> original box --- $15.00
>
> 3. Weschler Electric Corp, Rectangular (4" x 4"), Scale
> 0-150 VAC, NOS in original (ragged!) box. --- $15.00
>
> 4. Modutec, Rectangular (5" x 4"), Mirrored Scale 0-1000
> DC Amps, FS=50 MV -- not sure this one works, used
> condition.. -- $5.00
>
> 6. General Electric, Rectangular (slightly curved) 2.5"
> x "2.5", Scale 0-1.2 DC Kiloamps,FS=50 MV. NOS in original
> box. --- $15.00
>
> 7. Gastech, Rectangular (2.75" x 2.5"), 3 Scales (1:
> 0-100% LEL, 2: 0-500 PPM, 3: 0-25% O2), fs = 1 MA, NOS in
> original box, --- $10.00
>
> 8. General Electric, Rectangular (slightly curved, 3.5"
> x 3.5", Scale 0-1 DC Kiloamp, FS = 50 MV, appears NOS -- no
> box -- $12.00
>
> 9. General Electric, Rectangular (3" x 3"), Scale 0-120
> AC Amps, FS=4A. Used - meter enclosure is slightly
> discolored - probably removed from equipment. I can't get the needle
> to zero -- $5.00
>
> 10. Simpson, Rectangular (2.25" x 2.25"), Scale 0-9 with
> a center indicator (dot) at 4.5. Needle position is at the
> center indicator. "Hewlett Packard" under the scale.
> Looks like NOS but no box -- worn --- $12.00
>
> 11. Several (5 ea.) 400 Hz Frequency Meters, designed to
> measure the frequency of a 100-150 VAC source. If anyone
> is interested in these, please contact me for better
> descriptions.
>

> Terms:
>
> 1. Shipping extra. Should be able to ship any of these
> via USPS Priority Mail for $4.00.
>
> 2. I will ship upon receipt of payment.
>
>
> If you need more information, please contact me.
>
> 73,
>
>
> Larry Keith
> KQ4BY

3722. FS: 400 watt VHF/UHF Linear Amp..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 00:21:00 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <MDhz9.661835$vq2.4672033@news1.east.cox.net>
Source record: 40085
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Put a big signal on 2M, 220 Mhz or 432 Mhz..

AM-6155/GRT-22 Linear power amp, 225-400MHz, 50W out (AM rating -- conservative) 10W in, Eimac X651Z/8930 final, extensive metering, rack mount 7" high, 80 lbs, ITT (model 3212), Part of AN/GRT-22. FAA Surplus. 110 VAC supply.

This Amp uses Emiac X651Z/8930 in silver-plated cavity-drawer; 175-turn TUNE counter dial. Main chassis has solid-state power supply and buffer amp/mulitplier; panel meter monitors voltages. Requires 105/120/210/240 VAC 50-400 Hz and +20 V req 60 ma. +20 V keyed; 7x19x18.5, 80 lbs shipping weight.

The HV Supply from AM-6155 is Loaded with GREAT parts to include a 1752V at 270ma transformer, 8HY 300ma choke, 100K ohm 95 watt resistor, 2x5mfd 3KVDC capacitor, & rectifier circuits card.

One ham has used a 4CX400A (available from Svetlana)to raise the output power to 450 Watts. Others have reported that you can run the 8930 (electrically identical to 4CX250R/7850W) at about 400 watts on 432 Mhz...

A quick Google search on "AM-6155" produced many hits of conversion information.. Check it out.

Used - Excellant Condition (NOT TESTED -- because it is not converted, yet!) $295.00 plus shipping from zip 31088.

Email if you have any questions.

73,

Larry Keith, KQ4BY

3723. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 01:11:54 UTC
From: wryder@chartermi.net
Message-ID: <308dabe9.0211091711.54fc643@posting.google.com>
Source record: 40086
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

As W. Hill notes the 1943 first edition Radio Engineers' handbook by Frederick Emmons Terman is a classic and at a good price here too. If I didn't already have on I'd get it.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1578866409

C ryder

3724. Re: Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 04:44:51 UTC
From: k7itm@aol.com
Message-ID: <3200347.0211092044.5e2b49dd@posting.google.com>
Source record: 40087

Roy Lewallen <w7el@eznec.com> wrote in message news:<usr0mafcpgvq1c@corp.supernews.com>...
> It's been many years since I was last at ARRL HQ. But the last time I
> was there, they had a separate Harris commercial amplifier for each band.

Equipment listed below, from the ARRL web site via Dino's earlier
posting. I wonder if they were phase-continuous from one key-down to
the next. If so, one could measure their freq pretty accurately, if
close enough to receive a really pure signal, and given a good enough
reference. Sure couldn't from where Roy and I live.

Cheers,
Tom

Equipment to be used for the 2002 W1AW Frequency Measuring Test

Transmitting Equipment:

* Harris RF-3200 Exciters w/ Harris RF-3220 Solid State Amplifiers

Antennas:

* 80-meter cage at 60 feet
* Phased 40-meter yagis; 65 feet and at 130 feet
* Phased 20-meter yagis; 35 feet and at 70 feet
* Phased 15-meter yagis; 45 feet and at 90 feet.

CW Generation:

* Compaq 133 with DRSI packet card (used to control matrix)
* ARRL Laboratory-designed Keying Matrix (keys all exciters
simultaneously)

Measuring Equipment:

* Hewlett Packard Z3801 GPS Receiver/Frequency Standard (provides
10 MHz
reference)
* Optoelectronics 8010 Frequency Counter w/ 10 MHz signal
reference
* (QST Product Review)
* Dunestar Bandpass filters
* Alpha/Delta switches

3725. Re: Not sure about antenna tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 06:20:55 UTC
From: Marty <vk2umj@NOSPAM.yahoo.com.au>
Message-ID: <5Nmz9.73657$g9.207167@newsfeeds.bigpond.com>
Source record: 40088

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:aqk5h5$h5c$2@helle.btinternet.com...
> Dave, you are thinking along the right lines. The purpose of a tuner is to
> ensure the transmitter sees its correct load impedance (usually 50 ohms).
> And nothing else. The transmitter then puts out the maximum safe power it
is
> designed for.
>
> Far and away the best place to locate the SWR meter is immediately
alongside
> the transmitter. Permanently. Not only does it ensure the existence of 50
> ohms exactly at the place it ought to be, it's convenient to see and
adjust.
>
> The tuner should then be in the feedline immediately next to the SWR
meter.
>
> When the meter indicates 1-to-1 then the transmitter does indeed see 50
> ohms. In general, only when a tuner is used can the 50 ohms be set exactly
> regardless of what is done to the feedline and antenna.
>
> So I suggest you invest in one. Better still build one yourself. Get it
> working and THEN think about what box to put it in. Strictly speaking it
> doesn't really need a box when it's indoors. Keep it compact, all the
wires
> short, straight and bent at right-angles. It's satisfying to show the neat
> working components to curious visitors.
>
> A tuner never loses its usefulness. If you should change transmitter,
> antenna, selector switches, or all three, the tuner will always be there
to
> do its job - providing the correct load to the transmitter as indicated
by
> the SWR meter.
>
> By the way, forget about reflected power indications. What you read about
on
> that subject in the magazines and especially on newsgroups is mostly
> confusing waffle which leads people astray.
> ---
> Yours, Reg, G4FGQ.

But, Reg,

Why would you even consider using a tuner on a CB installation when the VSWR is only 1.5:1??

--
Martin, VK2UMJ
vk2umj@NOSPAMyahoo.com.au

Remove NOSPAM from e-mail address to reply

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.416 / Virus Database: 232 - Release Date: 06/11/2002

3726. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 07:06:33 UTC
From: David Walker <no_spam@hotmail.com>
Message-ID: <3dce0575@news.comindico.com.au>
Source record: 40089

I've got an IC-706IIG and it hears alot of RF but it can't resolve the audio from a signal very well at all unless its better than S6. I'm looking at the K2 because from the reports I've read it will give nice audio even from the weakest of signals.

I haven't purchased the kit yet because it takes alot of aussie dollars to buy a K2... (and even more hours being a social worker) but hopefully sometime next year I guess I'll build and will be able to suck it and see for myself.

"N2EY" <n2ey@aol.com> wrote in message news:20021109100717.00112.00000330@mb-fz.aol.com...
> In article <3dccbe0c$1@news.comindico.com.au>, "David Walker"
> <no_spam@hotmail.com> writes:
>
> >Is the Omni still available? I've seen pics of it and it looks like a
> >beautiful rig.
> >
> The Omni 6 Plus has been replaced by the new Orion.
>
> "Omni" is the family name of a whole series of Ten Tec rigs, from the "ABCD"
> analog PTO versions of the early-mid '80s, to the low noise PLL Omni 5, Omni 6
> and Omni 6 Plus versions of recent years. (The "Plus" was the addition of DSP
> and some other improvements).
>
> The current TenTec HF line is in three levels - the ~$100 monoband QRP CW
> transceiver kits, the $800 Argonaut V 20 watter allHFband multimode, and the
> $3300-$3600 Orion super rig.
>
> Argonaut V is obviously meant to compete with the K2 and Orion is obviously
> meant to compete with the FT-1000. TT doesn't (now) make a moderately priced
> 100-watt-class-HF rig.
>
> Plenty of clean used Omni 6s out there at good prices, tho. But I'd rather have
> my K2.
>
> 73 de Jim, N2EY

3727. Re: Amidon substitute?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 09:03:38 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <ussbnutlc2kd1a@corp.supernews.com>
Source record: 40091

The part you describe is powdered iron, not ferrite. Amidon's powdered iron parts came (and still come, as far as I know) from Micrometals. I don't know of anyone else who makes equivalents of Micrometals low-permeability parts. I suggest that you contact Micrometals, or check their web site, to find a UK distributor for their parts.

Fair-Rite makes ferrites, not powdered iron. I'd be amazed if Fair-Rite, an old and established company with a very large commercial customer base, was bought out by Amidon, started as a garage retail operation by Bill Amidon primarily to sell small quantities of Fair-Rite and Micrometals parts to amateurs. But stranger things have happened.

Roy Lewallen, W7EL

Philip de Cadenet wrote:
> I'm trying to find an equivalent by another manufacturer to Amidon's
> T-50-12 or 17 mix. It must have a permeability of around 4.
>
> I require a 1/2" torroid to use as an output transformer in a VHF RF
> amplifier stage.
>
> I have looked at Fair-Rite products, who I believe are now owned by
> Amidon but have had no joy.
>
> It seems Amidon do not have an official, or unofficial UK distributor.
>
> I do not really wish to import from the US in relatively small
> quantity's if I can find the components here in the UK.
>
> Any idea's?

3728. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 09:15:45 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <NjH1R+DBPiz9EAnN@ifwtech.co.uk>
Source record: 40095

Eddi wrote:
>In <20021109100717.00112.00000330@mb-fz.aol.com> n2ey@aol.com (N2EY) writes:
>
>> [...]
>> Argonaut V is obviously meant to compete with the K2
>
> The Argonout V is meant to compete with the SGC-2020.
>
>> and Orion is obviously meant to compete with the FT-1000.
>
> The FT-1000 would find it very hard to compete with a K2.

Speaking of good receivers, take a look at the CDG2000 project, at www.warc.org.uk

The architecture is very similar to the K2 - ham-band only and single conversion to 9MHz - but there are some significant refinements including G3SBI's H-mode FET mixer and VCO with very low phase noise. The resulting IP3 is around +40dBm (yes, plus forty!) and noise degradation is limited by other people's transmitted noise. In other words, the receiver front-end performance is no longer a limiting factor in what you can hear. This is probably *the* best amateur HB receiver front-end around today.

Parts of the transceiver are "standard", for example the highly respected Bill Carver IF strip (they developed a new PC board for it, which may be useful for other projects). Also the transmitter is pretty ordinary as yet... though in time that may change.

The big problem, of course, is that even when PC boards become available, it's is still a major HB project. You have to build your own case, and performance will depend on how successfully you shield some of the boards.

Also the control interface is under continuous development. It is based on i2c protocols, so it's very adaptable... but only if you have the programming skill. All the code is published, but if you want something different from what's already available, you have to either program it yourself or persuade the main software developer that your changes would be useful to a lot of other people.

Some examples of the CDG2000 have an extremely basic "programmer's" control interface which is not very practical on-air, while others are more operator-friendly but also require more controls, wiring and programming. DSP is coming... but that will require some further rebuilding as the DSP progressively replaces the existing hardware.

As with any HB project, the great dread is that by the time you've built it, the main thing you've gained is the knowledge of how to do it *properly* next time... which you simply cannot face!

Interestingly, the CDG developers say "If you want a transceiver that's darn good (through not quite as good as ours) because you mostly want to *use* it, then get a K2."

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3729. Amidon substitute?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 09:48:42 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <jii7pto6tiz9EwT9@fslife.co.uk>
Source record: 40090

I'm trying to find an equivalent by another manufacturer to Amidon's T-50-12 or 17 mix. It must have a permeability of around 4.

I require a 1/2" torroid to use as an output transformer in a VHF RF amplifier stage.

I have looked at Fair-Rite products, who I believe are now owned by Amidon but have had no joy.

It seems Amidon do not have an official, or unofficial UK distributor.

I do not really wish to import from the US in relatively small quantity's if I can find the components here in the UK.

Any idea's?
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3730. 2m/70cm dualband GP instructions needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 12:08:39 UTC
From: Juha <REMOVEjuha_@hotmail.com>
Message-ID: <aqli6k$89v$1@phys-news1.kolumbus.fi>
Source record: 40092

Does anyone know instructions for 2m / 70 cm dualband mobile-GP? I know I could buy one, but I hate to spend money for a piece of wire ;)

73
Juha
OH7PF

3731. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 13:13:34 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ussms6scleo4c6@corp.supernews.com>
Source record: 40093

> I've got an IC-706IIG and it hears alot of RF but it can't resolve
the audio
> from a signal very well at all unless its better than S6.

Must be something wrong if you need an S6 signal to get any audio out.
What is the noise level at your location. Any receiver (including the
K2) is going to require that the signal is stronger than the noise to
copy it. If the 706 has an S5 noise level the K2 will likely also have
a similar noise level. Not bashing the K2, but I would be quite
surprised if it copied many signals well that you couldn't even hear
with a working 706. Where the K2 shines is in its ability to copy weak
signals in the presence of very strong signals.

3732. Re: HP 5340A vs HP 5342A?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 13:34:47 UTC
From: Yrrah <harke.smits@hccnet.nl>
Message-ID: <aqln6a$ma2$1@news.hccnet.nl>
Source record: 40094

I think the 5340A was only shortly produced with nixies. The 42 starts at
500 MHz i.s.o the 40 starting at 10 Hz. But beware of options: a precision
oscillator or amplitude measurement also costs something...
regards,
Harke

Henry Kolesnik <wd5jfr@oklahoma.net> schreef in berichtnieuws
usqg5083kosvb0@corp.supernews.com...
> Looking thru the 1982 HP catalog I noticed that the HP 5342A was priced at
> $5500.00 and the HP 5340A was priced at $8600.00. A 1989 Tucker show the
> 5342A at $5675.00 and the 5340A at $7995.00 I'm not a counter expert but
> they're both 18mHz counters and the 5340 being older has nixie tubes. Why
> would anyone pay more for theolder technology, I know I must be missing
> something. What is it? I'm looking at up grading from a 5341A and wonder
> what the counter experts opinions are on the 5340A vs the 5342A.
> tnx
> Hank wd5jfr
>
>

3733. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 14:06:09 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <RkDCQPPRfmz9EAkw@ifwtech.co.uk>
Source record: 40096

Bob Lewis (AA4PB) wrote:
>> I've got an IC-706IIG and it hears alot of RF but it can't resolve
>the audio
>> from a signal very well at all unless its better than S6.
>
>Must be something wrong if you need an S6 signal to get any audio out.
>What is the noise level at your location. Any receiver (including the
>K2) is going to require that the signal is stronger than the noise to
>copy it. If the 706 has an S5 noise level the K2 will likely also have
>a similar noise level. Not bashing the K2, but I would be quite
>surprised if it copied many signals well that you couldn't even hear
>with a working 706. Where the K2 shines is in its ability to copy weak
>signals in the presence of very strong signals.

That's why a good receiver like the K2 could indeed copy things you
couldn't hear on a 706.

To hear some "very strong signals", come listen to 7MHz in Europe after
dark.
Our band ends at 7.1MHz, and from there up it's solid with horrendously
strong short-skip AM broadcast signals. With a receiver that's prone to
intermodulation - like the IC-706 - the background from 7.0-7.1 becomes
a continuous mush of IMD at S7-8-9. Amateur signals need to be at least
that strong to be workable at all.

You can't tell that the IMD is composed of speech and/or music, because
there are so many different signals mixed together (many of them with
their modulation content frequency-doubled) and overlapping. It sounds
very much like "noise", until you have the experience to notice that it
doesn't flicker in quite the same way as either "smooth noise" or
overlapping static crashes.

With a good receiver, that intermod isn't there, or very rarely and only
in a few spots. Then you discover that the true background noise level
is much lower, so you can hear weak signals, and there are even empty
spaces between them. The first time you hear this is one of amateur
radio's genuine "Oh wow" revelations!

In other words, with a good receiver, 7MHz after dark sounds much more
like it does in the daytime... or perhaps most of the time in the USA.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3734. Re: Not sure about antenna tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 14:31:28 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aqlqjvpfe1@venus.btinternet.com>
Source record: 39997

> But, Reg,
>
> Why would you even consider using a tuner on a CB installation when the VSWR
> is only 1.5:1??
>
==========
Only ? Only 1.5:1 ?? You must be joking!

The SWR meter could be in error by 1.5 and the actual SWR could be 3:1.

I wouldn't want to push my luck that far and it would be an interesting project to make one.

And it's always useful. It can indicate which way to go when messing about with feedlines, line switches and antennas. Capable of providing a lot of operating satisfaction.

Have you no imagination ? ;o)

Reg.

3735. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 14:50:56 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <usssio50b96e8b@corp.supernews.com>
Source record: 39998

> That's why a good receiver like the K2 could indeed copy things you
> couldn't hear on a 706.
>

I fully agree, however we don't know that his problem is front end overload. What I read into his post is that he can't copy any signals on any band unless they are at least an S6. If his problem is high ambient noise level (power lines, etc) then he may be real disappointed if he invests in a K2 and doesn't find any improvement in the local noise level.

Here on the east coast of the U.S., I don't find that I normally have to deal with very strong signals with my type of operating. Most of the QRM I experience is from stations operating close to my frequency. Things like passband tuning and notch filters do me the most good but these are things the K2 does not have. I had a K2 here (a field test unit). Based on several people who said they could often copy signals on their K2 that they couldn't even hear with the 756PRO, I did a number of A-B tests using my PRO. Never did I hear a signal with the K2 that I couldn't copy with the PRO (nor the other way around). Often however, I could make a signal more "comfortable" copy by using the QRM fighting features of the PRO.

The K2 is good but like every rig I've ever used, it has its "warts". Like all rigs, it does some things very well and others not so well.

3736. Re: Not sure about antenna tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 14:54:41 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ussspolhlgdbfa@corp.supernews.com>
Source record: 39999

> The SWR meter could be in error by 1.5 and the actual SWR could be
3:1.
>
His wattmeter could be in error and he might be only putting out 2
watts so he should run a linear just to be sure :-)

3737. Re: Not sure about antenna tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 14:59:57 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <usst3l247bn2ac@corp.supernews.com>
Source record: 40000

> Only ? Only 1.5:1 ?? You must be joking!
>
In general, hams and CBers worry way too much about SWR. 50% reflected power does not mean that only half the power gets radiated by the antenna. The only thing SWR does is to subject the signal to the feed line loss more than once so it results in a little more feed line loss. If the line is fairly low loss to begin with than even a 3:1 SWR is insignificant provided that the transmitter will load into it okay.

Below 30 Mhz with a reasonable feed line, working to get a 1.5:1 SWR lower is a waste of time.

3738. Re: Not sure about antenna tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 15:27:01 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ussusddedsr1d7@corp.supernews.com>
Source record: 40001

"Bob Lewis (AA4PB)" <rlewis@staffnet.com> wrote in message
news:usst3l247bn2ac@corp.supernews.com...

> Below 30 Mhz with a reasonable feed line, working to
> get a 1.5:1 SWR lower is a waste of time.

It's worse than a waste of time. Other than adjusting the antenna, anything
you do to "correct" the problem is going to introduce more loss than you
gain by getting to 1:1.

..

3739. Re: Amidon substitute?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 15:27:38 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <aqm08m$52q$2@newsg4.svr.pol.co.uk>
Source record: 40003

"Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message
news:jii7pto6tiz9EwT9@fslife.co.uk...
> I'm trying to find an equivalent by another manufacturer to Amidon's
> T-50-12 or 17 mix. It must have a permeability of around 4.
>
> I require a 1/2" torroid to use as an output transformer in a VHF RF
> amplifier stage.

Sycom stock some of the Micrometals toroids, including the T-50-12:

http://www.sycomcomp.co.uk

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

3740. Vector Network Analyzer w/ PSoC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 16:02:20 UTC
From: "Eike Lantzsch, ZP6CGE" <eikelan@gmx.net>
Message-ID: <slrnast0oc.8mh.eikelan@ID-77364.user.dfncis.de>
Source record: 40002

Anybody out ther who likes to comment on this project?
http://www.circuitcellar.com/PSOC2002/winners/3.htm
I would like to see a kit for this one.

Kind Regards, Eike

3741. Re: COP8782C microcontroller

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 16:50:03 UTC
From: Richard J <no_spam@please.com>
Message-ID: <aqm2o4$2jc$1@news.lth.se>
Source record: 40004
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Hmm....in the old days (!) we used these to descramble Satellite TV...until the built-in memory cudn't handle all the keys anymore. I still have a HB programmer that takes COP cards, but I really dunno if I still have any data on its use...even have a couple of COP cards and maybe also a couple of COP ICs here :-) collecting dust. Problem with them was that the control program in the COP for descrambling was never released, as opposed to widespread PIC control program, so COP cards died long before they shud.

Tip: Check the newsgroups alt.satellite.tv and ....tv.crypt for info.
Besides all the whackos and the kids asking for new keys/management keys on these groups, there are a few cool guys that might help you out.

FWIW Cheers /Rick

"Peter Koch" <pk@kom.auc.dk> wrote in message
news:3DCA2CC0.3AB9A2B7@kom.auc.dk...
>
> Hi all,
>
>
> Anybody who can guide me to / provide me with a datasheet of
> the old COP8782C microcontroller from National Semiconductors...???
>
> Nothing is available on the National's homepage and my Internet
> search gave no usefull results...:-(
>
> Also, I would be very much interested in circuit diagrams for a
> programmer for these devises.
>
>
> Thanks a lot in advance.
>
> -Peter
>
> OZ1LFI
>
> pk@kom.auc.dk

3742. Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 17:34:17 UTC
From: Jason <kc7eip_nospam@shaw.ca>
Message-ID: <tMwz9.775668$Ag2.26874233@news2.calgary.shaw.ca>
Source record: 40006

Well i am in the process of designing my own 40 meter txcvr.I'm along way from going to copper and solder, but I have a couple of ideas that i wanted to put out to the field. Here is what I'm wanting to accomplish,granted i know there are easier ways but here is what i was thinking on. I was wanting to use a combination of pics one as a freq counter that would feed the second the freq at specified intervals then the second could control the voltage to the varactor to adjust the freq up or down as needed..

I'm not quite sure how I'd use the pic to vary the voltage though either switching resisters or maybe use it to switch out caps directly instead of using a veractor...
Granted this all could be done using a lot les complicated using a POT and turning by hand and just using 1 pick to output the freq. and adjusting by hand.. the other way i thought is to use the second pic to run a motor that could actually turn a pot for me.. any way these were just some ideas i had on how to adjust frequency.

3743. Re: FS: Meters..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 17:40:39 UTC
From: k9sqg@aol.com
Message-ID: <20021110124039.03955.00000036@mb-cm.aol.com>
Source record: 40005

Larry,

I can't figure out how much of your email address to delete to avoid the "no spam" feature. Could you contact me about the #3 meter, 0-150 VAC?

Thanks.

Evan

3744. Re: Not sure about antenna tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 18:29:10 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aqm8hl$k8p$1@sparta.btinternet.com>
Source record: 40007

> > Below 30 Mhz with a reasonable feed line, working to
> > get a 1.5:1 SWR lower is a waste of time.
>
> It's worse than a waste of time. Other than adjusting the antenna,
anything
> you do to "correct" the problem is going to introduce more loss than you
> gain by getting to 1:1.
==========

Have either of you two discouraging folks ever home-brewed a tuner. I doubt
it.

Reg.

3745. Re: Not sure about antenna tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 18:50:21 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ustajmdk15g15b@corp.supernews.com>
Source record: 40008

> Have either of you two discouraging folks ever home-brewed a tuner.
I doubt
> it.
> ---
> Reg.
>
Yes, I sure have, Reg. There are times when a tuner is very useful but to reduce an SWR on a feed line from 1.5:1 to 1:1 is not one of them. Of course if he places the tuner at the transmitter then he hasn't done a thing to the SWR on the feed line. I'm not being discouraging, I'm just stating that to buy or build a tuner for the application he described is a waste of time and effort (unless of course you just want to build a tuner for the fun of it).

3746. Re: Not sure about antenna tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 18:53:34 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <ustapn21p3npc8@corp.supernews.com>
Source record: 40009

By the way, since he's getting two different opinions here I recommend he get the ARRL Handbook or better yet, REFLECTIONS II by Maxwell and take a look at the impact of SWR on transmitted power.

3747. Re: Frequency measuring contest

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 19:04:44 UTC
From: gc@radix.net
Message-ID: <aqmakc$h1p$1@news1.radix.net>
Source record: 40010

In article <3DC93275.7BCF6EF4@ix.netcom.com>,
Dan Rae <rae4@ix.netcom.com> wrote:
>
[...]
>Given that a lot of folk now have the capability to measure off air down
>to fractions of a Hertz, to
>reach the maximum accuracy, we will need a lot longer time to average
>out a number of measurements than
>the FMT provides, in it's current form.
>

But then it would be a different problem. WWV and CHU provide steady
long duration carriers.

Did anyone here try it? I could only get a good signal on 80 meters.
I did get in several tries in the 15 minutes they were on, and my
readings were consistent to 0.5 Hz. Unfortunately, my measurement procedure
has some ambiguities and if I slipped in resolving them, I could be
off by tens of Hz. My report has been sent in.

3748. Commercial Kits for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 19:21:36 UTC
From: Simon <st599@ecs.soton.ac.uk>
Message-ID: <92ctsusa4mtjt7ltmhnnlroqdp4tuf1b39@4ax.com>
Source record: 40011

Hi

I'm currently looking for a low power transceiver kit for operation in the HF Bands. The specs would be as follows:

Must be commercially available

RF output tuneable to 10W or less

Frequency display (preferrable)

SSB-AM and CW operation

Small portable preferable battery operated.

These limitations occur as I've currently only got time to study for an M3 licence, which prevents me from using a built from scratch transceiver.

Also which bands would peole recommend for a newbie.

Thanks

Simon

3749. Re: Commercial Kits for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 19:36:49 UTC
From: ON5MJ <on5mjREMOVE@skynet.be>
Message-ID: <3dceb559$0$86562$ba620e4c@news.skynet.be>
Source record: 40012

Seems K2 from www.elecraft.com could be #1.

73 de ON5MJ - Jacques

3750. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 19:53:44 UTC
From: ON5MJ <on5mjREMOVE@skynet.be>
Message-ID: <3dceb950$0$86564$ba620e4c@news.skynet.be>
Source record: 40013

Hi Ian,

I recently received a mail from a belgian Ham living in DL. This guy gave me the URL of a very interesting variable condensators producer in Germany. All in kit and have very attractive prices, much lower than factory made. Seems of very good quality. Have a look. Here is the URL: http://www.schubert-gehaeuse.de/prod04.htm . Unfortunately the site is only in german but not to hard to understand.

73 de ON5MJ - Jacques

3751. Re: Amidon substitute?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 20:57:41 UTC
From: averyfineman@aol.com
Message-ID: <20021110155741.20031.00000532@mb-cm.aol.com>
Source record: 40014

In article <ussbnutlc2kd1a@corp.supernews.com>, Roy Lewallen <w7el@eznec.com>
writes:

>The part you describe is powdered iron, not ferrite. Amidon's powdered
>iron parts came (and still come, as far as I know) from Micrometals. I
>don't know of anyone else who makes equivalents of Micrometals
>low-permeability parts. I suggest that you contact Micrometals, or check
>their web site, to find a UK distributor for their parts.
>
>Fair-Rite makes ferrites, not powdered iron. I'd be amazed if Fair-Rite,
>an old and established company with a very large commercial customer
>base, was bought out by Amidon, started as a garage retail operation by
>Bill Amidon primarily to sell small quantities of Fair-Rite and
>Micrometals parts to amateurs. But stranger things have happened.

When Bill Amidon started his little business, both Micrometals
and Fair-Rite would sell their products in minimum quantities.
Micrometals had 100-piece minimums on direct orders; still did
until three months ago. Amidon would repackage into small
quantities for sale in electronics hobbyist stores and received
permission to reprint certain Micrometals Q curves and technical
information in those repackages. Very handy for hobbyists.

Bill Amidon retired in 1990 but his little business continues as
part of www.amidon-inductive.com and that company continues
with the radio hobbyist line. One can mail-order parts and
kit packs from them. Amidon-Inductive takes VISA or Master-
card. Their on-line order form indicates foreign (to USA) sales
are possible.

Micrometals specializes in powdered-iron core products. They
have a good website for technical information at www.micrometals.
com. They have two free DOS-based programs for power and RF
inductors, also a couple Application Notes on RF inductors. Their
whole catalog has been on CD since June but one can order parts
of their catalog. I recommend the Q-Curves section, 30 pages of
graphs. Good product line that has been valuable to me for over
two decades.

Len Anderson
retired (from regular hours) electronic engineer person

3752. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 21:16:19 UTC
From: n2ey@aol.com
Message-ID: <20021110161619.06308.00000445@mb-fm.aol.com>
Source record: 40015

In article <g5hqsugui9aksd4ll7398c69bo1lta4l6l@4ax.com>, Dan Richardson <k6mhe@mendolink.com> writes:

>On 09 Nov 2002 15:07:17 GMT, n2ey@aol.com (N2EY) wrote:
>
>>Argonaut V is obviously meant to compete with the K2 and Orion is obviously
>>meant to compete with the FT-1000. TT doesn't (now) make a moderately priced
>>100-watt-class-HF rig.
>
>Jupiter?
>
MY BAD!!!

Ten Tec currently offers both the Jupiter ($1189) and Pegasus ($895) HF transceivers. It is my understanding that a Jupiter is essentially a "Pegasus with a front panel". Both are currently on the TT webpage, and Jupiter was most recently advertised in QST in the September, 2002 issue.

Jupiter can be had with an internal ATU for $1488, too. I don't know about Pegasus and an internal ATU.

Sorry for the wrong info. I must have had a halfheimer moment!

Thanks for the heads-up, Danny.

73 de Jim, N2EY

3753. Anyone have 73 Aug99 Issue?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 23:29:47 UTC
From: Brent <bc316@yahoo.com>
Message-ID: <LZBz9.11356$jj5.207934@twister.rdc-kc.rr.com>
Source record: 40016
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I'm looking for the August 99 issue of 73. Actually the WA8TXT article about a psk31 interface.
If anyone would scan it possible post to a web site or better yet email it to me at n9bc-----@msn.com remove the ----'s from the address. I would be greatly appreciated!

Thanks
Brent N9BC

3754. Re: Commercial Kits for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-10 23:57:11 UTC
From: Dale Parfitt <parinc@verizon.net>
Message-ID: <3DCEF2DB.2C938C58@verizon.net>
Source record: 40017

Simon wrote:

> Hi
>
> I'm currently looking for a low power transceiver kit for operation in
> the HF Bands. The specs would be as follows:
>
> Must be commercially available
>
> RF output tuneable to 10W or less
>
> Frequency display (preferrable)
>
> SSB-AM and CW operation
>
> Small portable preferable battery operated.
>
> These limitations occur as I've currently only got time to study for
> an M3 licence, which prevents me from using a built from scratch
> transceiver.
>
> Also which bands would peole recommend for a newbie.
>
> Thanks
>
> Simon

Elecraft K2- not only a fine kit, but holds its own against the finest
commercial amateur gear.
http://www.elecraft.com

Regards,

Dale W4OP

3755. Re: Not sure about antenna tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 00:49:46 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ustvtklq4minc3@corp.supernews.com>
Source record: 40018

"Reg Edwards" <g4fgq.regp@btinternet.com> wrote in message
news:aqm8hl$k8p$1@sparta.btinternet.com...
>
> Have either of you two discouraging folks ever home-brewed a tuner. I
doubt
> it.

I absolutely have, and I use a tuner regularly, but not for a resonant
antenna with an SWR of 1.5:1.

..

3756. Re: Not sure about antenna tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 00:51:00 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ustvtl47ilnsc4@corp.supernews.com>
Source record: 40019

"Bob Lewis (AA4PB)" <rlewis@staffnet.com> wrote in message
news:ustajmdk15g15b@corp.supernews.com...

> (unless of course you just want to build a
> tuner for the fun of it).

And this would be a worthy goal.

..

3757. Re: HP 5340A vs HP 5342A?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 00:58:12 UTC
From: Rick Karlquist <richard@karlquist.remove.this.com>
Message-ID: <EgDz9.1278$To1.262@sccrnsc01>
Source record: 40020

I believe the 5340 had dual samplers and the 5342 had a
single sampler. The latter is obviously cheaper but
may not do as good a job of counting pulsed signals
like radar. It is also possible that the 5340 may be
more sensitive. Also, an interesting feature of the 5340 was
that it had a single connector that covered the whole
frequency range, rather than low frequency and microwave
inputs.

As a general rule, you shouldn't assume that newer counters
automatically have better performance than older ones.
The 5340, 5345, 5360, and 5370 were "cost is no object" doomsday
machines. At the time of their design, the HP Santa Clara
Division had a performance oriented general manager. Other newer counters
were designed under more business oriented general
managers.

(Note: I worked for the HP Santa Clara Division for 19 years).

Rick Karlquist N6RK

"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:usqg5083kosvb0@corp.supernews.com...
> Looking thru the 1982 HP catalog I noticed that the HP 5342A was priced at
> $5500.00 and the HP 5340A was priced at $8600.00. A 1989 Tucker show the
> 5342A at $5675.00 and the 5340A at $7995.00 I'm not a counter expert but
> they're both 18mHz counters and the 5340 being older has nixie tubes. Why
> would anyone pay more for theolder technology, I know I must be missing
> something. What is it? I'm looking at up grading from a 5341A and wonder
> what the counter experts opinions are on the 5340A vs the 5342A.
> tnx
> Hank wd5jfr
>
>

3758. Re: Commercial Kits for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 01:01:42 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <usu0e0tjnvmea9@corp.supernews.com>
Source record: 40021

Hands Electronics <http://www.rf-kits.demon.co.uk/> has quite a few nice kits. They are a tad pricey on this side of the pond, but over there they probably would look a bit more attractive. Also, the DL-QRP club <http://www.werdau.net/dl-qrp-ag/> has a Black Forest rig that is pretty close to what you describe which I believe they have a kit for. Again, it may look a little more attractive on that side of the Atlantic. Don't know if the QRP Club satisfies your need for "commercial", but Sheldon's rigs certainly should.

Others have mentioned the K2, which is an extraordinary radio. But by the time you get the SSB option and get it over there, pay the duty, etc. you are probably going to be in the 1500 Euro neighborhood, maybe more.

..

"Simon" <st599@ecs.soton.ac.uk> wrote in message
news:92ctsusa4mtjt7ltmhnnlroqdp4tuf1b39@4ax.com...
> Hi
>
> I'm currently looking for a low power transceiver kit for operation in
> the HF Bands. The specs would be as follows:

3759. Re: Not sure about antenna tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 02:12:26 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aqn3m9ocr1@helle.btinternet.com>
Source record: 40022

> By the way, since he's getting two different opinions here I recommend
> he get the ARRL Handbook or better yet, REFLECTIONS II by Maxwell and
> take a look at the impact of SWR on transmitted power.

==========

Be practical ! By the time he has obtained, researched, paid for and
studied the books without being any the wiser he could have built 2 or 3
tuners and thoroughly enjoyed himself.

Reg.

3760. Re: Not sure about antenna tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 03:30:26 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <usu92k8tgo1vb7@corp.supernews.com>
Source record: 40023

Okay, I give up. He can build a tuner and get a nice 1:1 swr on that
3-foot piece of coax between the rig and the tuner. I guess that's
easier than studying a book and learning how the stuff works :-)

3761. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 04:36:00 UTC
From: w4pqwhs@aol.com
Message-ID: <20021110233600.02410.00004253@mb-fv.aol.com>
Source record: 40024

>Well i am in the process of designing my own 40 meter txcvr

Question, what is a pic and pick? what am I missing here? Harold W4PQW

3762. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 11:22:35 UTC
From: David Walker <no_spam@hotmail.com>
Message-ID: <3dcf92f6$1@news.comindico.com.au>
Source record: 40025

Sorry Bob... I am exaggerating a little bit... I hear weak signals but I am not happy with the tone of the radio, and weak cw get diffused with the background noise... even at low levels.... although with a bit of noise - say at S2 level will certainly run down an S6 signal very easily.

"Bob Lewis (AA4PB)" <rlewis@staffnet.com> wrote in message news:ussms6scleo4c6@corp.supernews.com...
> > I've got an IC-706IIG and it hears alot of RF but it can't resolve
> the audio
> > from a signal very well at all unless its better than S6.
>
> Must be something wrong if you need an S6 signal to get any audio out.
> What is the noise level at your location. Any receiver (including the
> K2) is going to require that the signal is stronger than the noise to
> copy it. If the 706 has an S5 noise level the K2 will likely also have
> a similar noise level. Not bashing the K2, but I would be quite
> surprised if it copied many signals well that you couldn't even hear
> with a working 706. Where the K2 shines is in its ability to copy weak
> signals in the presence of very strong signals.
>
>
>

3763. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 11:26:33 UTC
From: David Walker <no_spam@hotmail.com>
Message-ID: <3dcf93e5$1@news.comindico.com.au>
Source record: 40026

I had an IC756 a year or so ago and it had a reasonable rx'r. Sometimes when the band seemed quiet the scope would indicate a high floor noise. A techno guy explained to me that the quiet reciever was simply it being desensed by some other strong out of band signal.

In other words I wasn't hearing anything at all.

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message news:RkDCQPPRfmz9EAkw@ifwtech.co.uk...
> Bob Lewis (AA4PB) wrote:
> >> I've got an IC-706IIG and it hears alot of RF but it can't resolve
> >the audio
> >> from a signal very well at all unless its better than S6.
> >
> >Must be something wrong if you need an S6 signal to get any audio out.
> >What is the noise level at your location. Any receiver (including the
> >K2) is going to require that the signal is stronger than the noise to
> >copy it. If the 706 has an S5 noise level the K2 will likely also have
> >a similar noise level. Not bashing the K2, but I would be quite
> >surprised if it copied many signals well that you couldn't even hear
> >with a working 706. Where the K2 shines is in its ability to copy weak
> >signals in the presence of very strong signals.
>
> That's why a good receiver like the K2 could indeed copy things you
> couldn't hear on a 706.
>
> To hear some "very strong signals", come listen to 7MHz in Europe after
> dark.
> Our band ends at 7.1MHz, and from there up it's solid with horrendously
> strong short-skip AM broadcast signals. With a receiver that's prone to
> intermodulation - like the IC-706 - the background from 7.0-7.1 becomes
> a continuous mush of IMD at S7-8-9. Amateur signals need to be at least
> that strong to be workable at all.
>
> You can't tell that the IMD is composed of speech and/or music, because
> there are so many different signals mixed together (many of them with
> their modulation content frequency-doubled) and overlapping. It sounds
> very much like "noise", until you have the experience to notice that it
> doesn't flicker in quite the same way as either "smooth noise" or
> overlapping static crashes.
>
> With a good receiver, that intermod isn't there, or very rarely and only
> in a few spots. Then you discover that the true background noise level
> is much lower, so you can hear weak signals, and there are even empty
> spaces between them. The first time you hear this is one of amateur

> radio's genuine "Oh wow" revelations!
>
> In other words, with a good receiver, 7MHz after dark sounds much more
> like it does in the daytime... or perhaps most of the time in the USA.
>
> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek

3764. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 11:53:34 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <usv6i7pa27fr06@corp.supernews.com>
Source record: 40027

> the quiet reciever was simply it being
> desensed by some other strong out of band signal.
>
Quit possible. The atmospheric noise level can also vary considerably
from one moment to the next. If you've got front end overload going on
then the K2 will likely be an improvement. It should also help to
switch in an attenuator on the existing receiver provided that the
signal you are trying to hear is not so weak that you can't copy it
with the attenuator on.

3765. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 12:14:21 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <aqoaab$3io$2@newsg4.svr.pol.co.uk>
Source record: 40029

"Jason" <kc7eip_nospam@shaw.ca> wrote in message
news:tMwz9.775668$Ag2.26874233@news2.calgary.shaw.ca...
> Well i am in the process of designing my own 40 meter txcvr.I'm along way
> from going to copper and solder, but I have a couple of ideas that i
> wanted to put out to the field. Here is what I'm wanting to
> accomplish,granted i know there are easier ways but here is what i was
> thinking on. I was wanting to use a combination of pics one as a freq
> counter that would feed the second the freq at specified intervals then
the
> second could control the voltage to the varactor to adjust the freq up or
> down as needed..

Try a web search for 'Huff and Puff' stabiliser, some people have used PICs
for this. Or use a PLL synthesiser controlled by the PIC.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

3766. Re: Not sure about antenna tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 14:06:43 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aqodhjngs1@venus.btinternet.com>
Source record: 40030

Bob wrote -
> Okay, I give up. He can build a tuner and get a nice 1:1 swr on that
> 3-foot piece of coax between the rig and the tuner. I guess that's
> easier than studying a book and learning how the stuff works :-)
==========

People get their knickers in a twist about SWR. The amount of waffle it generates is right out of proportion to its importance. The so-called SWR meter does not measure it. Nobody has measured SWR since the thing was invented.

It attracts a great deal of attention because the nice looking meter is the only measuring instrument in the shack to be seen and read and talked about. It becomes an obsession.

What really matters is whether or not the transmitter sees 50 ohms. That's what antenna tuners are for.

But I admit SWR provides a nice excuse to have a friendly argument about it. ;o)

Reg, G4FGQ

3767. Re: COP8782C microcontroller

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 16:11:07 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3DCFD69B.74AC9BB7@mfi.net>
Source record: 40031
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Grzegorz Lentka wrote:
>
> Peter Koch wrote:
> >
> > Hi all,
> >
> > Anybody who can guide me to / provide me with a datasheet of
> > the old COP8782C microcontroller from National Semiconductors...???
> >
> > Nothing is available on the National's homepage and my Internet
> > search gave no usefull results...:-(
> >
> > Also, I would be very much interested in circuit diagrams for a
> > programmer for these devises.
> >
> > Thanks a lot in advance.
> >
> > -Peter
> >
> > OZ1LFI
> >
> > pk@kom.auc.dk
>
> Hi,
> You can find this datasheet on www.fretradezone.com, but You must
> register for paid subscription (I didn't).
> --
> Grzegorz "GREG" Lentka
>
> "Serva ordinem at ordo te servabit"

http://www.freetradezone.com
^ An e is missing from your URL.
--

Michael A. Terrell
Central Florida

3768. ANTIQUE STUFF, and stuff, and stuff

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 16:32:48 UTC
From: Heytubeguy <heytubeguy@worllnet.att.net>
Message-ID: <QYQz9.280$vM1.20397@bgtnsc04-news.ops.worldnet.att.net>
Source record: 40032

BTI manual
Collins 312B4/5 manual original
Ford spark coil
Johnson 229 var inductor
Kenwood KPS-7 ps
Weston dc meter
Collins mech filter
Thord. filter choke
DRF coil set
Kenwood 230 VFO man. orig.
Hal ST-5000

check out under sellers: heytubeguy
emptying out 3 buildings: watch weekly
coming: 30 antique radio, parts, tubes (+WE types)

3769. Re: Amidon substitute?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 17:08:01 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <xJAPDt3xP+z9EwSO@fslife.co.uk>
Source record: 40033

Hi Leon,

>Sycom stock some of the Micrometals toroids, including the T-50-12:
>
>http://www.sycomcomp.co.uk
Yes, this company were suggested earlier in this thread.

I spoke with Robin earlier today6 and have placed an order.

Thank you again.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3770. Re: Stop the extinction... 2036

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 17:18:33 UTC
From: MTV <mvolzRemoveTheseFourWords@houston.rr.com>
Message-ID: <3DCFE617.9DD01223@houston.rr.com>
Source record: 40034
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

And this has what to do with radio?

pawe@hotmail.com wrote:

> Please read this itll only take you a minute - it could be your local area next...!
> The corporations are at it again, this time focussing their attentions on a small part of the SW of England. A large international mining company claims to have found platinum in the UK and in their quest for money are going to extinquish at least 1 species from our planet. Butterflies, birds, small mammals, fish and even some plants are at risk from extinction if this corporate monster is not stopped.
>
> Please, please, please send as many emails as you can to register your views at info@mcleaninternationalmining.com - like i said, it could be your area next...
>
> Thanks
> Harry
> P.A.W.E
> yulvcnjhmkqwjrdnimflpqplwgyjuwvmjqsszwxpgsrprmsxtjwhkodcjntwgluwjyrxhjjphp

--
This mail checked and found to be free of any virus.

3771. Cable Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 17:27:39 UTC
From: fazamy@aol.com
Message-ID: <20021111122739.12811.00004050@mb-fk.aol.com>
Source record: 40035

Problem: In connecting a keyer to a tcvr, I'm using a Radio Shack microphone cable product: 2C/24 Type LL2x. (I assume that it is two conductors, 24 gauge. And there is a braid shield.) At the keyer end there is an RCA plug; at the tcvr there is a phono plug. I feel the gauge is too large because at times there are intermittent shorts and I have to jiggle the wire to straighten it out. Is there a smaller gauge product I can use for this application?

Thanks,
Evan
KB2AMY

3772. Radio Frequency Choke manufacturers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 18:13:34 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <O7ga4ON$z9EwHC@fslife.co.uk>
Source record: 40036

Can anyone on the group supply me with any RF plate choke manufacturers
that are still in business?

I believe R.S. Miller are no more.

Any others?

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3773. FA: HV Diode Modules for Large amp Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 19:10:26 UTC
From: GaryH <garyh@bellsouth.net>
Message-ID: <_cTz9.3830$wO4.1641@news.bellsouth.net>
Source record: 40037

4 Diode Modules for your next HF amp power
supply.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=800962693

3774. W8MMQ Radio mods page

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 19:23:16 UTC
From: Daniel Hicks <w8mmq-NOSPAM@email.com>
Message-ID: <3dd00343$0$17648$2c3e98f8@news.voyager.net>
Source record: 40039

Check out the W8MMQ web page:
http://www.w8mmq.com/

Also, the W8MMQ Radio Mods page:
http://www.w8mmq.com/mods/
There are over 1,200 radio mods listed.

If you can't find a mod at my site, another good source for mods is
http://mods.dk/

3775. Re: HP 5340A vs HP 5342A?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 19:24:35 UTC
From: Yrrah <harke.smits@hccnet.nl>
Message-ID: <aqp01u$kt9$1@news.hccnet.nl>
Source record: 40038

In my humble opinion: the HP 5345A is worth its weight in gold.....
cheers, Harke

Rick Karlquist <richard@karlquist.remove.this.com> schreef in berichtnieuws
EgDz9.1278$To1.262@sccrnsc01...
>

3776. Re: Commercial Kits for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 19:47:40 UTC
From: Simon <st599@ecs.soton.ac.uk>
Message-ID: <f820tus14a4ohea348qh752rt74b5iqq91@4ax.com>
Source record: 40040

Thanks,

I looked at the black forest and it looks just the thing I'm after.

As long as I bought a ready made kit I should be able to get away with
it - it's part of the regs for the foundation licence.

Thanks

Simon

On Sun, 10 Nov 2002 20:01:42 -0500, "xpyttl"
<xpyttl_nospam@earthling.net> wrote:

>Hands Electronics <http://www.rf-kits.demon.co.uk/> has quite a few nice
>kits. They are a tad pricey on this side of the pond, but over there they
>probably would look a bit more attractive. Also, the DL-QRP club
><http://www.werdau.net/dl-qrp-ag/> has a Black Forest rig that is pretty
>close to what you describe which I believe they have a kit for. Again, it
>may look a little more attractive on that side of the Atlantic. Don't know
>if the QRP Club satisfies your need for "commercial", but Sheldon's rigs
>certainly should.
>
>Others have mentioned the K2, which is an extraordinary radio. But by the
>time you get the SSB option and get it over there, pay the duty, etc. you
>are probably going to be in the 1500 Euro neighborhood, maybe more.
>
>..
>
>"Simon" <st599@ecs.soton.ac.uk> wrote in message
>news:92ctsusa4mtjt7ltmhnnlroqdp4tuf1b39@4ax.com...
>> Hi
>>
>> I'm currently looking for a low power transceiver kit for operation in
>> the HF Bands. The specs would be as follows:
>

3777. Re: Commercial Kits for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 19:59:20 UTC
From: SB <susantv69_uk@btinternet.com>
Message-ID: <aqp26n$lj0$1@knossos.btinternet.com>
Source record: 40041

Simon <st599@ecs.soton.ac.uk> wrote in message
news:92ctsusa4mtjt7ltmhnnlroqdp4tuf1b39@4ax.com...
> Hi
>
> I'm currently looking for a low power transceiver kit for operation in
> the HF Bands. The specs would be as follows:
>
> Must be commercially available
>
> RF output tuneable to 10W or less
>
> Frequency display (preferrable)
>
> SSB-AM and CW operation
>
> Small portable preferable battery operated.
>
> These limitations occur as I've currently only got time to study for
> an M3 licence, which prevents me from using a built from scratch
> transceiver.
>
> Also which bands would peole recommend for a newbie.
>
> Thanks
>
> Simon

Simon,

Please be aware of the fact that the M3 license forbids use of any kit (ready built or self assembled) unless it has been approved by the authorities. You will need to check this out with the kit manufacturer.

Regards Susan.

3778. Sylvania 6481 coaxial triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 20:26:07 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <RhHSRWGfJB09EAsC@ifwtech.co.uk>
Source record: 40044

Does anyone have operating data on the Sylvania 6481 coaxial triode,
please - as used in the General Radio "Unit Oscillator" Type 1209-B
covering 250 to 920 MHz?

In particular the voltage/current rating of the heater?

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3779. 2N2-40 report ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 20:27:25 UTC
From: Daniel <dsavel@wanadoo.fr>
Message-ID: <aqp7afnpu1@news-reader10.wanadoo.fr>
Source record: 40046

LO,
I'm looking for the ARRL report of the 2N2-40...
DnL

3780. Re: Commercial Kits for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 20:30:12 UTC
From: Simon <st599@ecs.soton.ac.uk>
Message-ID: <2n40tus00lfndecggr6ekh9qacct1hlvvu@4ax.com>
Source record: 40042

How would one go about getting the RA to authorise use of a kit, I'm
not willing to stump up for the elecraft kit just because someone at
the RA says it's better.

If it's a matter of testing, I can do that myself using a spectrum
analyser or VNA to test the output frequencies and powers.

On Mon, 11 Nov 2002 19:59:20 +0000 (UTC), "SB"
<susantv69_uk@btinternet.com> wrote:

>
>Simon <st599@ecs.soton.ac.uk> wrote in message
>news:92ctsusa4mtjt7ltmhnnlroqdp4tuf1b39@4ax.com...
>> Hi
>>
>> I'm currently looking for a low power transceiver kit for operation in
>> the HF Bands. The specs would be as follows:
>>
>> Must be commercially available
>>
>> RF output tuneable to 10W or less
>>
>> Frequency display (preferrable)
>>
>> SSB-AM and CW operation
>>
>> Small portable preferable battery operated.
>>
>> These limitations occur as I've currently only got time to study for
>> an M3 licence, which prevents me from using a built from scratch
>> transceiver.
>>
>> Also which bands would peole recommend for a newbie.
>>
>> Thanks
>>
>> Simon
>
>Simon,
>
>Please be aware of the fact that the M3 license forbids use of any kit
>(ready built or self assembled) unless it has been approved by the
>authorities. You will need to check this out with the kit manufacturer.
>
>Regards Susan.

>

3781. More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 20:38:57 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <jc40tu0pn2qkeg6kvmi5rqlse8vs01s5ua@4ax.com>
Source record: 40043
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

There has been some discussion on this NG about how to detect the location of a transmitter in the HF region (80 and 40 meters is the subject of some interest here) using everything from a handheld radio's loopstick to a curtain array that will cover several dozen acres.

Suppose, just suppose I wanted to fix a small, lightweight antenna in a single position and in some way figure out the direction of a distant signal relative to some known horizontal axis of the antenna.

In the old days, we would have actually rotated a coil "loop antenna": relative to a fixed "sense antenna" and driven the motor on the coil to null the combined cardioid signal of sense added to loop. By measuring the motor's position and driving a meter in some sort of goniometer arrangement, we could then use the meter pointer to locate the signal relative to the coil's orientation.

When we did this arrangement, radio receivers were moosey things that glowed in the dark, and it was far easier to rotate a loop than do all that messy digital stuff with hot fets.

That is no longer true. A good receiver chip that will amplify and limit the signal, producing a digital output, is the size of your thumbnail or smaller. Digital power is a nickel a gigainstruction or thereabouts. At any rate, it seems to me that there is a better way to DF or ADF (direct bearing readout) on an HF signal than motors and rotating coils. Ferrites and toroid techniques are available that we didn't even dream of in the old days.

I've done a fairly exhaustive web search to see if this has been done before and have come up dry. However, my web search skills are not as honed as some in this group, I'm sure. Anybody got a pointer to a "how to" article on HF ADF using a small, fixed antenna?

Jim

Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

3782. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 21:15:27 UTC
From: Joop van der Velden <pe1dna@amsat.org>
Message-ID: <VA.00000567.0b3adc14@amsat.org>
Source record: 40045
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Jim Weir wrote:
> There has been some discussion on this NG about how to detect the location of a
> transmitter in the HF region (80 and 40 meters is the subject of some interest
> here) using everything from a handheld radio's loopstick to a curtain array that
> will cover several dozen acres.

It seems to me that nowadays, when we all can have nanosecond-accurate
gps-based synchonized clocks also synchronizing our receivers, it should
be possible to find the direction and distance of a transmitter without
any directional antenna.

With 3 or more distant receivers, correlating their reception, it should
be possible to pinpoint a transmitter within milliseconds. Is anybody
aware of amateur projects that uses this principle?

--
Joop van der Velden
pe1dna@amsat.org

3783. Re: COP8782C microcontroller

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 21:24:46 UTC
From: Grzegorz Lentka <leo.rendor@wp.pl.bez_spamu>
Message-ID: <3DD0201E.2C63@wp.pl.bez_spamu>
Source record: 40028
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Peter Koch wrote:
>
> Hi all,
>
> Anybody who can guide me to / provide me with a datasheet of
> the old COP8782C microcontroller from National Semiconductors...???
>
> Nothing is available on the National's homepage and my Internet
> search gave no usefull results...:-(
>
> Also, I would be very much interested in circuit diagrams for a
> programmer for these devises.
>
> Thanks a lot in advance.
>
> -Peter
>
> OZ1LFI
>
> pk@kom.auc.dk

Hi,
You can find this datasheet on www.fretradezone.com, but You must
register for paid subscription (I didn't).
--
Grzegorz "GREG" Lentka

"Serva ordinem at ordo te servabit"

3784. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 21:37:52 UTC
From: Atlas <nospam.shf@pandora.be>
Message-ID: <QqVz9.12583$p56.2100908286@hestia.telenet-ops.be>
Source record: 39947
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Hello,

Me,and some friends are active with direction finding stuff.We build a doppler with 4 antennas and it also works on 28 MHz (when mounted on the roof of a car).For lower frequencies is this not so good because the antenna's are too close to eachother.

But there is a system with 2 crossed loops and a sense antenna in the middle.You see (or saw) that on top of ships.You can detect the direction (not the distance)
A few weeks ago,I also wanted to know more about this,but didn't found anything on the web (except where to buy it).

So any tips about that system will be appreciated.

Bart

3785. Re: HP 5340A vs HP 5342A?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 21:43:59 UTC
From: steveq@bigtime.tip.csiro.au
Message-ID: <aqp8at$ti0$1@bigtime.tip.csiro.au>
Source record: 39948

In article <aqp01u$kt9$1@news.hccnet.nl>, Yrrah <yrrah53@yahoo.com> wrote:
>In my humble opinion: the HP 5345A is worth its weight in gold.....
>cheers, Harke
>
Having used one I have to agree. It is a reciprocal counter, meaning that it counts its' (500MHz) timebase using the input signal to gate the count, then calculates the frequency. Result, high resolution measurements dependent only on gate time, not input frequency.

BUT......

Repairing one is another matter. It is pre-micro, and it is packed with TTL chips that work like a big state machine. The only sane way to trouble shoot it is with the manual (of course) AND a logic analyser. (been there twice)

BTW, the "Rolls Royce" of the HP counters has to be the 5370. Like most high performance counters it used interpolation, but the 5370 did this digitally using a dual vernier method of interpolation that had a patented triggered phase-locked oscillator (using HP's 5GHz silicon-on saphire process)for the vernier that was self-calibrating. This gave an effective time base gating resolution of 100ps (equivalent to having a 10GHz timebase oscillator!). (Check out the August 1978 HP Journal for mor info)

They just don't make 'em like they used to :-(

Cheers
Steve Quigg.
>Rick Karlquist <richard@karlquist.remove.this.com> schreef in berichtnieuws
>EgDz9.1278$To1.262@sccrnsc01...
>>
>
>

3786. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 22:09:04 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <5ga0tuokk9dn1m4bm85o05bv0h9e8m6qt3@4ax.com>
Source record: 39950
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Either I was not clear in the original request OR you intended to start another thread, which is OK also.

However, my intention is NOT to pinpoint a transmitter location using multiple receivers. The intention is simply a solid state A-DF without the use of rotating loops for a fixed location.

Jim

Joop van der Velden <pe1dna@amsat.org>
shared these priceless pearls of wisdom:

->Jim Weir wrote:
->> There has been some discussion on this NG about how to detect the location of a
->> transmitter in the HF region

->It seems to me that nowadays, when we all can have nanosecond-accurate
->gps-based synchonized clocks
->
->With 3 or more distant receivers, correlating their reception, it should
->be possible to pinpoint a transmitter within milliseconds.
Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

3787. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 22:10:05 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <7ka0tu0hfebg7k19qm0v8cclbltrl7fkst@4ax.com>
Source record: 39949
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Precisely the idea I was looking for, and like you, couldn't find any technical details at all.

Jim

"Atlas" <nospam.shf@pandora.be>
shared these priceless pearls of wisdom:

->But there is a system with 2 crossed loops and a sense antenna in the
->middle.You see (or saw) that on top of ships.You can detect the direction
->(not the distance)
->A few weeks ago,I also wanted to know more about this,but didn't found
->anything on the web (except where to buy it).
Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

3788. info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-11 23:33:05 UTC
From: Tazanator <tazanator1@hotmail.com>
Message-ID: <R6Xz9.1039$QZ.200@sccrnsc02>
Source record: 39952

I have a 0-10mhz scope and the sbl-1 mixer how do I rig up a system to allow the scope to work onthe tech bands (2meter 70 CM and 6 meter) Please be detailed ... just learning

3789. Re: Commercial Kits for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 00:23:54 UTC
From: eric@elecraft.com
Message-ID: <ad8a96ee.0211111623.702a5e34@posting.google.com>
Source record: 39954

The K2 has been approved by the U.K. authorities for the M3 license.

73, Eric WA6HHQ
http://www.elecraft.com
==========

"SB" <susantv69_uk@btinternet.com> wrote in message news:<aqp26n$lj0
>
> Please be aware of the fact that the M3 license forbids use of any kit
> (ready built or self assembled) unless it has been approved by the
> authorities. You will need to check this out with the kit manufacturer.

3790. Re: Stop the extinction... 2036

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 00:31:11 UTC
From: g0mem <isembardbinladen@hotmail.com>
Message-ID: <AZXz9.47539$8P5.43993@news-binary.blueyonder.co.uk>
Source record: 39955
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Its SPAM, I live in SW england, and I never heard of such a thing.

73 de G0MEM

"MTV" <mvolzRemoveTheseFourWords@houston.rr.com> wrote in message
news:3DCFE617.9DD01223@houston.rr.com...
> And this has what to do with radio?
>
>
> pawe@hotmail.com wrote:
>
> > Please read this itll only take you a minute - it could be your local
area next...!
> > The corporations are at it again, this time focussing their attentions
on a small part of the SW of England. A large international mining company
claims to have found platinum in the UK and in their quest for money are
going to extinquish at least 1 species from our planet. Butterflies, birds,
small mammals, fish and even some plants are at risk from extinction if this
corporate monster is not stopped.
> >
> > Please, please, please send as many emails as you can to register your
views at info@mcleaninternationalmining.com - like i said, it could be your
area next...
> >
> > Thanks
> > Harry
> > P.A.W.E
> >
yulvcnjhmkqwjrdnimflpqplwgyjuwvmjqsszwxpgsrprmsxtjwhkodcjntwgluwjyrxhjjphp
>
> --
> This mail checked and found to be free of any virus.
>
>

3791. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 00:38:29 UTC
From: Dave Holford <holford@sympatico.ca>
Message-ID: <3DD04D85.7E0F269@sympatico.ca>
Source record: 39956
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Atlas wrote:
>
> Hello,
>
> Me,and some friends are active with direction finding stuff.We build a
> doppler with 4 antennas and it also works on 28 MHz (when mounted on the
> roof of a car).For lower frequencies is this not so good because the
> antenna's are too close to eachother.
>
> But there is a system with 2 crossed loops and a sense antenna in the
> middle.You see (or saw) that on top of ships.You can detect the direction
> (not the distance)
> A few weeks ago,I also wanted to know more about this,but didn't found
> anything on the web (except where to buy it).
>
> So any tips about that system will be appreciated.
>
> Bart

Try searching for hf+radio+foxhunting or something similar. I got over
1,700 hits with that one and with hf+radio+df it went up to 18,900.
Somewhere in there you will probably find some useful information.

I understand it is quite a popular hobby in Europe and seem to recall
having read a number of articles on HF DFing in various Ham
publications.

Dave

3792. Re: 2N2-40 report ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 00:52:27 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ut0kc03d24dub8@corp.supernews.com>
Source record: 39957

Was there ever an ARRL report on the 2N2/40? I would be real surprised. In fact, I'm sure I would have noticed since I built one.

You can read lots about it on http://www.qsl.net/k8iqy

also at http://www.fix.net/~jparker/norcal/2n2/2n2.htm

There is an outstanding QRPp article which, unfortunately, isn't available online, but there is enough information on k8iqy's site to build one. I would recommend ordering the QRPp reprint from Norcal though, it really is an outstanding article.

..

"Daniel" <dsavel@wanadoo.fr> wrote in message
news:aqp7afnpu1@news-reader10.wanadoo.fr...
> LO,
> I'm looking for the ARRL report of the 2N2-40...
> DnL

3793. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 01:39:56 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <3pm0tuscokp67p2ib4df6fb49plqu0jprm@4ax.com>
Source record: 39958
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Precisely so. And if you estimate 2 minutes checking out each hit, in the first case you've slogged through 56 hours of time and in the second case you are up to 630 hours. What both I and the other gentleman who was looking for information were asking was if there were some other search criteria that might turn up what we were looking for in a bit less time.

Jim

Dave Holford <holford@sympatico.ca>
shared these priceless pearls of wisdom:

->
->
->Try searching for hf+radio+foxhunting or something similar. I got over
->1,700 hits with that one and with hf+radio+df it went up to 18,900.
->Somewhere in there you will probably find some useful information.

3794. Re: Sylvania 6481 coaxial triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 02:12:41 UTC
From: Mike Monett <Die@Spam.Bots>
Message-ID: <3DD06399.376A@Spam.Bots>
Source record: 39951

Ian White, G3SEK wrote:
>
> Does anyone have operating data on the Sylvania 6481 coaxial triode,
> please - as used in the General Radio "Unit Oscillator" Type 1209-B
> covering 250 to 920 MHz?
>
> In particular the voltage/current rating of the heater?
>
> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek

A quick google shows the 6481 is equivalent to the CV5224 and RT434:

http://w1.871.telia.com/~u87127076/tabeller/cv2000.htm

Frank's electron Tube Data sheets has many listings at

http://www.mif.pg.gda.pl/homepages/frank/vs.html

The RT434 data sheet is at

http://www.mif.pg.gda.pl/homepages/frank/sheets/137/r/RT434.pdf

The heater is 6.3V @400ma.

A picture of the 6481 is at

http://www.tubecollector.org/6481.htm

That tube might be hard to find. Have you considered modifying the
oscillator to use a transistor?

The Philips PBR941 would handle the frequency but might be limited in
power output. Philips has other versions with higher current and
collector breakdown voltage. See

http://www.semiconductors.philips.com/selectionguides/tables/15613.html

Good Luck!

Mike

3795. WANTED: Info on Collins HF Amplifier Module

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 02:32:52 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <xPZz9.12523$lj.328580@read1.cgocable.net>
Source record: 39959

I recently picked up an HF Amplifer Module. Was told it was from a Collins Radio, but have NO data on it. I have attached a link to a picture of it...Does anyone recognize this unit and/or have any documentation on it. Supposed to be good for 100W and range of 4 - 30 Mhz.
http://home.cogeco.ca/~rodemi/Collins%20HF%20Amp1.jpg
Thank You for whatever help you can offer....73...Norm VE3CZI

3796. Re: HP 5340A vs HP 5342A?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 03:02:20 UTC
From: Mike Monett <Die@Spam.Bots>
Message-ID: <3DD06F3C.60A1@Spam.Bots>
Source record: 39953

steveq@bigtime.tip.csiro.au wrote:
>
> In article <aqp01u$kt9$1@news.hccnet.nl>, Yrrah <yrrah53@yahoo.com> wrote:
> >In my humble opinion: the HP 5345A is worth its weight in gold.....
> >cheers, Harke
> >
> Having used one I have to agree. It is a reciprocal counter, meaning that it
> counts its' (500MHz) timebase using the input signal to gate the count, then
> calculates the frequency. Result, high resolution measurements dependent only
> on gate time, not input frequency.
>
> BUT......
>
> Repairing one is another matter. It is pre-micro, and it is packed with TTL
> chips that work like a big state machine. The only sane way to trouble shoot
> it is with the manual (of course) AND a logic analyser. (been there twice)
>
> BTW, the "Rolls Royce" of the HP counters has to be the 5370. Like most high
> performance counters it used interpolation, but the 5370 did this digitally
> using a dual vernier method of interpolation that had a patented triggered
> phase-locked oscillator (using HP's 5GHz silicon-on saphire process)for the
> vernier that was self-calibrating. This gave an effective time base gating
> resolution of 100ps (equivalent to having a 10GHz timebase oscillator!).
> (Check out the August 1978 HP Journal for mor info)
>
> They just don't make 'em like they used to :-(
>
> Cheers
> Steve Quigg.

I'm fortunate to be a proud owner. Bought it new in the 80's and it still works great. One minor quibble - with interpolation, the single-shot time resolution is 20ps. With averaging, you can measure down to 100 femtoseconds. Here's a nice analysis of the performance:

http://www.febo.com/time-freq/5370B/

Mike

3797. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 04:00:17 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <aqpue4$om6$1@slb0.atl.mindspring.net>
Source record: 39960
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Jim, I know of a method called 'Time of Arrival' which requires some
physical space for the antennas, but it works on HF. Possibly adding that
to a search could be useful.

Interesting subject.... As far as I know, 'time of arrival' is the most
common technique but it DOES require three horizontally separate antennas
which need lots of room.

==========

I also suspect using several Quads, or similar directional antennas,
could be switched by solid state RF combining and such to simulate a
rotating antenna. Similar methods are used at VHF for doppler DF although
they use hard on/off switching. If you got the phasing right, and used
linear attenuating switching, you should get a lot closer to getting the
effect of rotation.

Interesting subject.... As far as I know, 'time of arrival' is the most
common technique but it DOES require three horizontally separate antennas
which need lots of room.

Jim Pennell
N6BIU

3798. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 04:35:45 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3dd08519$1@news.netacc.net>
Source record: 39961
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Well, your not being much of an engineer, and even less of a researcher, I guess it would be easier if someone just designed it for you. So.....

2001 ARRL handbook, page 23.63, fig 23.74

Steve

"Jim Weir" <jim@rst-engr.com> wrote in message news:3pm0tuscokp67p2ib4df6fb49plqu0jprm@4ax.com...
>
> Precisely so. And if you estimate 2 minutes checking out each hit, in the first
> case you've slogged through 56 hours of time and in the second case you are up
> to 630 hours. What both I and the other gentleman who was looking for
> information were asking was if there were some other search criteria that might
> turn up what we were looking for in a bit less time.
>
> Jim
>
> Dave Holford <holford@sympatico.ca>
> shared these priceless pearls of wisdom:
>
> ->
> ->
> ->Try searching for hf+radio+foxhunting or something similar. I got over
> ->1,700 hits with that one and with hf+radio+df it went up to 18,900.
> ->Somewhere in there you will probably find some useful information.
>
>
>

3799. Re: info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 05:19:34 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <Gb0A9.1375$vM1.104972@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39962

I believe that you are talking about using this system as a Spectrum Analyzer. There have been some articles over the years, such as the Poor Man's Spectrum Analyzer. Unfortunately, I don't have that information on hand.

Pete

3800. Has anyone ... YES I HAVE!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 07:22:56 UTC
From: John Smith <someone@microsoft.com>
Message-ID: <aqq9p3ndi1@newstoo.ericsson.se>
Source record: 39963

> has anyone got a simple design for a dc dc converter to generate about 30v
> from 5-12v.Must not emite rf only needs to give 1ma.tnx
On my homepages, at http://w1.859.telia.com/~u85920178/ you will find several hundred projects, most of which have PCB foils and component overlays.

The project at http://w1.859.telia.com/~u85920178/power/vconv_01.htm can be used to generate just about any voltage from -90 to +90 and uses no transformers! It can only deliver a few milliamperes, depending upon the final output voltage needed. I have also shown one use, for replacing HT batteries in antique radios.

http://w1.859.telia.com/~u85920178/use/tubepsu.htm shows a technique using a transformer and can be used to give many watts. I use a similar circuit to run my oil-fired boiler during power cuts. The only difference is that I use an external oscillator since I needed somewhere near 50Hz.

Hope you find the info interesting. Took me hours to put the projects together!

BR from Harry

3801. Re: Sylvania 6481 coaxial triode

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 07:23:39 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <sre9DAC7xK09EAbo@ifwtech.co.uk>
Source record: 39967

Mike Monett wrote:
[exactly where to find the data]

Thanks, Mike, that just about covers it. I hadn't realised that tube data was so easy to find.

>That tube might be hard to find. Have you considered modifying the
>oscillator to use a transistor?
>
Fortunately the tube is there, and only the power supply is missing.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3802. Re: P.S. Transformer source

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 07:28:14 UTC
From: John Smith <someone@microsoft.com>
Message-ID: <aqqa31nsp1@newstoo.ericsson.se>
Source record: 39964

http://w1.859.telia.com/~u85920178/use/tubepsu.htm is what you need. You find it on my homepages at http://w1.859.telia.com/~u85920178 It basically says that you can use transformers backwards and there I give two alternatives:

1. Two 250 - 12v transformers to give 250v isolated
2. One 250v - 12v in a transistor inverter cct.

Both will give you what you want.

Have fun - Harry

3803. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 09:08:45 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <G28yMeBdUM09Ewur@fslife.co.uk>
Source record: 39966
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Gentlemen,

You're not looking in the right place:-)

Trying some advanced search techniques turned up the following very
interesting site:

http://www.silcom.com/~pelican2/

Now if this work could be developed into a compact HF mobile DF system
complete with LCD showing the polar plot!

--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3804. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 13:07:45 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <aqquf3$cbgbk$1@ID-61331.news.dfncis.de>
Source record: 39968

Everything you wanted to know about Huff Puff stabilisers, with links to all the Huff Puff projects that I know of on the web, including some Pic versions:

http://www.hanssummers.com/radio/huffpuff/contents.htm

Hans Summers
http://www.HansSummers.Com

"Leon Heller" <leon@heller123.freeserve.co.uk> wrote in message news:aqoaab$3io$2@newsg4.svr.pol.co.uk...
>
> "Jason" <kc7eip_nospam@shaw.ca> wrote in message
> news:tMwz9.775668$Ag2.26874233@news2.calgary.shaw.ca...
> > Well i am in the process of designing my own 40 meter txcvr.I'm along way
> > from going to copper and solder, but I have a couple of ideas that i
> > wanted to put out to the field. Here is what I'm wanting to
> > accomplish,granted i know there are easier ways but here is what i was
> > thinking on. I was wanting to use a combination of pics one as a freq
> > counter that would feed the second the freq at specified intervals then
> the
> > second could control the voltage to the varactor to adjust the freq up or
> > down as needed..
>
> Try a web search for 'Huff and Puff' stabiliser, some people have used PICs
> for this. Or use a PLL synthesiser controlled by the PIC.
>
> 73, Leon
> --
> Leon Heller, G1HSM
> leon_heller@hotmail.com
> http://www.geocities.com/leon_heller
>
>

3805. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 13:13:53 UTC
From: Keith Wootten <keith.w@ntlworld.Xcom>
Message-ID: <7ac0HtXR6P09Ewao@ntlworld.com>
Source record: 39969
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

In message <jc40tu0pn2qkeg6kvmi5rqlse8vs01s5ua@4ax.com>, Jim Weir
<jim@rst-engr.com> writes

<snipped>

>There has been some discussion on this NG about how to detect the location of a
>transmitter in the HF region (80 and 40 meters is the subject of some interest
>here) using everything from a handheld radio's loopstick to a curtain
>array that
>will cover several dozen acres.
>
>Suppose, just suppose I wanted to fix a small, lightweight antenna in a single
>position and in some way figure out the direction of a distant signal relative
>to some known horizontal axis of the antenna.

Jim, http://www.uspto.gov/ (US Patent Office) is a useful resource.
Enter "radio direction finder" or similar in the patent search section -
you'll need to download a suitable viewer if you don't already have one,
the FAQ tells how and what. US patent 4,302,759 and 4,368,470 are
examples similar to what you want, but there are many more. This
particular patent uses two orthogonal loops with a whip and some phase
detection stuff.

It never ceases to amaze me just what sort of obvious things can be
patented, along with their seemingly endless variations.

Cheers
--
Keith Wootten
Extend surname and exorcise for e-mail.

3806. Re: COP8782C microcontroller

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 13:31:27 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3DD102AE.C5528E89@mfi.net>
Source record: 39970
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

```
Grzegorz Lentka wrote:
>
> Michael A. Terrell wrote:
> > http://www.freetradezone.com
> > ^ An e is missing from your URL.
> > --
> >
> > Michael A. Terrell
> > Central Florida
>
> Sorry...
> --
> Grzegorz "GREG" Lentka
>
> "Serva ordinem at ordo te servabit"

No problem, it just makes it easier for someone to use your link if it
works. :)
--

Michael A. Terrell
Central Florida
```

3807. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 14:48:26 UTC
From: Dave Holford <holford@sympatico.ca>
Message-ID: <3DD114BA.4E046A62@sympatico.ca>
Source record: 39971
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

And I suppose you read each piece of SPAM?

If you are dumb enough to check out each search result without applying
a modicum of intelligence to narrowing the search you must lead a
singularly boring life.

Dave

Jim Weir wrote:
>
> Precisely so. And if you estimate 2 minutes checking out each hit, in the first
> case you've slogged through 56 hours of time and in the second case you are up
> to 630 hours. What both I and the other gentleman who was looking for
> information were asking was if there were some other search criteria that might
> turn up what we were looking for in a bit less time.
>
> Jim
>
> Dave Holford <holford@sympatico.ca>
> shared these priceless pearls of wisdom:
>
> ->
> ->
> ->Try searching for hf+radio+foxhunting or something similar. I got over
> ->1,700 hits with that one and with hf+radio+df it went up to 18,900.
> ->Somewhere in there you will probably find some useful information.

3808. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 14:55:48 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3dd1166b$1@news.netacc.net>
Source record: 39972
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

"Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message
news:G28yMeBdUM09Ewur@fslife.co.uk...
>
> http://www.silcom.com/~pelican2/
>
> Now if this work could be developed into a compact HF mobile DF system
> complete with LCD showing the polar plot!
>

Nice for VHF and UHF but not easily scaled to HF due to the long
wavelengths.

The closest would be the No Such Agency's "Elephant Cages" at Udorn
Thailand, Synop Turkey, etc etc. These were electrically steared arrays
that took up lots and lots of real estate. I am sure the user interface has
been modernized to a nice video display vs the old analog scopes.

Steve

3809. Re: Stop the extinction... 2036

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 15:16:09 UTC
From: Dan/W4NTI <w4ntinospam@mindspring.com>
Message-ID: <aqr69l$db6$2@slb6.atl.mindspring.net>
Source record: 39974
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Sounds to me like a demented greener is having a fit.

Dan/W4NTI

"MTV" <mvolzRemoveTheseFourWords@houston.rr.com> wrote in message
news:3DCFE617.9DD01223@houston.rr.com...
> And this has what to do with radio?
>
>
> pawe@hotmail.com wrote:
>
> > Please read this itll only take you a minute - it could be your local
area next...!
> > The corporations are at it again, this time focussing their attentions
on a small part of the SW of England. A large international mining company
claims to have found platinum in the UK and in their quest for money are
going to extinquish at least 1 species from our planet. Butterflies, birds,
small mammals, fish and even some plants are at risk from extinction if this
corporate monster is not stopped.
> >
> > Please, please, please send as many emails as you can to register your
views at info@mcleaninternationalmining.com - like i said, it could be your
area next...
> >
> > Thanks
> > Harry
> > P.A.W.E
> >
yulvcnjhmkqwjrdnimflpqplwgyjuwvmjqsszwxpgsrprmsxtjwhkodcjntwgluwjyrxhjjphp
>
> --
> This mail checked and found to be free of any virus.
>
>

3810. Re: Stop the extinction... 2036

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 15:40:47 UTC
From: KB9TMP <kb9tmp@juno.com>
Message-ID: <ut287s3qi2og68@corp.supernews.com>
Source record: 39975
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

"g0mem" <isembardbinladen@hotmail.com> wrote in message
news:AZXz9.47539$8P5.43993@news-binary.blueyonder.co.uk...
> Its SPAM, I live in SW england, and I never heard of such a thing.
>
> 73 de G0MEM

It may be SPAM but it is also a real story.
Check out the news release on their web site at:
http://www.mcleaninternationalmining.com/pages/press.htm

You really need to keep up with your local news! ;^)

--
'73' From KB9TMP
"The secret of life is honesty and fair dealing,
if you can fake that, you've got it made."
-Groucho Marx

3811. Re: WANTED: Info on Collins HF Amplifier Module

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 15:52:47 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3DD123CF.FCE1FAAF@ix.netcom.com>
Source record: 39976

Norm VE3CZI wrote:
>
> I recently picked up an HF Amplifer Module. Was told it was from a Collins
> Radio, but have NO data on it. I have attached a link to a picture of
> it...Does anyone recognize this unit and/or have any documentation on it.
> Supposed to be good for 100W and range of 4 - 30 Mhz.
>

If one could read the type numbers on the transistors it would be
possible to make an intelligent guess, but it looks more like a 20 Watt
amp than 100. HF certainly, and posssibly designed for Class A use with
those emitter Rs. I personally would not use an SMB at the 100 watt
level either, and can't imagine Collins doing so.

The working voltage of the transistors and the turns ratio of the output
transformer will give you more clues.

73
Dan ac6ao g3ncr

3812. Re: Stop the extinction... 2036

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 15:54:29 UTC
From: g0mem <isembardbinladen@hotmail.com>
Message-ID: <CR9A9.50631$8P5.39555@news-binary.blueyonder.co.uk>
Source record: 39977
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

"KB9TMP" <kb9tmp@juno.com> wrote in message
news:ut287s3qi2og68@corp.supernews.com...
>
> "g0mem" <isembardbinladen@hotmail.com> wrote in message
> news:AZXz9.47539$8P5.43993@news-binary.blueyonder.co.uk...
> > Its SPAM, I live in SW england, and I never heard of such a thing.
> >
> > 73 de G0MEM
>
> It may be SPAM but it is also a real story.
> Check out the news release on their web site at:
> http://www.mcleaninternationalmining.com/pages/press.htm
>
> You really need to keep up with your local news! ;^)
>
> --
> '73' From KB9TMP
> "The secret of life is honesty and fair dealing,
> if you can fake that, you've got it made."
> -Groucho Marx
>
>
>

Ah the mining is going to be in Cornwall, which is 150 miles from me. I guess our local news is a bit too local!. It hasn't been on the national news either here.

Thanks for the info.

73 de G0MEM

3813. Re: Cable Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 16:02:50 UTC
From: Doug Smith <me@invalid.invalid>
Message-ID: <3DD1262A.556DAE90@invalid.invalid>
Source record: 39973

FAZAMY wrote:
> Problem: In connecting a keyer to a tcvr, I'm using a Radio Shack microphone
> cable product: 2C/24 Type LL2x. (I assume that it is two conductors, 24 gauge.
> And there is a braid shield.) At the keyer end there is an RCA plug; at the
> tcvr there is a phono plug. I feel the gauge is too large because at times
> there are intermittent shorts and I have to jiggle the wire to straighten it
> out. Is there a smaller gauge product I can use for this application?

I don't see that too large a gauge would directly cause this problem.
(it might be an *indirect* source)

You do literally mean a short, the transmitter keying when you aren't
pressing the key, right?

It is almost certain that there is a visible short in one of the two
plugs. You should be able to see it by removing the plastic covers,
flexing the cable, and looking carefully.

(that said, I would not rule out a defect in the middle of the cable. I
once bought a 12v transformer from RS and found the primary open right
out of the box.....)

Doesn't Radio Shack sell a prefabricated cable with a RCA plug on one
end and a 1/4" phone plug on the other? (if they don't - I would still
be tempted to buy a prefab cable with a RCA on one end. Cut off
whatever's on the other end and solder on a phone plug. They've done at
least half the work<grin>!)
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

3814. Re: Stop the extinction... 2036

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 16:18:04 UTC
From: Dan/W4NTI <w4ntinospam@mindspring.com>
Message-ID: <aqr9oi$b0j$1@slb6.atl.mindspring.net>
Source record: 39978
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I consider these ecowackos terrorists. Remember those forest fires a few months back out west? Why was that? Because those green wackos wouldn't let anyone clean out the underbrush. And if ANY sort of clearing was to be done to help break up fires they took em to court.

Got no use for them at all.

Dan/W4NTI

"KB9TMP" <kb9tmp@juno.com> wrote in message
news:ut287s3qi2og68@corp.supernews.com...
>
> "g0mem" <isembardbinladen@hotmail.com> wrote in message
> news:AZXz9.47539$8P5.43993@news-binary.blueyonder.co.uk...
> > Its SPAM, I live in SW england, and I never heard of such a thing.
> >
> > 73 de G0MEM
>
> It may be SPAM but it is also a real story.
> Check out the news release on their web site at:
> http://www.mcleaninternationalmining.com/pages/press.htm
>
> You really need to keep up with your local news! ;^)
>
> --
> '73' From KB9TMP
> "The secret of life is honesty and fair dealing,
> if you can fake that, you've got it made."
> -Groucho Marx
>
>
>

3815. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 17:16:41 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <ev92tucr1rqmhr4366crionet9qr2dq1b2@4ax.com>
Source record: 39979
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Mon, 11 Nov 2002 12:38:57 -0800, Jim Weir <jim@rst-engr.com> wrote:

>I've done a fairly exhaustive web search to see if this has been done before
>and have come up dry. However, my web search skills are not as honed as some in
>this group, I'm sure. Anybody got a pointer to a "how to" article on HF ADF
>using a small, fixed antenna?

How about the original Ryan Stormscope patent? It does pretty much
what you describe. Try searching the USPTO patent #4023408 and
following. There are many updates to that patent. I'm not certain
that Ryan's original ADF patent is on-line; but if it is, you should
see a reference to that technology as well...

HTH,

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

3816. Re: Radio Frequency Choke manufacturers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 17:56:32 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <rxpA9.770$B92.220303@newsfep2-win.server.ntli.net>
Source record: 39911

> Can anyone on the group supply me with any RF plate choke manufacturers
> that are still in business?
>
> I believe R.S. Miller are no more.
=========
If you mean by ' RF Plate choke' a choke in the anode power supply of a valve type RF power amplifier , I thought that even for commercial equipment these can be readily made around a polystyrene /Delrin / ceramic former , eg with adequate inductance for the freq. range while checking for unwanted resonance over the operating range.
In the Nov 2002 issue of QST ,on page 71 there is a photograph of the 'innards' of a ACOM 1000 RF Power Amp.(1.8 -50 MHz) with 2 chokes clearly visible ,one for HF the other for VHF (50 MHz)
From the Product Review article ACOM International is labelled as US distributor ,although their web appears to be www.hfpower.com and the price referred to is that of the manufacturer .If the manufacturer they might buy the chokes somewhere , although I suspect they make these components themselves .

In the UK ,Mainline in Leicester (not their Surplus Department) is usually a good source for a large variety of RF components.

Frank gm0csz.kn6wh@ntlworld.com

3817. Re: COP8782C microcontroller

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 18:03:32 UTC
From: Grzegorz Lentka <leo.rendor@wp.pl.bez_spamu>
Message-ID: <3DD14274.7986@wp.pl.bez_spamu>
Source record: 39965
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Michael A. Terrell wrote:
> http://www.freetradezone.com
> ^ An e is missing from your URL.
> --
>
> Michael A. Terrell
> Central Florida

Sorry...
--
Grzegorz "GREG" Lentka

"Serva ordinem at ordo te servabit"

3818. Re: Not sure about antenna tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 18:19:37 UTC
From: mcalhoun@ksu.edu
Message-ID: <aqrgnp$8ts@unix1.cc.ksu.edu>
Source record: 39980

>> Only ? Only 1.5:1 ?? You must be joking!
>In general, hams and CBers worry way too much about SWR. 50% reflected
>....[snip]....
>Below 30 Mhz with a reasonable feed line, working to get a 1.5:1 SWR
>lower is a waste of time.

With my not-center-fed 550-foot "dipole", the SWR routinely runs above
10 on all HF bands, but since I use open-wire line, I removed the SWR
meter so the high SWR would quit bothering me!-)

--Myron, W0PBV.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

3819. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 18:26:17 UTC
From: k7itm@aol.com
Message-ID: <3200347.0211121026.349aebe2@posting.google.com>
Source record: 39981
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

I recently had a look at a commercial RDF antenna that was an
appropriate size to put on a small airplane, if you wanted. It
covered all of HF and some above. I'm quite sure it's available to
anyone who wants to pay for it, though I suppose most of the people
who buy them do so with taxpayer money. As I recall, the antenna
structure itself was described as "annular slot". I was surprised by
its accuracy, though didn't have a chance to test it with as many
"real" signals as I might have liked.

Cheers,
Tom

Jim Weir <jim@rst-engr.com> wrote in message
news:<jc40tu0pn2qkeg6kvmi5rqlse8vs01s5ua@4ax.com>...
> There has been some discussion on this NG about how to detect the location of a
> transmitter in the HF region (80 and 40 meters is the subject of some interest
> here) using everything from a handheld radio's loopstick to a curtain array that
> will cover several dozen acres.
>
> Suppose, just suppose I wanted to fix a small, lightweight antenna in a single
> position and in some way figure out the direction of a distant signal relative
> to some known horizontal axis of the antenna.
>
> In the old days, we would have actually rotated a coil "loop antenna": relative
> to a fixed "sense antenna" and driven the motor on the coil to null the combined
> cardioid signal of sense added to loop. By measuring the motor's position and
> driving a meter in some sort of goniometer arrangement, we could then use the
> meter pointer to locate the signal relative to the coil's orientation.
>
> When we did this arrangement, radio receivers were moosey things that glowed in
> the dark, and it was far easier to rotate a loop than do all that messy digital
> stuff with hot fets.
>
> That is no longer true. A good receiver chip that will amplify and limit the
> signal, producing a digital output, is the size of your thumbnail or smaller.
> Digital power is a nickel a gigainstruction or thereabouts. At any rate, it
> seems to me that there is a better way to DF or ADF (direct bearing readout) on
> an HF signal than motors and rotating coils. Ferrites and toroid techniques are
> available that we didn't even dream of in the old days.
>
> I've done a fairly exhaustive web search to see if this has been done before
> and have come up dry. However, my web search skills are not as honed as some in
> this group, I'm sure. Anybody got a pointer to a "how to" article on HF ADF
> using a small, fixed antenna?

>
> Jim
>
> Jim Weir, VP Eng. RST Eng. WX6RST
> A&P, CFI, and other good alphabet soup

3820. Re: HP 5340A vs HP 5342A?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 18:44:59 UTC
From: Yrrah <harke.smits@hccnet.nl>
Message-ID: <aqri3b$l9u$1@news.hccnet.nl>
Source record: 39982

I bought two of these machines. And I hope, I never need to use the other one. But just in case.....
Harke

<steveq@bigtime.tip.csiro.au> schreef in berichtnieuws aqp8at$ti0$1@bigtime.tip.csiro.au...
> In article <aqp01u$kt9$1@news.hccnet.nl>, Yrrah <yrrah53@yahoo.com> wrote:
> >In my humble opinion: the HP 5345A is worth its weight in gold.....
> >cheers, Harke
> >
> Having used one I have to agree. It is a reciprocal counter, meaning that it
> counts its' (500MHz) timebase using the input signal to gate the count, then
> calculates the frequency. Result, high resolution measurements dependent only
> on gate time, not input frequency.
>
> BUT......
>
> Repairing one is another matter. It is pre-micro, and it is packed with TTL
> chips that work like a big state machine. The only sane way to trouble shoot
> it is with the manual (of course) AND a logic analyser. (been there twice)
>
> BTW, the "Rolls Royce" of the HP counters has to be the 5370. Like most high
> performance counters it used interpolation, but the 5370 did this digitally
> using a dual vernier method of interpolation that had a patented triggered
> phase-locked oscillator (using HP's 5GHz silicon-on saphire process)for the
> vernier that was self-calibrating. This gave an effective time base gating
> resolution of 100ps (equivalent to having a 10GHz timebase oscillator!).
> (Check out the August 1978 HP Journal for mor info)
>
> They just don't make 'em like they used to :-(
>
> Cheers
> Steve Quigg.
> >Rick Karlquist <richard@karlquist.remove.this.com> schreef in berichtnieuws

> >EgDz9.1278$To1.262@sccrnsc01...
> >>
> >
> >
>
>

3821. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 18:51:22 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <caj2tukpsronbkbkjh2iknm8oeqcl9kvol@4ax.com>
Source record: 39984
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

"Jim Pennell" <NoSpam@killspam.com>
shared these priceless pearls of wisdom:

-> Jim, I know of a method called 'Time of Arrival' which requires some
->physical space for the antennas, but it works on HF. Possibly adding that
->to a search could be useful.

Time of arrival techniques are useful where you have (a) a large amount of room
and (b) are operating at a single frequency or closely spaced frequencies or
have a chart of TDA versus frequency.

I'm looking at an antenna in a coffee cup that will work on both 40 and 80
meters without switching.

Jim

3822. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 18:52:29 UTC
From: k7itm@aol.com
Message-ID: <3200347.0211121052.16beac20@posting.google.com>
Source record: 39983
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

There must, of course, be some modulation that covers a broad enough spectrum that you have something to correlate.

For synchronization, who needs GPS? You can synchronize very accurately with a lot of other available signals. One example is broadcast television, which nicely transmits synchronization pulses and tone bursts. An ordinary television receiver locks to the color sync tone burst within a very few degrees...probably within a nanosecond or so. I'm under the impression that you have to get fairly fancy with GPS to get that good...we've been doing some GPS-synchronized acquisition using internet-controlled "receivers," and my understanding is that you don't get much better than 50 nanosecond relative sync stability. That's not bad, of course...that's only 50 feet of propagation distance. There's also a patented technique for getting withing a couple hundred nanoseconds, just using internet connections (and hardware that reads special packets). In any such system, of course, you should expect to calibrate out systematic errors.

Several years ago, I thought about how simply you might be able to make such a system. You'd like to make receivers which have very little drift of their delay times. I wondered how well you could do with something like a "direct conversion" I and Q receiver, digitizing the outputs and feeding them to a DSP. Put emphasis on a high TOI, so you can leave the bandwidth wide, so you don't have to have filters with narrow bandwidth and long delays that can drift around. As with lots of other ideas, I never found time to develop that one. Sigh. The "receivers" in the system I mentioned above have a 10MHz bandwidth, and have the luxury of residing in temperature-controlled environments, so phase (time) shifts aren't much of a problem. Of course, you have to be careful with your synchronization signal also.

Cheers,
Tom

Joop van der Velden <pe1dna@amsat.org> wrote in message news:<VA.00000567.0b3adc14@amsat.org>...
> Jim Weir wrote:
> > There has been some discussion on this NG about how to detect the location of a
> > transmitter in the HF region (80 and 40 meters is the subject of some interest
> > here) using everything from a handheld radio's loopstick to a curtain array that
> > will cover several dozen acres.
>
> It seems to me that nowadays, when we all can have nanosecond-accurate

> gps-based synchonized clocks also synchronizing our receivers, it should
> be possible to find the direction and distance of a transmitter without
> any directional antenna.
>
> With 3 or more distant receivers, correlating their reception, it should
> be possible to pinpoint a transmitter within milliseconds. Is anybody
> aware of amateur projects that uses this principle?

3823. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 18:55:58 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <mkj2tu85ovhh72ccj7rbl7hnalera8kcg7@4ax.com>
Source record: 39985
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Who forgot to give Steve his meds this morning?

{;-)

Jim

"Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
shared these priceless pearls of wisdom:

->Well, your not being much of an engineer, and even less of a researcher, I
->guess it would be easier if someone just designed it for you. So.....
->
->2001 ARRL handbook, page 23.63, fig 23.74
->
->Steve

3824. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 18:58:28 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <goj2tuoktqohgknfc4mvvfj51b0r61l0a1@4ax.com>
Source record: 39986
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

And Phil, I'm afraid you didn't quite understand the problem. Pseudodoppler VHF DF has been with us for several decades. However, bringing it down two orders of magnitude in frequency is a nontrivial task.

Jim

Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
shared these priceless pearls of wisdom:

->Gentlemen,
->
->You're not looking in the right place:-)

3825. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 19:08:43 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <ick2tukqoq52n936jso63kknapugevrisj@4ax.com>
Source record: 39987
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Keith...

Thanks for this bit of *very useful* information.

Jim

Keith Wootten <keith.w@ntlworld.Xcom>
shared these priceless pearls of wisdom:

->
->Jim, http://www.uspto.gov/ (US Patent Office) is a useful resource.
->Enter "radio direction finder" or similar in the patent search section -
->you'll need to download a suitable viewer if you don't already have one,
->the FAQ tells how and what. US patent 4,302,759 and 4,368,470 are
->examples similar to what you want, but there are many more. This
->particular patent uses two orthogonal loops with a whip and some phase
->detection stuff.

3826. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 19:09:49 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <qek2tusueiktfrm0ar28qksccr5l40ah5a@4ax.com>
Source record: 39989
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Are you and Steve Robbins related in some way??

Jim

Dave Holford <holford@sympatico.ca>
shared these priceless pearls of wisdom:

->And I suppose you read each piece of SPAM?
->
->If you are dumb enough to check out each search result without applying
->a modicum of intelligence to narrowing the search you must lead a
->singularly boring life.

3827. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 19:12:07 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <ajk2tu4g319qprb5iptna8drj4it08rugd@4ax.com>
Source record: 39988
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

There's a good thought. Thanks.

Jim

Jake Brodsky <frussle@erols.com>
shared these priceless pearls of wisdom:

->How about the original Ryan Stormscope patent? It does pretty much
->what you describe. Try searching the USPTO patent #4023408 and
->following.

3828. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 19:40:43 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0211121140.3fe01b3a@posting.google.com>
Source record: 39990
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Do a web search on 'StormScope'.

This detects and displayse the bearing and location of lightening discharges, and I believe works on 100 kHz. The same idea would probably work on any frequency and signal type.

If I recall, it uses two loop antennas and a sense antenna. Very compact, as it is typically mounted on aircraft. I don't know what they are doing now, but in the original design the loops were wound around a square chunk of ferrite.

Bearing is based on the relative amplitude in the two loops, with the sense antenna resolving the 180 degree ambiguity. The distance requires knowledge of the strength of the 'transmitter'. For the StormScope, it turns out that all lightening bolts average out to some mean value, 20000 amps, I believe.

Goodrich Aerospace is currently the maker of the StormScope. I think they have one model for fixed use.

Jim
N8EE

3829. Data on Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 20:23:29 UTC
From: Robert Offer <robert@g1zjp.freeserve.co.uk>
Message-ID: <aqrnvj$p69$1@news5.svr.pol.co.uk>
Source record: 39991

Hi all,
I have some stud mounted diodes - reference CV7160 (? manuf IOR) and
CV7262. Have done a "Google" search, but can only find further stocks -
anybody got any data on them, please?
Thanks
Bob
G1ZJP

3830. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 20:34:27 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <2P$uySOTXW09Ewrc@fslife.co.uk>
Source record: 39992
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Hi Steve,

>Nice for VHF and UHF but not easily scaled to HF due to the long
>wavelengths.
>
>The closest would be the No Such Agency's "Elephant Cages" at Udorn
>Thailand, Synop Turkey, etc etc. These were electrically steared arrays
>that took up lots and lots of real estate. I am sure the user interface has
>been modernized to a nice video display vs the old analog scopes.
I'll have to disagree with you there.

30 years ago when I was 16 and still wet behind the ears with regards
radio I dabbled with 807's on the AM broadcast band.

Now with a 1/4 wave inverted L plus waterpipe ground it comfortably hit
the 25 mile marker.

Late one night a local ham turned up on my doorstep (read that as 1am in
the morning). I had a cardiac when he asked if he could come in for a
cup of tea.

To cut a long story short he had a Perdio Marco Polo receiver, a 6 foot
vertical whip used as a sense antenna and a horizontally mounted ferrite
rod clipped to the car roof above the drivers door. All this equipment
went through some kind of phase comparator or whatever it was. He was
able to track stations single handed on any frequency from LF through HF
while on the move.

If this fella could do this in the 70's I'm damn sure you could put
something similar together now.

--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3831. Re: HP 5340A vs HP 5342A?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 21:24:47 UTC
From: steveq@bigtime.tip.csiro.au
Message-ID: <aqrrit$n5q$1@bigtime.tip.csiro.au>
Source record: 39993

In article <3DD06F3C.60A1@Spam.Bots>, Mike Monett <Die@Spam.Bots> wrote:
>steveq@bigtime.tip.csiro.au wrote:
>>
>> In article <aqp01u$kt9$1@news.hccnet.nl>, Yrrah <yrrah53@yahoo.com> wrote:
>> >In my humble opinion: the HP 5345A is worth its weight in gold.....
>> >cheers, Harke
>> >
>> Having used one I have to agree. It is a reciprocal counter, meaning that it
>> counts its' (500MHz) timebase using the input signal to gate the count, then
>> calculates the frequency. Result, high resolution measurements dependent only
>> on gate time, not input frequency.
>>
>> BUT......
>>
>> Repairing one is another matter. It is pre-micro, and it is packed with TTL
>> chips that work like a big state machine. The only sane way to trouble shoot
>> it is with the manual (of course) AND a logic analyser. (been there twice)
>>
>> BTW, the "Rolls Royce" of the HP counters has to be the 5370. Like most high
>> performance counters it used interpolation, but the 5370 did this digitally
>> using a dual vernier method of interpolation that had a patented triggered
>> phase-locked oscillator (using HP's 5GHz silicon-on saphire process)for the
>> vernier that was self-calibrating. This gave an effective time base gating
>> resolution of 100ps (equivalent to having a 10GHz timebase oscillator!).
>> (Check out the August 1978 HP Journal for mor info)
>>
>> They just don't make 'em like they used to :-(
>>
>> Cheers
>> Steve Quigg.
>
>I'm fortunate to be a proud owner. Bought it new in the 80's and it still works
>great. One minor quibble - with interpolation, the single-shot time resolution is
>20ps. With averaging, you can measure down to 100 femtoseconds. Here's a nice
>analysis of the performance:
>
You're right. I think I was getting confused with the 5360. When I checked the
article I quoted I see the following. Time Base clock is 200MHz (5ns period).
Vernier interpolates by factor of 256; -----> (5ns)/256 = 20 ps (approx).
Sorry for the mistake.
Cheers,
Steve Quigg.
> http://www.febo.com/time-freq/5370B/
>

>Mike

3832. Re: Anyone have 73 Aug99 Issue?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 21:29:21 UTC
From: Eskay <Nospamve3jua@rac.ca>
Message-ID: <3DD172B1.7FA616F3@rac.ca>
Source record: 39995
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Please if anyone could send this I would like a copy too.
VE3JUA,,,, sieb@uraxis.com

Brent wrote:

> I'm looking for the August 99 issue of 73. Actually the WA8TXT article about
> a psk31 interface.
> If anyone would scan it possible post to a web site or better yet email it
> to me at n9bc-----@msn.com remove the ----'s from the address. I would be
> greatly appreciated!
>
> Thanks
> Brent N9BC

3833. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 21:38:00 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3dd174ae$1@news.netacc.net>
Source record: 39994
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

"Jim Weir" <jim@rst-engr.com> wrote in message
news:mkj2tu85ovhh72ccj7rbl7hnalera8kcg7@4ax.com...
> Who forgot to give Steve his meds this morning?
>
> {;-)
>
> Jim
>
>

Jim

I have sworn off the meds. The last pill I took was one of those Viagra pills. It got stuck in my throat and I had a stiff neck for 3 hours :-)

Steve

3834. Re: Data on Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 21:40:54 UTC
From: Bill M <exray@no>
Message-ID: <ut2t56evgduccd@corp.supernews.com>
Source record: 39996

Robert Offer wrote:
>
> Hi all,
> I have some stud mounted diodes - reference CV7160 (? manuf IOR) and
> CV7262. Have done a "Google" search, but can only find further stocks -
> anybody got any data on them, please?
> Thanks
> Bob
> G1ZJP

Here's the International Rectifier website:
http://www.irf.com/

I didn't get any hits on those numbers, maybe you could inquire directly
to them in the case that they may be obsolete.

Good luck,
Bill

3835. Re: Data on Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 21:53:21 UTC
From: Bill M <exray@no>
Message-ID: <ut2tshjig62b4e@corp.supernews.com>
Source record: 39897

Robert Offer wrote:
>
> Hi all,
> I have some stud mounted diodes - reference CV7160 (? manuf IOR) and
> CV7262. Have done a "Google" search, but can only find further stocks -
> anybody got any data on them, please?
> Thanks
> Bob
> G1ZJP

Oops, more info. I just noticed that you are in the UK. I had no idea
that the military CV numbering was still being used into the solid state
era, but I think thats what you have on hand.
I found the CV7262...its a 1S5051RA zener diode, 51 volt, 10 watts.
I think these people could identify the other one...
http://www.bslexpress.com/

-BM

3836. Re: info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 22:17:30 UTC
From: "Thomas C. Sefranek" <WA1RHP@ARRL.net>
Message-ID: <_5fA9.1448$Bh1.123427@newsread1.prod.itd.earthlink.net>
Source record: 39898

Tazanator <tazanator1@hotmail.com> wrote in message
news:R6Xz9.1039$QZ.200@sccrnsc02...
> I have a 0-10mhz scope and the sbl-1 mixer how do I rig up a system to
allow
> the scope to work onthe tech bands (2meter 70 CM and 6 meter) Please be
> detailed ... just learning

You will need an ACCURATE Local Oscillator to feed the Mixer LO port.
(The LO will need to change for each band.)
The sum and difference between the LO and the signal is what will appear on
the IF port.
You then need to filter out the SUM and amplify the difference to feed your
scope.

Read about how receivers work, you learn while reading, and you will be able
to ask
better questions.

--
*
| __O Thomas C. Sefranek WA1RHP@ARRL.net
|_-\<,_ Amateur Radio Operator: WA1RHP
(*)/ (*) Bicycle mobile on 145.41, 448.625 MHz

http://hamradio.cmcorp.com/inventory/Inventory.html
http://www.harvardrepeater.org

3837. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 22:47:17 UTC
From: Atlas <nospam.shf@pandora.be>
Message-ID: <VxfA9.14607$l24.2420829299@hestia.telenet-ops.be>
Source record: 39899
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

aha,some usefull information.
I think i have some reading to to this week :-)

3838. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 23:28:38 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <d9gA9.2112$VH2.101649@newsfep1-gui.server.ntli.net>
Source record: 39900

"Jason" <kc7eip_nospam@shaw.ca> wrote in message
news:tMwz9.775668$Ag2.26874233@news2.calgary.shaw.ca...
> Well i am in the process of designing my own 40 meter txcvr.I'm along way
> from going to copper and solder, but I have a couple of ideas that i
> wanted to put out to the field. Here is what I'm wanting to
> accomplish,granted i know there are easier ways but here is what i was
> thinking on. I was wanting to use a combination of pics one as a freq
> counter that would feed the second the freq at specified intervals then
the
> second could control the voltage to the varactor to adjust the freq up or
> down as needed..
>
> I'm not quite sure how I'd use the pic to vary the voltage though either
> switching resisters or maybe use it to switch out caps directly instead of
> using a veractor...
> Granted this all could be done using a lot les complicated using a POT and
> turning by hand and just using 1 pick to output the freq. and adjusting by
> hand.. the other way i thought is to use the second pic to run a motor
that
> could actually turn a pot for me.. any way these were just some ideas i
had
> on how to adjust frequency.
>
Many PIC's have an anlogue output too. Or you could use a basic A-D
converter chip.

OR

Many "computer control of analogue fuctions" are done by varying the pulse
width of a square wave output. You could do this easily in software, and
just use the output to charge a capacitor through a resistor. The cap would
charge to a voltage proportional to the duty cycle of the output waveform.
This is how the "digital control" of the really analogue control functions
(height, width etc) in CRT based computer monitors is done. All the control
is done by a single microcontroller IC with many variable pulse width
outputs providing the necessary reference voltages for good display.

Alec M1BNK

3839. Re: Commercial Kits for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-12 23:35:13 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <gygA9.2215$VH2.107451@newsfep1-gui.server.ntli.net>
Source record: 39901

Hi Simon

I am afraid it is up to the manufacturers generally to apply for type approval - a costly business, so costly as to make it prohibitive for the individual. It has to be carried out by an "approved body" too, of which there are not many. The fees these places charge for the work would make your eyes water.

I think it was a mistake to make no provision for say a "qualified person" to certificate kits built as OK and go down the type-approval route, but who cares what I (and many other non-RSGB members) think?

Alec M1BNK

"Simon" <st599@ecs.soton.ac.uk> wrote in message
news:2n40tus00lfndecggr6ekh9qacct1hlvvu@4ax.com...
> How would one go about getting the RA to authorise use of a kit, I'm
> not willing to stump up for the elecraft kit just because someone at
> the RA says it's better.
>
> If it's a matter of testing, I can do that myself using a spectrum
> analyser or VNA to test the output frequencies and powers.
>
>
> On Mon, 11 Nov 2002 19:59:20 +0000 (UTC), "SB"
> <susantv69_uk@btinternet.com> wrote:
>
> >
> >Simon <st599@ecs.soton.ac.uk> wrote in message
> >news:92ctsusa4mtjt7ltmhnnlroqdp4tuf1b39@4ax.com...
> >> Hi
> >>
> >> I'm currently looking for a low power transceiver kit for operation in
> >> the HF Bands. The specs would be as follows:
> >>
> >> Must be commercially available
> >>
> >> RF output tuneable to 10W or less
> >>
> >> Frequency display (preferrable)
> >>
> >> SSB-AM and CW operation
> >>
> >> Small portable preferable battery operated.
> >>

> >> These limitations occur as I've currently only got time to study for
> >> an M3 licence, which prevents me from using a built from scratch
> >> transceiver.
> >>
> >> Also which bands would peole recommend for a newbie.
> >>
> >> Thanks
> >>
> >> Simon
> >
> >Simon,
> >
> >Please be aware of the fact that the M3 license forbids use of any kit
> >(ready built or self assembled) unless it has been approved by the
> >authorities. You will need to check this out with the kit manufacturer.
> >
> >Regards Susan.
> >
>

3840. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 00:18:04 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ut36qtq74med45@corp.supernews.com>
Source record: 39902

I've been working along similar lines for a little bit now, and it's not really quite the same thing as a huff 'n puff stabilizer. Obviously, you need some sort of a DAC, but if you do the math, the DAC needs to be a pretty pricey one, 14 or 16 bits. I don't think it would be realistic to get that sort of resolution with duty cycle modulation, but maybe.

What's really ugly is that serial 16 bit DACs in DIP packages are pretty scarce. An LTC1655 will do the trick but they are expensive. A DAC8501 is a little cheaper but I've only found those in a TSSOP which is a bear to solder.

..

> "Jason" <kc7eip_nospam@shaw.ca> wrote in message
> news:tMwz9.775668$Ag2.26874233@news2.calgary.shaw.ca...

3841. KD9JQ HomeBrew Site changed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 01:42:18 UTC
From: Chuck Reichert <kd9jq@comcast.net>
Message-ID: <_ZCcnUc4L9hyMEygXTWcpA@comcast.com>
Source record: 39903

I've moved to Ft Wayne, IN and have setup my
Homebrewers Site on Comcast.

See: http://mywebpages.comcast.net/kd9jq

73 Chuck KD9JQ

3842. Should I scrounge it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 02:16:55 UTC
From: Robert Lyons <boblyons@umich.edu>
Message-ID: <3DD1B617.8D91B08F@umich.edu>
Source record: 39904

I noticed a big, honkin' power supply being thrown away at work the other day, and I rolled it into a corner in case I decide to use it for a project. It puts out 90V DC and 25 amps. The regulator apparently is constant-current, and I don't know the circuit, so it might be difficult to convert it to constant voltage. If I can, though, this monster just might be able to power a sizeable HF amp.

I've scanned the 'net for solid-state amps, and haven't found anything operating anywhere near this voltage range. Can anyone (a) suggest a source for solid-state HF amp schematics that might match my idea, or (2) tell me why it won't work in the first place?

I've been out of homebrewing for quite a few years, and don't have all that much RF-homebrewing experience in the first place.

73 - Bob, KI8AB

3843. Re: info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 03:11:13 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3DD1C2D1.9A237CD1@mfi.net>
Source record: 39905

Pete KE9OA wrote:
>
> I believe that you are talking about using this system as a Spectrum
> Analyzer. There have been some articles over the years, such as the Poor
> Man's Spectrum Analyzer. Unfortunately, I don't have that information on
> hand.
>
> Pete

http://www.science-workshop.com/
--

Michael A. Terrell
Central Florida

3844. Coil forms

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 04:36:42 UTC
From: Bill M <exray@no>
Message-ID: <ut3lgtl4729174@corp.supernews.com>
Source record: 39906

Are the old 1930's style bakelite plug-in rcvr coil forms (Bud, Hammarlund, etc) suitable for output tank coils in the 25-watt range (HF)?

Tnx,
Bill

3845. Re: Commercial Kits for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 05:15:46 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0211122115.4600a991@posting.google.com>
Source record: 39907

"Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com> wrote in message news:<gygA9.2215$VH2.107451@newsfep1-gui.server.ntli.net>...
> Hi Simon
>
> I am afraid it is up to the manufacturers generally to apply for type
> approval - a costly business, so costly as to make it prohibitive for the
> individual. It has to be carried out by an "approved body" too, of which
> there are not many. The fees these places charge for the work would make
> your eyes water.
>
> I think it was a mistake to make no provision for say a "qualified person"
> to certificate kits built as OK and go down the type-approval route, but who
> cares what I (and many other non-RSGB members) think?
>
> Alec M1BNK
>
A similar thing has happened here in Canada. When there was
a licensing restructuring back about 1990, suddenly the entry level
license did not allow for building transmitters. The wording of
the material for the public (if not the actual regulations) seems
to sidestep the issue by talking about how the license allows one
to build receivers and accessories, as if you needed a license
for that.

While I admit most wouldn't be interested in building, by changing
the rules to forbid transmitter building it got rid of what I
consider a basic part of amateur radio. Up till then, one could
build at least a very simple transmitter, and get some sort of
results, but now you can't do that unless you pass the advanced
test.

While I've seen speculation about what constitutes "commercially
made equipment", I've yet to see a real definition of what
the rule is supposed to mean.

Michael VE2BVW

3846. Re: info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 05:21:42 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0211122121.1fc27451@posting.google.com>
Source record: 39908

"Pete KE9OA" <n.gianakopoulos@worldnet.att.net> wrote in message
news:<Gb0A9.1375$vM1.104972@bgtnsc04-news.ops.worldnet.att.net>...
> I believe that you are talking about using this system as a Spectrum
> Analyzer. There have been some articles over the years, such as the Poor
> Man's Spectrum Analyzer. Unfortunately, I don't have that information on
> hand.
>
> Pete
No, it's a followup question from about a week ago, when the poster
wanted to use his oscilliscope for measuring something at frequencies
beyond the limits of his scope. Someone suggested using a mixer,
and now he's back trying to get details.

If I remember the original question properly, he's not trying to
see a waveform, just wanting to measure the output voltage. If that's
the case, there isn't much point in using the scope, especially if
one has to build a converter to extend the scope's range. Better to
build some sort of RF voltmeter (or just a probe to work with an
existing meter).

Michael VE2BVW

3847. Re: Coil forms

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 08:22:28 UTC
From: ON5MJ <on5mjREMOVE@skynet.be>
Message-ID: <3dd20bd4$0$202$ba620e4c@news.skynet.be>
Source record: 39909

160 to 10 m - yes, but is size OK ?

73 de ON5MJ - Jacques.

3848. Re: silk screening

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 08:35:45 UTC
From: IJ.McCrum@ulst.ac.uk
Message-ID: <3dd024e3.46628253@news.ntlworld.com>
Source record: 39910

Silk screening?
A friend used sheet copper, very thin shim and etched it to give a
stencil. You have to leave thin "tracks" to support islands but it is
useful in some situations...
Ian McCrum, MI5AFL, University of Ulster

3849. Re: info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 11:20:02 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0211130320.3fe5501d@posting.google.com>
Source record: 39912

"Thomas C. Sefranek" <WA1RHP@ARRL.net> wrote in message
news:<_5fA9.1448$Bh1.123427@newsread1.prod.itd.earthlink.net>...
> Tazanator <tazanator1@hotmail.com> wrote in message
> news:R6Xz9.1039$QZ.200@sccrnsc02...
> > I have a 0-10mhz scope and the sbl-1 mixer how do I rig up a system to
> allow
> > the scope to work onthe tech bands (2meter 70 CM and 6 meter) Please be
> > detailed ... just learning
>
> You will need an ACCURATE Local Oscillator to feed the Mixer LO port.
> (The LO will need to change for each band.)
> The sum and difference between the LO and the signal is what will appear on
> the IF port.
> You then need to filter out the SUM and amplify the difference to feed your
> scope.
>
> Read about how receivers work, you learn while reading, and you will be able
> to ask
> better questions.

Thomas,
he has done the most important thing, and that is to ask questions,
which is a very nice place to start. He has shown a willingness to
learn by asking questions. Perhaps you could recommend a easily
available textbook that his library might have to point in the right
direction. I dont think he can homebrew a spectrum analyser, and as a
previous poster mentioned probably a RF voltmeter would be more
appropriate at this point in his learning curve.

Unfortunately, and this is just a gut reaction, your posting reminds
me of years ago in our radio club - a novice would ask a question,
and immediately be put down by the "experts" - some of them never
came back because of this. Fortunately this has changed, and while the
newbies still ask questions about radio we try to answer them, in
return we learn from them as their confidence in the group grows - it
may not be about radio, we have competant machinists, cabinet makers,
people who grow champion roses and orchids, a myriad of skills, in
short all those interesting things outside my own narrow speciality.

Regards,
Andrew VK3BFA

3850. Re: info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 11:32:52 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <ELqA9.3861$vM1.262805@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39913

Thanks Michael; I need to get back out of my cave!

Pete

3851. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 13:39:23 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0211130539.3ee5b432@posting.google.com>
Source record: 39914
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Jake Brodsky <frussle@erols.com> wrote in message
news:<ev92tucr1rqmhr4366crionet9qr2dq1b2@4ax.com>...

[snipped]

> How about the original Ryan Stormscope patent? It does pretty much

See my other post on this.

The StormScope is now manufactured by Goodrich Aerospace (or is it
Goodrich Avionics?).

The basic idea for this has been around for decades, even before Paul
Ryan invented the StormScope. I remember seeing the basic idea in a
late 1940's vintage radio engineering handbook.

Jim
N8EE

3852. Re: Anyone have 73 Aug99 Issue?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 14:30:20 UTC
From: Eskay <Nospamve3jua@rac.ca>
Message-ID: <3DD261FC.3FFACA5D@rac.ca>
Source record: 39915
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Thanks to VE4K?? for the article it is great to get responses to requests made here.
73 de Sieb VE3JUA.

Eskay wrote:

> Please if anyone could send this I would like a copy too.
> VE3JUA,,,, sieb@uraxis.com
>
> Brent wrote:
>
> > I'm looking for the August 99 issue of 73. Actually the WA8TXT article about
> > a psk31 interface.
> > If anyone would scan it possible post to a web site or better yet email it
> > to me at n9bc-----@msn.com remove the ----'s from the address. I would be
> > greatly appreciated!
> >
> > Thanks
> > Brent N9BC

3853. Model T ignition coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 14:57:48 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <MLtA9.4001$vM1.277605@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39916

Ford ignition coil, Model T, wooden box see at ebay search under 'seller'
heytubeguy, 73 Joe

3854. Re: info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 15:48:56 UTC
From: gaschafer@attbi.com
Message-ID: <3dd27476.5601600@netnews.attbi.com>
Source record: 39917

On Tue, 12 Nov 2002 22:17:30 GMT, "Thomas C. Sefranek"
<WA1RHP@ARRL.net> wrote:

>
>Tazanator <tazanator1@hotmail.com> wrote in message
>news:R6Xz9.1039$QZ.200@sccrnsc02...
>> I have a 0-10mhz scope and the sbl-1 mixer how do I rig up a system to
>allow
>> the scope to work onthe tech bands (2meter 70 CM and 6 meter) Please be
>> detailed ... just learning
>
>You will need an ACCURATE Local Oscillator to feed the Mixer LO port.
>(The LO will need to change for each band.)
>The sum and difference between the LO and the signal is what will appear on
>the IF port.
>You then need to filter out the SUM and amplify the difference to feed your
>scope.
>
>Read about how receivers work, you learn while reading, and you will be able
>to ask
>better questions.
>
>
>--
> *
> | __O Thomas C. Sefranek WA1RHP@ARRL.net
>
==========
Just using the mixer and a signal generator for the local oscillator
will do the job. Yes you will
get the sum and difference out but who cares.

If wanting to look at 144 to 154 mhz, the signal generator would need
to be around 144 mhz.
The difference will be 0 to 10 mhz out of the mixer. The sum will
be288 mhz. The 10 mhz
scope will see the 0 to 10 mhz and ignore the 288 mhz.

With a 144 mhz oscillator signal you will also be able to see from 144
mhz down to 134 mhz.
Which is the sum and difference of the signal generator and the scope
band pass.

You need a fairly strong output from the signal generator if you want
good sensitivity from the

mixer. But even at lower signal generator levels you will get usable sensitivity for the scope. The
spec sheet from the mixer will give you values of how much loss you will have at different local
oscillator levels (signal generator levels)

73
Gary K4FMX

3855. Looking for Ham Radio Magazine March 1968

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 16:11:19 UTC
From: canyon <kloc@commspeed.net>
Message-ID: <1037204459.470453@news.commspeed.net>
Source record: 39918
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi Guys,

I am looking for an article in Ham Radio Magazine, March 1968.
The article is "Modifing the Yaesu FT-310 for 30 Meters"
I would be interested in the issue or a copy of the article.

Thank you very much,

WA4MNT

3856. Operating desk on CQ cover years ago - looking for

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 16:52:45 UTC
From: "R. Scott" <washingtonham@yahoo.com>
Message-ID: <3DD2835D.CF27B5F1@yahoo.com>
Source record: 39919

Years ago there was a 7 land that had a really really nice 3 piece operating desk that angled on the cover of CQ and an article to build the desk inside.

Does anyone remember who the 7 land was and the article. Id like to build something similar.

Scotty N7HJ

3857. Re: Should I scrounge it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 17:30:06 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <aqu26q$ei5$1@slb6.atl.mindspring.net>
Source record: 39920

Of course you need to 'scrounge' it. Thats a requirement to being a 'real ham'.

If you can't use it in ten years, trade it for some other 'scrounged' junque.

Dan/W4NTI

"Robert Lyons" <boblyons@umich.edu> wrote in message news:3DD1B617.8D91B08F@umich.edu...
> I noticed a big, honkin' power supply being thrown away at work the
> other day, and I rolled it into a corner in case I decide to use it
> for a project. It puts out 90V DC and 25 amps. The regulator apparently
> is constant-current, and I don't know the circuit, so it might be
> difficult to convert it to constant voltage. If I can, though, this
> monster just might be able to power a sizeable HF amp.
>
> I've scanned the 'net for solid-state amps, and haven't found anything
> operating anywhere near this voltage range. Can anyone (a) suggest a
> source for solid-state HF amp schematics that might match my idea, or
> (2) tell me why it won't work in the first place?
>
> I've been out of homebrewing for quite a few years, and don't have all
> that much RF-homebrewing experience in the first place.
>
> 73 - Bob, KI8AB

3858. Re: Radio Frequency Choke manufacturers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 18:13:14 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <giV7Z0H6Yp09Ew6$@fslife.co.uk>
Source record: 39921

Hi Frank,

>In the UK ,Mainline in Leicester (not their Surplus Department) is usually
>a good source for a large variety of RF components.

My requirement is for a plate choke.

I shall contact Mainline.

Shame they have not produced a catalogue for some years. They only print
their surplus flyer.

Another gentleman kindly pointed out that Miller's do still exist. I
have requested a catalogue.

I do not wish to produce my own chokes as this is for a limited
production run product. I just do not have the time.

Thank you.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3859. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 21:53:12 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0211131353.9d12fb@posting.google.com>
Source record: 39922

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:<ut36qtq74med45@corp.supernews.com>...
> I've been working along similar lines for a little bit now, and it's not
> really quite the same thing as a huff 'n puff stabilizer. Obviously, you
> need some sort of a DAC, but if you do the math, the DAC needs to be a
> pretty pricey one, 14 or 16 bits. I don't think it would be realistic to
> get that sort of resolution with duty cycle modulation, but maybe.
>
> What's really ugly is that serial 16 bit DACs in DIP packages are pretty
> scarce. An LTC1655 will do the trick but they are expensive. A DAC8501 is
> a little cheaper but I've only found those in a TSSOP which is a bear to
> solder.

You could also use an op amp integrator that you
step up and down with pulses from the microprocessor.

I've seen this done with a small DC motor providing the
pulses - rotate one way for positive pulses, the other
way for negative pulses. The reference is at home, but
I remember seeing this in VHF Communications not that
long ago...

"DIP package"? What's that? :-)

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

3860. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 22:20:20 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <ut5nhfgm3kf345@corp.supernews.com>
Source record: 39926

Laura Halliday wrote:
>
> "DIP package"? What's that? :-)

It's repetitive and redundant, that's what it is. Report this person to the Department of Redundancy Department! And don't forget to enter your your PIN number on the LCD display.

73's,

Roy Lewallen, W7EL W7EL

3861. Re: Should I scrounge it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 23:02:06 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ut5mqhpqbg661@corp.supernews.com>
Source record: 39923

Bob

The reason you don't see a lot of projects for that voltage isn't that common components don't work well there, it's that getting that voltage at any sort of current is a pain. The 12 volt nominal station supply is a big pain when trying to build and amp with some power. You end up needing horrid currents, and use transistors that are a lot more expensive than you really need.

Power MOSFETS in the 20-30 amp range at 150 volts or so that will work through the HF range are pretty widely available and cheap. It's a little harder, though, to find transistors that will do both at the same time (i.e. dissipate a KW or so) but they are available and they really aren't all that expensive, typically. It gets quite a bit uglier if you are looking for VHF, however.

The main problem is that you will likely need to do the design yourself. One huge advantage is that we are typically talking a few dollars for this sort of transistor. If, in your experimentation, you toast a few, it's a whole bunch different than toasting, say, a 4CX1000A.

And although 90 volts is a lot more friendly than the thousands you might need for a valve circuit, 25 amps can be pretty impressive so you do need to give it quite a bit of respect.

Sounds like you got the beginnings of a fun project!

..

"Robert Lyons" <boblyons@umich.edu> wrote in message
news:3DD1B617.8D91B08F@umich.edu...
> I noticed a big, honkin' power supply being thrown away at work the
> other day, and I rolled it into a corner in case I decide to use it
> for a project. It puts out 90V DC and 25 amps. The regulator apparently
> is constant-current, and I don't know the circuit, so it might be
> difficult to convert it to constant voltage. If I can, though, this
> monster just might be able to power a sizeable HF amp.
>
> I've scanned the 'net for solid-state amps, and haven't found anything
> operating anywhere near this voltage range. Can anyone (a) suggest a
> source for solid-state HF amp schematics that might match my idea, or
> (2) tell me why it won't work in the first place?
>
> I've been out of homebrewing for quite a few years, and don't have all
> that much RF-homebrewing experience in the first place.
>

> 73 - Bob, KI8AB

3862. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 23:08:01 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <ut5mqv4euhes73@corp.supernews.com>
Source record: 39924

"Laura Halliday" <marsgal42@hotmail.com> wrote in message >

> You could also use an op amp integrator that you
> step up and down with pulses from the microprocessor.

The problem I see with this sort of approach is getting the resolution. Presuming you want to cover 100 KHz of 40 with a resolution of, say, 10 Hz, you need at least 14 bits of resolution, preferably a lot better if you are going to control it with any degree of success. That seems like a lot to ask from this technique.

> "DIP package"? What's that? :-)

Well, maybe you got smaller fingers than some of us <g> I suppose we're all going to have to learn pretty soon, tho.

..

3863. Re: Radio Frequency Choke manufacturers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 23:22:57 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <ut5ng8gvhqav1e@corp.supernews.com>
Source record: 39925

RF Parts Co. has a good choke, RFC-3 about $23 each. I've used them in many amp projects.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message news:rxpA9.770$B92.220303@newsfep2-win.server.ntli.net...
> > Can anyone on the group supply me with any RF plate choke manufacturers
> > that are still in business?
> >
> > I believe R.S. Miller are no more.
> =========
> If you mean by ' RF Plate choke' a choke in the anode power supply of a
> valve type RF power amplifier , I thought that even for commercial equipment
> these can be readily made around a polystyrene /Delrin / ceramic former , eg
> with adequate inductance for the freq. range while checking for unwanted
> resonance over the operating range.
> In the Nov 2002 issue of QST ,on page 71 there is a photograph of the
> 'innards' of a ACOM 1000 RF Power Amp.(1.8 -50 MHz) with 2 chokes clearly
> visible ,one for HF the other for VHF (50 MHz)
> From the Product Review article ACOM International is labelled as US
> distributor ,although their web appears to be www.hfpower.com and the price
> referred to is that of the manufacturer .If the manufacturer they might buy
> the chokes somewhere , although I suspect they make these components
> themselves .
>
> In the UK ,Mainline in Leicester (not their Surplus Department) is usually
> a good source for a large variety of RF components.
>
> Frank gm0csz.kn6wh@ntlworld.com
>
>

3864. WTB: Millen 10012

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-13 23:42:58 UTC
From: Al Lorona <al_lorona@agilent.com>
Message-ID: <3DD2E381.48BBE615@agilent.com>
Source record: 39927

Hi, Everybody,

I am looking for a Millen 10012 dual right-angle drive. If you have one you want to sell, please e-mail me privately and tell me what you want for one.

Regards,

Al W6LX
al_lorona@agilent.com

3865. FS: Vintage Packet Books by K4ABT

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 00:37:07 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <TeCA9.3900$X5.218723@news1.east.cox.net>
Source record: 39928
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

1. Glossary of Packet Terms And Definitions, by Buck Rogers, K4ABT. Soft Cover, approximately 50 pages, published by Kantronics Press in 1988. 1st edition, 1st printing, VGC. $7.00 postage paid to CONUS.

2. RS-232 as related to PACKET, by Buck Rogers, K4ABT. Soft Cover, approximately 50 pages, published by Kantronics Press in 1989.1st edition, 1st printing, VGC. $7.00 postage paid to CONUS.

3. Advanced Packet by Buck Rogers, K4ABT, Soft Cover, approximately 50 pages, published by Kantronics Press in 1988. 1st edition, 1st printing, VGC. $7.00 postage paid to CONUS.

Terms: I will ship upon receipt of payment. Contact me if you need additional info.

Larry Keith, KQ4BY
Warner Robins, GA

GA_BONEYARD$@$HOTMAIL$.COM$

remove the $ to use the e-mail address

3866. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 00:52:48 UTC
From: Jason <kc7eip_nospam@shaw.ca>
Message-ID: <AtCA9.789027$v53.29623133@news3.calgary.shaw.ca>
Source record: 39929

Thanks all for the input at i know my concept wasn't too far fetched :).
Although just putting in a 10k pot is easier to implement it's not as fun to
design :)..

3867. Re: Data on Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 01:35:02 UTC
From: la8ak.xnd@online.no
Message-ID: <3dd2facd.21470877@news.online.no>
Source record: 39930

On Tue, 12 Nov 2002 17:53:21 -0400, Bill M <"exray"@no
spam-caribe.net> wrote:

>Robert Offer wrote:
>>
>> Hi all,
>> I have some stud mounted diodes - reference CV7160 (? manuf IOR) and
>> CV7262. Have done a "Google" search, but can only find further stocks -
>> anybody got any data on them, please?
>> Thanks
>> Bob
>> G1ZJP
>
>Oops, more info. I just noticed that you are in the UK. I had no idea
>that the military CV numbering was still being used into the solid state
>era, but I think thats what you have on hand.
>I found the CV7262...its a 1S5051RA zener diode, 51 volt, 10 watts.
>I think these people could identify the other one...
>http://www.bslexpress.com/
>
>-BM

yes, remember we used CV numbered components in the Post Office
Laboratories at Bearley nr. Stratford upon Avon back in 1974, it was
somewhat limited range of components available. You could try some
civil types, but must use official type in the end

73 LA8AK (ex-G5BFV)
still in the telecomms
--
remove ,xnd to reply

3868. Re: info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 01:35:02 UTC
From: la8ak.xnd@online.no
Message-ID: <3dd2fc32.21828064@news.online.no>
Source record: 39931

On Wed, 13 Nov 2002 15:48:56 GMT, gaschafer@attbi.com (Gary Schafer) wrote:

>
>You need a fairly strong output from the signal generator if you want
>good sensitivity from the
>mixer.
0.5V = +7dBm

> But even at lower signal generator levels you will get usable
>sensitivity for the scope. The
>spec sheet from the mixer will give you values of how much loss you
>will have at different local
>oscillator levels (signal generator levels)
>

yes, it works for lower voltages, believe it is not so critical. and the xtal frequency is not critical at all, you just use an odd xtal. A 26.985 xtal in 9MHz osc and multiplied by 16 for 2m, or you could use something around 48MHz and multiply by 3.
Sometime wondered if a diplexer was needed at the output, but used only an attenuator/termination. Not certain if LO needs good filtering, neither

73, LA8AK
--
remove ,xnd to reply

3869. FS: TWO-WAY RADIO SERVICE MANUALS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 02:19:54 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <jPDA9.14562$lj.377603@read1.cgocable.net>
Source record: 39932
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

Have acquired a quantity of Commercial & some Amateur, Two Way Radio Service Manuals...Take a look and see if you have a need for any. Am trying to add to my HTML page as time permits.
73...Norm VE3CZI

http://home.cogeco.ca/~rodemi/Service%20Manuals/Service%20Manuals.html

3870. Homebrewed small RF chokes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 02:39:24 UTC
From: Fred Ruckser <whru@email.msn.com>
Message-ID: <Oa4zab4iCHA.1672@cpimsnntpa03>
Source record: 39933

What is the rule of thumb to homebrew small RFchokes (number of turns, diameter, value etc). My project at this time is a 6L6 based transmitter for 40 meters.
Thanks in advance
73 Fred
wb6iiq

3871. FT-101 o/p stage and 4CX series

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 07:46:46 UTC
From: Dave Bullock <DaveB@ihr.mrc.ac.uk>
Message-ID: <3DD354E6.6080308@ihr.mrc.ac.uk>
Source record: 39934

Homebrewers, here's a good question.....

The FT-101 "probably the most modified Ham bands radio ever"
or so the saying goes.
The 6JS6C probably the most sought after tube for this radio!
I have seen lots of modification info to convert to 6146B's etc,
but I would have thought that another of the radio classics..... the
4CX150 or (250) would have been a more suitabe choice.

Readily available, (10-a-penny) at junk sales, (even ones that are tired
of UHF would probably work on DC ...sorry HF)!
Unbreakable, (in this application) only being asked to produce 100W they
can dissipate 250W on the anode alone!
Removing all thet parallel wiring would probably remove the need for
neutralisation too!

As the newbie owner of an FT-101 in need of O/P bottles, do any of you
know what is the problem, converting the set to a single 4CX250?
(There must be something I missed)!

Please help.........

Thanks ...Dave

daveb@ihr.mrc.ac.uk

--
* * * * * * * * * * * * * * * * * * * *
* Dave Bullock *
* MRC Institute of Hearing Research *
* Nottingham University *
* Nottingham *
* NG7 2RD *
* *
* daveb@ihr.mrc.ac.uk *
* * * * * * * * * * * * * * * * * * * *

3872. Re: Operating desk on CQ cover years ago - looking for

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 07:52:53 UTC
From: KC8PMX <kc8pmx@NOSPAMdiamondcs.net>
Message-ID: <ar0a3r711p3@enews2.newsguy.com>
Source record: 39937

Any idere as to when that was? I have a bunch of CQ's between 1960something
till 1980something and can look before I throw those away soon.....

--
Ryan, KC8PMX
FF/MFR
REMOVE "NOSPAM" in email address to reply.

"R. Scott" <washingtonham@yahoo.com> wrote in message
news:3DD2835D.CF27B5F1@yahoo.com...
> Years ago there was a 7 land that had a really really nice 3 piece
> operating desk that angled on the cover of CQ and an article to build
> the desk inside.
>
> Does anyone remember who the 7 land was and the article. Id like to
> build something similar.
>
>
> Scotty N7HJ

3873. Re: info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 11:22:10 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <ar05vi$q62$2@news7.svr.pol.co.uk>
Source record: 39935

"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3dd2fc32.21828064@news.online.no...

> Sometime wondered if a diplexer was needed at the output, but used
> only an attenuator/termination. Not certain if LO needs good
> filtering, neither

If you have the attenuator, and it looks like 50 ohms to the mixer, you
don't really need the diplexer, as the mixer will be properly terminated.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

3874. Re: Looking for Ham Radio Magazine March 1968

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 13:23:39 UTC
From: Bob Liesenfeld <robert.liesenfeld@neicoltech.org>
Message-ID: <3DD3A3DB.90E48132@neicoltech.org>
Source record: 39936
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

canyon wrote:

> Hi Guys,
>
> I am looking for an article in Ham Radio Magazine, March 1968.
> The article is "Modifing the Yaesu FT-310 for 30 Meters"
> I would be interested in the issue or a copy of the article.

Canyon,
I have the complete set of Ham Radio on CDs and do not see an
article with this title in any issue. Also, I don't think we had 30
meters back in 1968. Did you mean QST or perhaps 73 and a different
year?

Bob L. WB0POQ

3875. Re: Should I scrounge it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 15:01:39 UTC
From: Robert Lyons <boblyons@umich.edu>
Message-ID: <3DD3BAD4.E7E7CBEF@umich.edu>
Source record: 39938

xpyttl wrote:
>
> Bob
>
> The reason you don't see a lot of projects for that voltage isn't that
> common components don't work well there...
>
> Power MOSFETS in the 20-30 amp range at 150 volts or so that will work
> through the HF range are pretty widely available and cheap....
>
> The main problem is that you will likely need to do the design yourself.
<snip>
>
> Sounds like you got the beginnings of a fun project!

Indeed! Thanks very much for your posting. I'll check into higher-voltage MOSFETs. After I learn something about how they work (they didn't exist when I learned my basic electronics AFAIK). My suspicion is that I'll be able to adapt some existing circuits to the higher voltage and alternative MOSFETs with some work. And no need to run up into VHF - I can get by barefoot there. It's HF I want.

73 de Bob, KI8AB

3876. Re: Operating desk on CQ cover years ago - looking for

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 15:14:53 UTC
From: "R. Scott" <washingtonham@yahoo.com>
Message-ID: <3DD3BDED.D03EA6AE@yahoo.com>
Source record: 39939

KC8PMX wrote:
>
> Any idere as to when that was? I have a bunch of CQ's between 1960something
> till 1980something and can look before I throw those away soon.....

Nerts, Im thinking 82 - 87 that is when I was in Maine, and Im sure it
was then, I was just hoping some would have remembered it.

Scotty N7HJ

3877. Re: FT-101 o/p stage and 4CX series

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 15:36:09 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <wyPA9.3241$JR.131518@newsfep1-win.server.ntli.net>
Source record: 39940

> As the newbie owner of an FT-101 in need of O/P bottles, do any of you
> know what is the problem, converting the set to a single 4CX250?
> (There must be something I missed)!
=====
Never having used such a valve (tube) myself ,but looking at one from the junk box ; fitting one inside an existing FT-101 means you'll have to devise a special air cooling system for this transceiver. I believe the 4CX250 is to be cooled with air of a significant pressure from below ,so when used in a chassis that chassis would have to be pressurised by means of a centrifugal blower producing a minimum pressure of 'X' mm water column ('X' probably found in the valve's spec. sheet).
Upon blower failure ,a pressure switch would have to switch off HT from the valve.

BTW ,depending on air pressure required ,a suitable pressure switch might be an adjustable water level switch from a domestic (laundry) washing machine.

Frank gm0csz.kn6wh@ntlworld.com

3878. Re: Looking for Ham Radio Magazine March 1968

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 17:02:21 UTC
From: "Ken Knox (N1JRO)" <knox_k@midmaine.com.invalid>
Message-ID: <jnl7tuc6cfbpnjvkf8dfjcs7njfme27kh8@4ax.com>
Source record: 39941
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Thu, 14 Nov 2002 07:23:39 -0600, Bob Liesenfeld
<robert.liesenfeld@neicoltech.org> wrote:

>
>
>canyon wrote:
>
>> Hi Guys,
>>
>> I am looking for an article in Ham Radio Magazine, March 1968.
>> The article is "Modifing the Yaesu FT-310 for 30 Meters"
>> I would be interested in the issue or a copy of the article.
>
> Canyon,
> I have the complete set of Ham Radio on CDs and do not see an
>article with this title in any issue. Also, I don't think we had 30
>meters back in 1968. Did you mean QST or perhaps 73 and a different
>year?
>

He made a typo...it is in the march 1986 issue.

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3879. Re: FT-101 o/p stage and 4CX series

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 17:45:01 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <d$HxWSCdE+09EA8Z@ifwtech.co.uk>
Source record: 39942

Dave Bullock wrote:
>
>As the newbie owner of an FT-101 in need of O/P bottles, do any of you
>know what is the problem, converting the set to a single 4CX250?
>(There must be something I missed)!
>
If you're using the FT101 power supply, you're missing another 1000V on the anode. A 4CX250 will hardly do anything with 800V on the anode, and I wouldn't like to guess what suitable grid and screen voltages would be.

Then there's the whole issue of the special socket and air cooling that Frank mentioned.

I've just been reviving a 101ZD (last of the 101 line, uses 6146s) and was pleasantly reminded what a nice rig it is.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

3880. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 18:21:46 UTC
From: pyr@zyan.takethisoff.org
Message-ID: <87k7jg3tcd.fsf@zyan.org>
Source record: 39943
Cross-posted to:
rec.arts.books.marketplace,sci.electronics.basics,rec.radio.amateur.swap,rec.radio.swap,rec.radio.amateur.homebrew

Due to a great response on a previous office copy, here is my personal
copy for sale.
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1583241941

--
pyr

3881. Re: Homebrewed small RF chokes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 18:55:23 UTC
From: k7itm@aol.com
Message-ID: <3200347.0211141055.25f20723@posting.google.com>
Source record: 39944

"Fred Ruckser" <whru@email.msn.com> wrote in message
news:<Oa4zab4iCHA.1672@cpimsnntpa03>...
> What is the rule of thumb to homebrew small RFchokes (number of turns,
> diameter, value etc). My project at this time is a 6L6 based transmitter for
> 40 meters.
> Thanks in advance
> 73 Fred
> wb6iiq

Depends on what the choke is used for. If its reactance will be tuned
out anyway (as a plate choke for an amplifier with a pi output
network), it only needs to be a reactance around the value of the
plate load...which should make it several times the reactance of the
pi network's inductor...or it could even be less than that, so long as
it has reasonable Q (reasonably low loss). Avoid chokes with
self-resonant frequencies below your operating frequency. So about
100uH, which is about 4400 ohms at 7MHz, should be reasonable. I
guess a couple inches of close-wound #30AWG enameled wire on a
half-inch diameter form should do the trick. I believe its self
resonance will be up around 15 meters, maybe a bit below.

But if it's a filament/cathode choke for a grounded grid amp, you'll
need to use heavier wire, and because of the low impedance at that
point, you can use less inductance...so, it depends on what it is
you're choking. The exact value should not be critical, but getting
it in the right ballpark is.

Cheers,
Tom

3882. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 20:03:38 UTC
From: averyfineman@aol.com
Message-ID: <20021114150338.03712.00000505@mb-co.aol.com>
Source record: 39945

In article <d9gA9.2112$VH2.101649@newsfep1-gui.server.ntli.net>, "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com> writes:

>"Jason" <kc7eip_nospam@shaw.ca> wrote in message
>news:tMwz9.775668$Ag2.26874233@news2.calgary.shaw.ca...
>> Well i am in the process of designing my own 40 meter txcvr.I'm along way
>> from going to copper and solder, but I have a couple of ideas that i
>> wanted to put out to the field. Here is what I'm wanting to
>> accomplish,granted i know there are easier ways but here is what i was
>> thinking on. I was wanting to use a combination of pics one as a freq
>> counter that would feed the second the freq at specified intervals then
>the
>> second could control the voltage to the varactor to adjust the freq up or
>> down as needed..
>>
>> I'm not quite sure how I'd use the pic to vary the voltage though either
>> switching resisters or maybe use it to switch out caps directly instead of
>> using a veractor...
>> Granted this all could be done using a lot les complicated using a POT and
>> turning by hand and just using 1 pick to output the freq. and adjusting by
>> hand.. the other way i thought is to use the second pic to run a motor that
>> could actually turn a pot for me.. any way these were just some ideas i had
>> on how to adjust frequency.
>>
>Many PIC's have an anlogue output too. Or you could use a basic A-D
>converter chip.

I would agree that a D-to-A PIC version could control a varactor which would control a VFO.

On the other hand, trying to do so even with the most-stable D-A output possible would not achieve good frequency control. The varactor/variable-capacitance-diode would not be stable enough to hold frequency to better than a few hundred Hertz at room temperature. To handle RF frequency stability requires something like a PLL or DDS, either of which could be driven by the digital output of a PIC, the PIC calculating the digital word necessary for the particular PLL divider or DDS register. That calculation could accept up-down pulses from a shaft encoder and also do calculation to drive any matrix display for frequency.

>OR
>
>Many "computer control of analogue fuctions" are done by varying the pulse
>width of a square wave output. You could do this easily in software, and

>just use the output to charge a capacitor through a resistor. The cap would
>charge to a voltage proportional to the duty cycle of the output waveform.
>This is how the "digital control" of the really analogue control functions
>(height, width etc) in CRT based computer monitors is done. All the control
>is done by a single microcontroller IC with many variable pulse width
>outputs providing the necessary reference voltages for good display.

Agreed. The advantage of one microcontroller for a number of front
panel functions driving voltage-controlled circuitry is more to reduce
the mechanical couplings and physical restraints of control
placements in manufactured radios. Microcontrollers are the
perfect choice for digital functions such as displays or digital states
for PLLs and DDSs. But, for homebrewing, things like RF gain or
AF gain can be handled with conventional wired circuits used years
ago.

Microcontroller use needs to take into account the harmonic content
of fast leading and trailing edges of digital waveforms and their
possible leakage into a receiver. The amount of design time spent on
free PIC development programs for a particular application may
exceed the total design-build time of more conventional analog
circuitry. This is especially true for those with little or no experience
in assembler programming. That has to be factored into homebrew
project decisions.

On the other hand, programming has its own unique "fun" and
guarantees an absolute control of desired functions...if the program
statements are written correctly. Such programs can be modified
on the computer quickly, proven in simulation, then applied directly
to a microcontroller through a burn-in accessory. No soldering
involved.

For those working with SMT, a suggestion:

Headband magnifiers are available in Arts and Crafts stores at less
cost than from electronics parts distributors. In the USA such a
chain is Michael's. I borrow my wife's headband magnifier from time
to time for close-up work...for many applications it is better than
a big lens magnifier with light on a stand.

Len Anderson
retired (from regular hours) electronics engineer person

3883. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 21:15:41 UTC
From: troglodite@aol.com
Message-ID: <20021114161541.19536.00000103@mb-ba.aol.com>
Source record: 39946

> Microcontroller use needs to take into account the harmonic content
> of fast leading and trailing edges of digital waveforms and their
> possible leakage into a receiver.

I would change the word "possible" to "probable" in the above sentence. This problem shows up even in expensive commercial gear. Best approach seems to be to put the processor functions "in a can" and connect via feedthrough capacitors. This also keeps the processor noise out of other nearby equipment. It is also possible to do the reverse, but as soon as you connect an antenna you are back where you started.

3884. FT 817 Price Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 22:01:49 UTC
From: KC0EH <okiemansc@yahoo.com>
Message-ID: <h3VA9.678$pi7.92514@newsread2.prod.itd.earthlink.net>
Source record: 39847
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Thinking of Christmas and I wonder who has the best price on a new Yaesu
FT-817.
Please reply direct.
Thanks,
...Charlie...KC0EH...

3885. Re: FT-101 o/p stage and 4CX series

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 22:03:40 UTC
From: mjmanship@iquest.net
Message-ID: <3dd41c79.12124698@news.iquest.net>
Source record: 39848

On Thu, 14 Nov 2002 15:36:09 -0000, "Frank Dinger"
<gm0csz.kn6wh@ntlworld.com> wrote:

>> As the newbie owner of an FT-101 in need of O/P bottles, do any of you
>> know what is the problem, converting the set to a single 4CX250?
>> (There must be something I missed)!
>=====
>Never having used such a valve (tube) myself ,but looking at one from the
>junk box ; fitting one inside an existing FT-101 means you'll have to devise
>a special air cooling system for this transceiver. I believe the 4CX250 is
>to be cooled with air of a significant pressure from below ,so when used in
>a chassis that chassis would have to be pressurised by means of a
>centrifugal blower producing a minimum pressure of 'X' mm water column ('X'
>probably found in the valve's spec. sheet).
>Upon blower failure ,a pressure switch would have to switch off HT from the
>valve.
>
>BTW ,depending on air pressure required ,a suitable pressure switch might be
>an adjustable water level switch from a domestic (laundry) washing machine.
>
>Frank gm0csz.kn6wh@ntlworld.com
>
The December 1975 issue of Ham Radio Magazine has an amplifier using a
single 4X150 in which both grids are grounded and drive is applied to
the cathode. It is billed as a linear amplifier for QRP SSB rigs. With
a driving power of 5 watts the output is 50 watts. There is NO forced
air cooling.
73 de Mike W9OJ

3886. Good antenna book?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-14 23:52:46 UTC
From: vshah101@aol.com
Message-ID: <20021114185246.21134.00004819@mb-fx.aol.com>
Source record: 39849

Hello, I'm taking an antenna theory and design class right now. I would like to find a good antenna book that I can use for practice problems. The textbook used in the class is "Antenna Theory and Design" by Stutzman and Thiele.

The book has the equations but not enough examples. I need a book with worked out problems.

The topics include:
antenna arrays, pattern multiplication,
resonant antennas (dipoles, Yagi-Uda, large loop antennas),
broadband antennas(helical, spiral, log periodic),
aperture antennas(horn and parabolic antennas).

Remember that this is an academic course, so many other types of topics, while interesting and useful will not be in the course. Can anyone recommend any good antenna books with solved problems on these topics?

3887. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-15 02:03:24 UTC
From: averyfineman@aol.com
Message-ID: <20021114210324.10597.00001547@mb-mq.aol.com>
Source record: 39850

In article <20021114161541.19536.00000103@mb-ba.aol.com>, troglodite@aol.com (Troglodite) writes:

>> Microcontroller use needs to take into account the harmonic content
>> of fast leading and trailing edges of digital waveforms and their
>> possible leakage into a receiver.
>
>I would change the word "possible" to "probable" in the above sentence. This
>problem shows up even in expensive commercial gear. Best approach seems to be
>to put the processor functions "in a can" and connect via feedthrough
>capacitors. This also keeps the processor noise out of other nearby
>equipment.
>It is also possible to do the reverse, but as soon as you connect an antenna
>you are back where you started.

I agree...but some have gotten away without full metal jackets.

An example is the old ICom IC-R70 0 to 30 MHz communications receiver. The internal microprocessor and ancilliary ICs are out in the open to some extent, but on a separate PCB assembly from the RF and front IF assembly. Of course, the chassis is an aluminum casting and it is well covered on all sides with near-zero holes/perforations. I have one and have never detected any digital noise from its innards.

One way to minimize digital noise is to use low-power CMOS wherever possible in the digital part of the receiver...and, of course, to bypass the #$%^!!! out of supply rails, use ferrite or iron powder beads in series with supply rail leads. Go for filtering overkill. There's no good way to predict the digital noise path to the input, but home-brewed designs allow that luxury...no manufacturing cost budgets for a few thousand units' production run. :-)

Prototyping digital circuit assemblies and trying some "sniffing" with an all-band comm receiver and a small probe loop will help to find out if the digital noise is low enough...before building it into a final design. If worst comes to worst, air duct galvanized sheet metal is fairly cheap and can be soldered with those big old irons gathering dust after the coming of the SMDs.

Len Anderson
retired (from regular hours) electronic engineer person

3888. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-15 03:56:29 UTC
From: Lisa Bengtson <Lbengtson@pobox.com>
Message-ID: <2nr8tu4r7e9pv221skcbt0suq0c64aqjvi@4ax.com>
Source record: 39851

On Sun, 10 Nov 2002 17:34:17 GMT, "Jason" <kc7eip_nospam@shaw.ca>
wrote:

>Well i am in the process of designing my own 40 meter txcvr.I'm along way
>from going to copper and solder, but I have a couple of ideas that i
>wanted to put out to the field. Here is what I'm wanting to
>accomplish,granted i know there are easier ways but here is what i was
>thinking on. I was wanting to use a combination of pics one as a freq
>counter that would feed the second the freq at specified intervals then the
>second could control the voltage to the varactor to adjust the freq up or
>down as needed..
>
>I'm not quite sure how I'd use the pic to vary the voltage though either
>switching resisters or maybe use it to switch out caps directly instead of
>using a veractor...
>Granted this all could be done using a lot les complicated using a POT and
>turning by hand and just using 1 pick to output the freq. and adjusting by
>hand.. the other way i thought is to use the second pic to run a motor that
>could actually turn a pot for me.. any way these were just some ideas i had
>on how to adjust frequency.
>
>

Is there any reason you wouldn't use a frequency synthesizer to do
this? It seems that with Analog Devices and National Semiconductor
parts, you could build a 40 Meter synth very simply.

Dave

3889. Rock-Mite QRP on 15 meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-15 04:39:15 UTC
From: canyon <kloc@commspeed.net>
Message-ID: <1037335742.977722@news.commspeed.net>
Source record: 39852

Has anyone modified a Rock-Mite to operate on 15 meters?

WA4MNT

3890. Re: Data on Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-15 08:40:57 UTC
From: Hugh Colborn <dontspamstockden@tiscali.co.uk>
Message-ID: <3dd4b2ed_1@mk-nntp-2.news.uk.tiscali.com>
Source record: 39853

"Robert Offer" <robert@g1zjp.freeserve.co.uk> wrote in message
news:aqrnvj$p69$1@news5.svr.pol.co.uk...
> Hi all,
> I have some stud mounted diodes - reference CV7160 (? manuf IOR) and
> CV7262. Have done a "Google" search, but can only find further stocks -
> anybody got any data on them, please?
> Thanks
> Bob
> G1ZJP
>
>

Bob,

According to the "CV Register of Electronic Valves" CV7160 is equivalent to
VR575B and is a Zener diode. CV7262 is equivalent to IS5051RA and/or
IS6051RA and is a "Zener regulator diode". Hope that helps.

Regards
Hugh
G8TMA

3891. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-15 11:37:49 UTC
From: JS <wd1v@amsat.org>
Message-ID: <wd1v-18706C.06375115112002@netnews.attbi.com>
Source record: 39854

In article <20021109100717.00112.00000330@mb-fz.aol.com>, n2ey@aol.com (N2EY) wrote:

> In article <3dccbe0c$1@news.comindico.com.au>, "David Walker"
> <no_spam@hotmail.com> writes:
>
> >Is the Omni still available? I've seen pics of it and it looks like a
> >beautiful rig.
> >
> The Omni 6 Plus has been replaced by the new Orion.
>
> "Omni" is the family name of a whole series of Ten Tec rigs, from the
> "ABCD"
> analog PTO versions of the early-mid '80s, to the low noise PLL Omni 5,
> Omni 6
> and Omni 6 Plus versions of recent years. (The "Plus" was the addition of
> DSP
> and some other improvements).
>
> The current TenTec HF line is in three levels - the ~$100 monoband QRP CW
> transceiver kits, the $800 Argonaut V 20 watter allHFband multimode, and
> the
> $3300-$3600 Orion super rig.
>
> Argonaut V is obviously meant to compete with the K2 and Orion is
> obviously
> meant to compete with the FT-1000. TT doesn't (now) make a moderately
> priced
> 100-watt-class-HF rig.
>
> Plenty of clean used Omni 6s out there at good prices, tho. But I'd
> rather have
> my K2.
>
> 73 de Jim, N2EY

For more than forty years, I never thought a kit, especially one that cost far less than a kilo-buck, would or could outpace the receiver performance of the top of the line gear from the commerical manufacturers. Then came Elecraft's K2.

From formal product reviews that include instrumentation based assessments to the personal experience reviews and comparisons found at

http://www.eham.net/reviews/products/14

Elecraft's continued success is now way beyond cult following.

With > 3,000 K2 kits sold, the K2 experience (building and operating)
is one not to miss.

What will Elecraft do next to top the K2?

72/73
John Seney, WD1V [FN42]
QRP ARCI 10345 K2 #1388
FIST #5014 CC: 1151
http://www.qsl.net/wd1v
JS
http://www.qsl.net/wd1v

3892. Cell phone to 900 Mhz project progress report.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-15 15:14:40 UTC
From: Gary Tait <taitg@hurontel.on.ca>
Message-ID: <ee2atusdg27ak407oluk9la1ik4ba7up7i@4ax.com>
Source record: 39855

So far, all I have is the receiver board receiving cell base
transmitters, and I beleive I have the PLL properly working.

Next in line will be to make a transmitter (from another receiver
LO/PLL),
and set up a micro board to adjust the PLL (I am currently using a PC
to control the RX board).

On the RX board, I plan on somehow converting the signal coming into
the 1st IF filter down approximately 35 Mhz.

I am primarily experimenting with Uniden phones, whose RX LO is 45 Mhz
above the RX RF, and the PLL chips are Fujitsu MB87001, wth MB 501
modulus prescalers, set to 30 KHz channeling. Also in my bag of tricks
is an NEC phone (Whose RX LO is something like 94.5 Mhz below RX
RF,and uses an unidentifiable NEC PLL),
and a Nokia, which I am not too sure about.

3893. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-15 15:46:45 UTC
From: Jason <kc7eip_nospam@shaw.ca>
Message-ID: <FF8B9.828679$Ag2.27994108@news2.calgary.shaw.ca>
Source record: 39856

Well that's why I'm in the brainstorming phase :).. .. I'm still green
around the gills when it comes to designing my own stuff so i was going with
things that I know basic components and pics :)... When it comes to PLL and
DDS i know the theory but still a little bit hesitant to get knee deep in an
area i am unfamiliar with. But as my original idea is getting beyond my
ability I think looking for different ways to accomplish this project are
in order.Still one of the major factors is price I'm trying to design
something for cheaper then i can get in a similar kit.(may not be
possible).>
>
> Is there any reason you wouldn't use a frequency synthesizer to do
> this? It seems that with Analog Devices and National Semiconductor
> parts, you could build a 40 Meter synth very simply.
>
>
>
> Dave
>

3894. Re: More on HF DF (or ADF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-15 16:16:02 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3DD51DC2.5A9E8171@clifto.com>
Source record: 39857
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Stephen C. Robbins wrote:
> I have sworn off the meds. The last pill I took was one of those Viagra
> pills. It got stuck in my throat and I had a stiff neck for 3 hours :-)

Just as well. They're not all they're cracked up to be. The other night,
I took a dozen of them and only nine worked.

--
It is better to light just one little candle than to curse the darkness.
If everyone lit just one little candle, the EPA would outlaw candles.

3895. Re: info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-15 16:49:58 UTC
From: la8ak.xnd@online.no
Message-ID: <3dd41510.93741081@news.online.no>
Source record: 39858

On Thu, 14 Nov 2002 11:22:10 -0000, "Leon Heller"
<leon@heller123.freeserve.co.uk> wrote:

>
>"J M Noeding" <la8ak.xnd@online.no> wrote in message
>news:3dd2fc32.21828064@news.online.no...
>
>
>> Sometime wondered if a diplexer was needed at the output, but used
>> only an attenuator/termination. Not certain if LO needs good
>> filtering, neither
>
>If you have the attenuator, and it looks like 50 ohms to the mixer, you
>don't really need the diplexer, as the mixer will be properly terminated.
>
>73, Leon
>--
>Leon Heller, G1HSM
>leon_heller@hotmail.com
>http://www.geocities.com/leon_heller
>
>
Yes, theoretically. But with an old oscilloscope - as for newer, the
sensitivity isn't too high and you most probably will need a
'broadband post-amplifier' - 15dB 10MHz bandwidth is quite easily
achieved with a BFR90 or 2N3866 stage

73
LA8AK
--
remove ,xnd to reply

3896. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-15 17:59:56 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <utadrfm64o3u1b@corp.supernews.com>
Source record: 39859

The problem with PLLs is that the good ones, the ones Dave suggests, are expensive and come in these tiny packages that are very difficult to solder. I guess you can get "samples" from Analog Devices, but that seems a little dishonest to me. The less expensive ones tend to not have enough resolution or work at frequencies that are just too low to be useful.

Texas Instruments does have a "transmitter" chip that is pretty interesting. Basically it's a fairly complete high level VFO. There are 400 and 900 MHz versions and it's around five bucks. Gigahertz prescalers to bring it down to HF are only a couple of bucks. It, too, however, is in a TSSOP package with lots of legs, so you will need to make a high quality PC board and then solder the itty bitty legs. The soldering is possible, but you're not going to make that PC board with a Sharpie marker, so that process is going to drive up the price and difficulty.

You will find that it will be hard to get below the price point of kits like the Small Wonder Labs SW-40+ unless you have a really good junk box or go really low tech. Chances are you will need to collect parts from several suppliers, and just the postage will start to add up pretty significantly.

You can get pretty cheap if you go with a bare-bones, DC rig, but it's not going to have anything like the features you want.

You might take a peek at Jim Kortge's 2N2/40 for ideas. Won't help you with the PIC driven VFO, but the rest of it is there and pretty nice quality.

..

"Jason" <kc7eip_nospam@shaw.ca> wrote in message
news:FF8B9.828679$Ag2.27994108@news2.calgary.shaw.ca...
> Well that's why I'm in the brainstorming phase :).. .. I'm still green
> around the gills when it comes to designing my own stuff so i was going
with
> things that I know basic components and pics :)... When it comes to PLL
and
> DDS i know the theory but still a little bit hesitant to get knee deep in
an

3897. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-15 19:00:31 UTC
From: Jason <kc7eip_nospam@shaw.ca>
Message-ID: <jvbB9.805710$v53.30157890@news3.calgary.shaw.ca>
Source record: 39860

Yes i have had my hand at low tech :).. and thought that i might try my hand at a computer controlled rig.. Well pic controlled any way.. my soldering is good but I'm not that good :).. small smt is ok but much past 8 pins and I'm sure to make a bridge :).. I have taken a look at the swl rigs and some of the other ones and they are affordably in my price range but I was trying for something i could call my own... That being said. I think i will stick to low tech or semi low-tech and just ad a few ic's in the mix... a freq counter and keyer... and maybe a nice mixer in there as well i have played around with one and i like the gain although it's a little much for my little audio amp but i since fixed that ... but for now i think I'll stick to the simple stuff and add in the more hi-tech things when i have a better grasp and bigger budget... So after i have my VFO built I'll be back for more advice...
"xpyttl" <xpyttl_nospam@earthling.net> wrote in message news:utadrfm64o3u1b@corp.supernews.com...
> The problem with PLLs is that the good ones, the ones Dave suggests, are
> expensive and come in these tiny packages that are very difficult to solder.
> I guess you can get "samples" from Analog Devices, but that seems a little
> dishonest to me. The less expensive ones tend to not have enough resolution
> or work at frequencies that are just too low to be useful.
>
> Texas Instruments does have a "transmitter" chip that is pretty interesting.
> Basically it's a fairly complete high level VFO. There are 400 and 900 MHz
> versions and it's around five bucks. Gigahertz prescalers to bring it down
> to HF are only a couple of bucks. It, too, however, is in a TSSOP package
> with lots of legs, so you will need to make a high quality PC board and then
> solder the itty bitty legs. The soldering is possible, but you're not going
> to make that PC board with a Sharpie marker, so that process is going to
> drive up the price and difficulty.
>
> You will find that it will be hard to get below the price point of kits like
> the Small Wonder Labs SW-40+ unless you have a really good junk box or go
> really low tech. Chances are you will need to collect parts from several
> suppliers, and just the postage will start to add up pretty significantly.
>
> You can get pretty cheap if you go with a bare-bones, DC rig, but it's not

> going to have anything like the features you want.
>
> You might take a peek at Jim Kortge's 2N2/40 for ideas. Won't help you
with
> the PIC driven VFO, but the rest of it is there and pretty nice quality.
>
> ..
>
> "Jason" <kc7eip_nospam@shaw.ca> wrote in message
> news:FF8B9.828679$Ag2.27994108@news2.calgary.shaw.ca...
> > Well that's why I'm in the brainstorming phase :).. .. I'm still green
> > around the gills when it comes to designing my own stuff so i was going
> with
> > things that I know basic components and pics :)... When it comes to PLL
> and
> > DDS i know the theory but still a little bit hesitant to get knee deep
in
> an
>
>

3898. Op-amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-15 22:15:51 UTC
From: Bill Hennessy <hennessy@281.com>
Message-ID: <3dd57233$0$11960$9a6e19ea@news.newshosting.com>
Source record: 39861

Can you use a op-amp as a preamp in a radio? I know you can use the 741 as a preamp on a microphone, but it's to narrow a bandwith for a radio.

Bill, N5NOB

3899. Need a junkedf FDK Multi-750A 2m rig - anyone got one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-15 22:30:20 UTC
From: xrenfredm@xtra.co.nz
Message-ID: <3dd574fc.1827904@news.xtra.co.nz>
Source record: 39862

Hi gang . I need a junked set for the CPU - UPD 650C. Doesnt appear to be any available anymore - anywhere. Thanks for any help. Cheers, Renfred. ZL1BDL
Remove (X) from xrenfred for correct email address...thanks.

3900. Re: Op-amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-15 23:45:02 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <utb1hl8elqe4e4@corp.supernews.com>
Source record: 39863

I use one as an "EQ", while a 2N3904 does the preamp.
Stop in on my web site to see it, look for the "ICOM mic preamp" link.
www.qsl.net/kk5dr

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Bill Hennessy" <hennessy@281.com> wrote in message
news:3dd57233$0$11960$9a6e19ea@news.newshosting.com...
> Can you use a op-amp as a preamp in a radio? I know you can use the 741
as
> a preamp on a microphone, but it's to narrow a bandwith for a radio.
>
> Bill, N5NOB
>
>

3901. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-16 00:06:20 UTC
From: averyfineman@aol.com
Message-ID: <20021115190620.23141.00000379@mb-mt.aol.com>
Source record: 39864

In article <FF8B9.828679$Ag2.27994108@news2.calgary.shaw.ca>, "Jason"
<kc7eip_nospam@shaw.ca> writes:

>Well that's why I'm in the brainstorming phase :).. .. I'm still green
>around the gills when it comes to designing my own stuff so i was going with
>things that I know basic components and pics :)... When it comes to PLL and
>DDS i know the theory but still a little bit hesitant to get knee deep in an
>area i am unfamiliar with. But as my original idea is getting beyond my
>ability I think looking for different ways to accomplish this project are
>in order.Still one of the major factors is price I'm trying to design
>something for cheaper then i can get in a similar kit.(may not be
>possible).>

Jameco still offers the Motorola MC145151P parallel-input divider
control in a 28-pin "standard" DIP pin spacing. $5.95 ea. singles.
It can be the VFO if you don't mind fixed increments of frequency
at 40m. Everything for the PLL is on-chip except the reference
oscillator crystal and the voltage-controlled oscillator. Jameco
even has the Motorola datasheet available for free download.

Jameco also has the Motorola MC1350P wideband amplifier
block for $1.19 ea. in singles, $1.09 ea. in tens. This is a
push-pull input, push-pull output amplifier which can be
single-ended at either end. It has DC control of gain and works
beyond 40 MHz (I've used it to 65 MHz). Can be a good IC gain
block for any receiver stage, even as a balanced mixer (LO into
gain control line). 8-pin DIP. Motorola datasheet on-line at
Jameco for free download.

If you want incremental frequency resolution better than a
recommended 1 KHz spacing, you can set the PLL at a
slightly lower frequency, say 6.0 to 6.3 MHz in 10 KHz
increments, and mix it with an analog VFO of 1.0 to 1.01 MHz...
an MC1350 as the mixer, perhaps another MC1350 as the
variable oscillator. The reason for having the VFO at a lower
frequency is better stability.

In going to direct-conversion, it might be better to add an "RF
stage" in front of the receiver section mixer to improve the
signal-to-noise ratio...every mixer has conversion loss and that
will degrade the ultimate S/N ratio. An MC1350 would work
there and also yield a stage that can be DC (voltage) controlled
for RF gain. A direct-conversion receiver for 40m would not
require any manual tuning since its maximum bandwidth is only
0.3 / 7.148 = 4.2%...or Q needed is only 23.8...two tuned
circuits (antenna input, RF amp to mixer input) could use a

staggered-pair tuned arrangement. MC1350 input impedance
is equal to a 5 K resistance in parallel with about 2 pFd of
capacitance.

Just some suggestions...

Len Anderson
retired (from regular hours) electronic engineer person

3902. Re: Op-amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-16 00:16:25 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3DD58E82.6D55663A@cox.net>
Source record: 39865

I am not sure whether you are asking about an audio pre-amp or an RF
preamp.

We live in neat times. There are some really fast op-amps these days.
TI just announced some voltage feedback amps (the op-amp type that most
of us are used to) that have up to 2000 MHz of gain-bandwidth. This is
100x gain at 20 MHz, 200x gain at 10 MHz, etc.

The noise level on some of these can be reasonable, but not ultra low
noise. I think the TI parts are something like just under 4 nV/SqrtHz.
Compared to 50 ohm noise of 0.9 nV/SqrtHz, it might give a noise figure
of 14 db or so.

These are certainly useful for increasing the signal level in a
transmitter, or perhaps as an IF amp in a receiver, but not so great as
a front end (RF preamp) to an HF receiver. It would boost the signal,
but not improve sensitivity, and would simply increase overload in the
receiver.

Normal op-amps such as a 741 have gain bandwidths in the 1 to 4 MHz
range and are not useful at RF frequencies. As an audio preamp, a 741
can be used as long as the gain is kept below 20 db or so.

- Dan, N7VE

Bill Hennessy wrote:
>
> Can you use a op-amp as a preamp in a radio? I know you can use the 741 as
> a preamp on a microphone, but it's to narrow a bandwith for a radio.
>
> Bill, N5NOB

3903. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-16 00:33:24 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <utb4imkhi8h9ae@corp.supernews.com>
Source record: 39867

I've built DC receivers without an RF stage (using a diode ring mixer) and found the noise figure to be entirely adequate up to about 20 meters. On 15 meters and above, an RF stage would be a good idea. The MC1350 is a very noisy amplifier, so I wouldn't recommend using it as an RF stage. Or as an IF stage unless you have a fair amount of low noise gain ahead of it.

If you're interested in looking at DC receivers, you might check out "An Optimized QRP Transceiver" in August 1980 QST, "The 'Ugly Weekender'" in August 1981 QST, and the several articles by Rick Campbell in QST since then describing his DC phasing rigs.

Roy Lewallen, W7EL

Avery Fineman wrote:
>
> Jameco still offers the Motorola MC145151P parallel-input divider
> control in a 28-pin "standard" DIP pin spacing. $5.95 ea. singles.
> It can be the VFO if you don't mind fixed increments of frequency
> at 40m. Everything for the PLL is on-chip except the reference
> oscillator crystal and the voltage-controlled oscillator. Jameco
> even has the Motorola datasheet available for free download.
>
> Jameco also has the Motorola MC1350P wideband amplifier
> block for $1.19 ea. in singles, $1.09 ea. in tens. This is a
> push-pull input, push-pull output amplifier which can be
> single-ended at either end. It has DC control of gain and works
> beyond 40 MHz (I've used it to 65 MHz). Can be a good IC gain
> block for any receiver stage, even as a balanced mixer (LO into
> gain control line). 8-pin DIP. Motorola datasheet on-line at
> Jameco for free download.
>
> If you want incremental frequency resolution better than a
> recommended 1 KHz spacing, you can set the PLL at a
> slightly lower frequency, say 6.0 to 6.3 MHz in 10 KHz
> increments, and mix it with an analog VFO of 1.0 to 1.01 MHz...
> an MC1350 as the mixer, perhaps another MC1350 as the
> variable oscillator. The reason for having the VFO at a lower
> frequency is better stability.
>
> In going to direct-conversion, it might be better to add an "RF
> stage" in front of the receiver section mixer to improve the
> signal-to-noise ratio...every mixer has conversion loss and that
> will degrade the ultimate S/N ratio. An MC1350 would work
> there and also yield a stage that can be DC (voltage) controlled

> for RF gain. A direct-conversion receiver for 40m would not
> require any manual tuning since its maximum bandwidth is only
> 0.3 / 7.148 = 4.2%...or Q needed is only 23.8...two tuned
> circuits (antenna input, RF amp to mixer input) could use a
> staggered-pair tuned arrangement. MC1350 input impedance
> is equal to a 5 K resistance in parallel with about 2 pFd of
> capacitance.
>
> Just some suggestions...
>
> Len Anderson
> retired (from regular hours) electronic engineer person

3904. Re: Op-amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-16 00:36:00 UTC
From: averyfineman@aol.com
Message-ID: <20021115193600.04612.00000642@mb-ch.aol.com>
Source record: 39866

In article <3dd57233$0$11960$9a6e19ea@news.newshosting.com>, "Bill Hennessy"
<hennessy@281.com> writes:

>Can you use a op-amp as a preamp in a radio? I know you can use the 741 as
>a preamp on a microphone, but it's to narrow a bandwith for a radio.
>
>Bill, N5NOB

If you are talking about an RF amplifier at MF and up, a 741 is
not good...its unity open-loop gain is around 2 to 5 MHz.

As I suggested to Jason over in the "brainstorming 40m rig" thread,
a Motorola MC1350P is still available from Jameco ($1.19 singles,
$1.09 tens, $0.99 hundreds), including a free-download Motorola
datasheet. It never had the greatest S/N ratio in the world but it is
low enough for HF front-end applications meeting a 0.3 uV
sensitivity criteria. It has a bandwidth in excess of 40 MHz and it
can yield 30 db gain no sweat. It can also yield 30 db of gain
control attenuation with a DC voltage on a separate pin. Not only
that, the 8-pin DIP handles as easily as any 741 in an 8-pin DIP.
Differential or single-ended input or output...your choice.

www.jameco.com [not an endorsement]

Len Anderson
retired (from regular hours) electronic engineer person

3905. Vector Voltmeter Probes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-16 00:43:39 UTC
From: Km <kmarch@ix.netcom.com>
Message-ID: <ar44kcute1@slb2.atl.mindspring.net>
Source record: 39868

I have an HP Vector Voltmeter which is missing the probes. Does anyone have the schematic for such probes or better yet a pair of probes I can salvage?
Thanks, Bob

3906. Re: Vector Voltmeter Probes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-16 01:49:07 UTC
From: Wes Stewart <n7ws@nowhere.com>
Message-ID: <iq8btugvqqk3fqlu0t7vj3urvhh57rq8i8@4ax.com>
Source record: 39869

On Fri, 15 Nov 2002 16:43:39 -0800, "Km" <kmarch@ix.netcom.com> wrote:

|I have an HP Vector Voltmeter which is missing the probes. Does anyone have
|the schematic for such probes or better yet a pair of probes I can salvage?
|Thanks, Bob

I think you're screwed but look here for a scanned image of the probe
schematic:

http://users.triconet.org/wesandlinda/8505_Probe.gif

As far as I know the parts are made of unobtainum. If you find
surplus probes let me know as I would like to have spares. If mine
ever fail, I'm screwed.

Wes
|

3907. FA: HV rectfier modules

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-16 03:26:04 UTC
From: GaryH <garyh@bellsouth.net>
Message-ID: <DRiB9.2645$%j3.680@news.bellsouth.net>
Source record: 39870

Last hours for some HV Rectfier modules for that homebrew
amp.

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=800962693

3908. FA: (2)Motorola Hang-up Switches...TU-526..N.I.B.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-16 07:16:28 UTC
From: MTM <res0i8ad@verizon.net>
Message-ID: <ghmB9.3094$aB1.1580@nwrddc02.gnilink.net>
Source record: 39871

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=800690552&rd=1

(2)Motorola Hang-up Switches...TU-526..N.I.B.

3909. Re: Need a junkedf FDK Multi-750A 2m rig - anyone got one?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-16 11:01:49 UTC
From: la8ak.xnd@online.no
Message-ID: <3dd59455.28689085@news.online.no>
Source record: 39872

On Fri, 15 Nov 2002 22:30:20 GMT, xrenfredm@xtra.co.nz (Renfred)
wrote:

>Hi gang . I need a junked set for the CPU - UPD 650C. Doesnt appear to
>be any available anymore - anywhere. Thanks for any help. Cheers,
>Renfred. ZL1BDL
>Remove (X) from xrenfred for correct email address...thanks.

schematics for different rigs may be available at
http://krasnodar.online.ru/hamradio/sch_eng.html ?
I have an old FDK VFO, but it seems nobody keeps schematics these
days.

73
LA8AK
--
remove ,xnd to reply

3910. QRP Homebrewer #7 article needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-16 18:45:30 UTC
From: canyon <kloc@commspeed.net>
Message-ID: <1037472924.769111@news.commspeed.net>
Source record: 39873

Guys,

I'm looking for a scan or hard copy of the "Rainbow tuner lives again"
article from QRP Homebrewer #7. Would greatly appreciate a copy.

Thank you,

WA4MNT 73's

3911. Re: Vector Voltmeter Probes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-16 21:18:09 UTC
From: gaschafer@attbi.com
Message-ID: <3dd6b649.3843314@netnews.attbi.com>
Source record: 39874

On Fri, 15 Nov 2002 18:49:07 -0700, Wes Stewart <n7ws@nowhere.com>
wrote:

>On Fri, 15 Nov 2002 16:43:39 -0800, "Km" <kmarch@ix.netcom.com> wrote:
>
>|I have an HP Vector Voltmeter which is missing the probes. Does anyone have
>|the schematic for such probes or better yet a pair of probes I can salvage?
>|Thanks, Bob
>
>I think you're screwed but look here for a scanned image of the probe
>schematic:
>
>http://users.triconet.org/wesandlinda/8505_Probe.gif
>
>As far as I know the parts are made of unobtainum. If you find
>surplus probes let me know as I would like to have spares. If mine
>ever fail, I'm screwed.
>
>Wes
>|
>

Hi Wes,

I have an 8505 too. I have the probes but neither one works! Do you
know what the diodes
and the amp are?

Thanks
Gary K4FMX

3912. ardf fox-hunting

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-16 21:35:37 UTC
From: Jokie <jokiedokie@planet.nl>
Message-ID: <ar6dnemik1@reader13.wxs.nl>
Source record: 39875

Could anyone tell me where i can find a layout of a transmitter for
foxhunting
if possible with MO1 to MO5 in cw.I would like to bild it by myself.

3913. Re: Radio Frequency Choke manufacturers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-16 23:28:18 UTC
From: Joe Strain <yodar@cfl.rr.com>
Message-ID: <mwAB9.298923$S8.6102007@twister.tampabay.rr.com>
Source record: 39876

Thordarsen/Meissner in The Chicago area?

Yodar

==========
"Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message
news:O7ga4ON$z9EwHC@fslife.co.uk...
> Can anyone on the group supply me with any RF plate choke manufacturers
> that are still in business?
>
> I believe R.S. Miller are no more.
>
> Any others?
>
> (((73)))
> --
> Philip de Cadenet G4ZOW
> Transmitters 'R' Us
> http://www.transmittersrus.com

3914. Re: P.S. Transformer source

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-16 23:33:14 UTC
From: Joe Strain <yodar@cfl.rr.com>
Message-ID: <_AAB9.299051$S8.6102196@twister.tampabay.rr.com>
Source record: 39877

SKYCRAFT SURPLUS INORLANDO FL. HAS AWHOLE WALL FULL OF XFMRS

There's also surplus sales , Lincoln Ne, and Fair Radio, Lima Oh., and
Electronics goldmine (Google required)
Yodar
==========
"Dale Parfitt" <parinc@verizon.net> wrote in message
news:3DCB2B44.EE05EF25@verizon.net...
> Hi,
> I need to generate 150VDC @50mA and 6.3 VAC @1A. Any sources out there
> other than Antique Electronics?
>
> Tnx,
>
> Dale W4OP
>

3915. Amplifier imput impedance circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-17 00:31:07 UTC
From: gw@webhideout.com
Message-ID: <235a74db.0211161631.204051f6@posting.google.com>
Source record: 39878

Hello to all. I am thinking about building my first tube amp using a single 3-500 z. By using the info from the data sheet on this tube, how do i come up with the input impedance of this tube? Thanks.

GW

3916. Re: Amplifier imput impedance circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-17 01:35:12 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <utdsc6fkif3jfe@corp.supernews.com>
Source record: 39879

Stop by my web site, I have what your looking for.
www.qsl.net/kk5dr

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"gw" <gw@webhideout.com> wrote in message
news:235a74db.0211161631.204051f6@posting.google.com...
> Hello to all. I am thinking about building my first tube amp using a
> single 3-500 z. By using the info from the data sheet on this tube,
> how do i come up with the input impedance of this tube? Thanks.
>
> GW

3917. Re: Should I scrounge it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-17 04:12:25 UTC
From: Tom Coates <tecoates@comcast.net>
Message-ID: <22ydnbp6Pb61ikqgXTWc3A@comcast.com>
Source record: 39880

The 2001 ARRL Handbook has a long article based on research by WA2EBY
describing a power MOSFET amp. The eight-page article has 8 references.

Tom, N3IJ

"Robert Lyons" <boblyons@umich.edu> wrote in message
news:3DD3BAD4.E7E7CBEF@umich.edu...
> xpyttl wrote:
> >
> > Bob
> >
> > The reason you don't see a lot of projects for that voltage isn't that
> > common components don't work well there...
> >
> > Power MOSFETS in the 20-30 amp range at 150 volts or so that will work
> > through the HF range are pretty widely available and cheap....
> >
> > The main problem is that you will likely need to do the design yourself.
> <snip>
> >
> > Sounds like you got the beginnings of a fun project!
>
>
> Indeed! Thanks very much for your posting. I'll check into higher-voltage
> MOSFETs. After I learn something about how they work (they didn't exist
> when I learned my basic electronics AFAIK). My suspicion is that I'll
> be able to adapt some existing circuits to the higher voltage and alter-
> native MOSFETs with some work. And no need to run up into VHF - I can get
> by barefoot there. It's HF I want.
>
> 73 de Bob, KI8AB

3918. Re: Building a variable condenser?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-17 05:08:58 UTC
From: cornytheclown@hotmail.com
Message-ID: <8e8f59d4.0211162108.70a10fd7@posting.google.com>
Source record: 39881
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

la8ak.xnd@online.no (J M Noeding) wrote in message
news:<3db02277.170352299@news.online.no>...
> Capacitors for ATU are difficult to find nowadays, and a friend are
> travelling to Taiwan with one of the purpose of finding variable
> capcitors for ATU projects.
>
> Have seen ATU's for sale in Germany with tuning capacitors which looks
> like 'home-made', but quite good work. Wonder if somebody has
> experience in making his own variable capcitorsm and what is possible
> maximum capacity?
>
> I am particularly interested if it is possible to make a 5000pF 2000V
> or larger capacitor for 136kHz ATU, dimensions for 136kHz could be 100
> times larger than 14MHz for similar performance. Suggest mica as
> dielectricum?
>
> 73
> Jan-Martin
> LA8AK

I have built a few air variable caps using aluminum sheet, phenolic or
(garolite) as the end plates and using stove bolts with washers as
spacers to hold the stator and endplates together, I assemble the
rotor plates and shaft from 1/4 threaded rod using washers as spacers
and nuts to hold the assembly together. On the back of the rotor unit
I use a small piece of sring steel bolted to the back plate and
bearing down on the back end of the rotor shaft to keep the rotor from
turning to freely though being connected to a vernier tuning knob this
does not seem to be much of an issue. basically copying the design of
air variables in possesion but being fabricated myself they are
wonderful additions to a receiver. I also make fixed capacitors like
the old micadon 601s and have made a few paper caps which perform well
in my grid leak and regen radios.....

My technique may not be what you are looking for but I thought I would
just throw this out there for you.
I had to turn to this method as I like building from scratch and being
as I build shortwave receivers and need small value air variables,
cheaply, and without butchering up a manufactured cap it has workd
fine.

I also have done vernier arrangements using friction drive and have
done a few vernier arrangements using plastic circles cut out of
phenolic and large rubber bands, they may look gruesome but they work

pretty well.

I really enjoy building my components, I hope to one day be able to fabricate my own triode and receive with it. I know of home built tubes but dont know how well they work in radio work, just something to waste winter time on....

Hope I didnt go too far off topic, I just love my raidios and dont often get the chance to talk about my work........

3919. Famous Patents

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-17 06:11:54 UTC
From: durabolin3@aol.com
Message-ID: <3dd732fc.18095491@news.pen.k12.va.us>
Source record: 39882

I was wondering if there is a list of famous radio patents, maybe on the Internet or in a ham rag?

Brock, VA6BTS

3920. Re: Famous Patents

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-17 06:41:47 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <ar7dnb$5cr$1@freenet9.carleton.ca>
Source record: 39883

Brock (durabolin3@aol.com) writes:
> I was wondering if there is a list of famous radio patents, maybe on
> the Internet or in a ham rag?
>
> Brock, VA6BTS

I know of no list. But months ago, I discovered that the US Patent Office has a website, and apparently ALL US patents are viewable online. I've looked up Armstrong's patents, and that was pretty neat. However, I've only looked at patents that I have numbers for. When I first learned of the site, I entered somebody's name (to find what might be the first product detector patent, actually for Jan-Martin who was looking at the time), and when I tried the search engine, I think both trying on name and "product detector" I got no results. I've never gotten back to trying the search engine, but it's there for all to see and try: http://www.uspto.gov/patft

From time to time, we've talked about QST and QEX on CDROM here, and sometimes people have wished for the ARRL Handbooks on CDROM. What I'd like is for someone at the ARRL to go through the archives and put together collections of related articles on CDROM. Since they've got the rights to the old Ham Radio magazine, they'd have access to a good portion of the ham technical articles over the years. There are some classic receiver articles (Armstrong must have had at least some articles about his receivers, Lamb writing about "single signal selectivity" in the thirties, that 1963 article about the 7360 in receiving applications and William Sabin's 1970 article about receiver design come immediately to mind) which would be nice to be collected together. The ARRL used to do this with specialized topics (VHF, SSB, mobile, etc) in book form, though in recent years the compilations seem focused on QRP. Since the articles are already in electronic format, the main deal would be selection, and the whole project could even be a "publish on demand", ie write a CDROM when an order comes in. If they could throw inpertinent patents, that would help fill out the material.

Michael VE2BVW

3921. Re: Radio Frequency Choke manufacturers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-17 07:25:28 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <afwlG5EoR019EwHk@fslife.co.uk>
Source record: 39884

>Thordarsen/Meissner in The Chicago area?
Thank you for that info.

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3922. Re: ardf fox-hunting

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-17 10:32:35 UTC
From: Atlas <nospam.shf@pandora.be>
Message-ID: <7fKB9.5049$9W3.528910474@hebe.telenet-ops.be>
Source record: 39885

For what band? 80m or 2m

3923. Re: Amplifier imput impedance circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-17 12:22:14 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ar81ll$9uc$1@sparta.btinternet.com>
Source record: 39886

Download program TRIODE1 from website below for full analysis/design of Class A,B,C power amps, grounded cathode. (Unsuitable for grounded grid). Design includes output tank and Pi-match.

An example design, built into the program, is based on a 3-500Z. Hit one key and you have it all. Ready for changing operating angle, HT, bias conditions, etc.

Grid driving impedance is one of the computed circuit parameters.

A neutralising circuit is not included in the analysis. You will have to sort that out for yourself.

Program TRIODE1 downloads in a few seconds. No unzipping inconvenience. Run immediately
---
==========
Regards from Reg G4FGQ
For Free Radio Design Software
Go to http://www.g4fgq.com
==========

3924. Re: Famous Patents

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-17 20:15:56 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <-hedndHo9uBHZUqgXTWcpw@comcast.com>
Source record: 39887

The USPatent and Trademark Office has a great search engine -- www.uspto.gov
The best time to access it is on Sunday morning. I don't know if it's still
the case, but you did need to have "Quicktime" installed to view the
diagrams.

The USPTO also takes credit cards over the web to order complete patents and
they usually arrive in a couple days. I think that it's one of the best
things the governmetn does (but damn those pharma companies with their
hundreds of claims clogging up the works.)

"Brock" <durabolin3@aol.com> wrote in message
news:3dd732fc.18095491@news.pen.k12.va.us...
> I was wondering if there is a list of famous radio patents, maybe on
> the Internet or in a ham rag?
>
> Brock, VA6BTS

3925. Re: Famous Patents

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-17 20:15:59 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3DD7F8FF.3E32C8B6@nettally.com>
Source record: 39888

I think the "pulse counting FM demodulator" is pretty neat.

Brock wrote:

> I was wondering if there is a list of famous radio patents, maybe on
> the Internet or in a ham rag?
>
> Brock, VA6BTS

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

3926. Re: First Edition 1943 Radio Engineers Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-17 20:55:44 UTC
From: some@somewhere.net
Message-ID: <87ptt3apbx.fsf@zyan.org>
Source record: 39890
Cross-posted to:
rec.arts.books.marketplace,sci.electronics.basics,rec.radio.amateur.swap,rec.radio.swap,rec.radio.amateur.homebrew

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1584915064

pyr@zyan.takethisoff.org writes:

> Due to a great response on a previous office copy, here is my personal
> copy for sale.
> http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1583241941
>
> --
> pyr

3927. Re: Famous Patents

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-17 20:56:14 UTC
From: "Sverre Holm (LA3ZA)" <0junk4me@qsl.net>
Message-ID: <lnTB9.1574$G42.20756@news2.e.nsc.no>
Source record: 39889

Try this one:

http://eepatents.com/collection.html

Pioneering EE Patents: The Collection

73 Sverre
LA3ZA

"Brock" <durabolin3@aol.com> wrote in message
news:3dd732fc.18095491@news.pen.k12.va.us...
> I was wondering if there is a list of famous radio patents, maybe on
> the Internet or in a ham rag?
>
> Brock, VA6BTS

3928. Re: Famous Patents

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-17 21:15:54 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <ar90uafsj1@freenet9.carleton.ca>
Source record: 39891

Joe Leikhim (jleikhim@nettally.com) writes:
> I think the "pulse counting FM demodulator" is pretty neat.
>
That one dates from 1946 or 47. I have about four issues of QST
from that era, and there is an article about pulse-counting detectors
in one. I'm sure it references the patent, and is either written by
the inventor or mentions it. If I felt like digging, I could find it.
Someone with that era of QST on CDROM could dig it out, and make it
easier for you to dig out the patent.

Michael VE2BVW

> Brock wrote:
>
>> I was wondering if there is a list of famous radio patents, maybe on
>> the Internet or in a ham rag?
>>
>> Brock, VA6BTS
>
> --
> Joe Leikhim K4SAT
> Jleikhim@nettally.com
>
> "Jazz is not dead. It just smells funny." -F.Z.
>
>

3929. FS: GATES RIGHT ANGLE DRIVES

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-17 22:35:42 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <2RUB9.18331$hK4.1680094@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39892

ON EBAY -search:seller: heytubeguy

3930. Re: Famous Patents

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-17 22:56:50 UTC
From: Idontwantspam@net
Message-ID: <3dd81e10.27880179@news.bellatlantic.net>
Source record: 39893

On Sun, 17 Nov 2002 15:15:56 -0500, "john walton"
<jdwalton@comcast.net> wrote:

>The USPatent and Trademark Office has a great search engine -- www.uspto.gov
>The best time to access it is on Sunday morning. I don't know if it's still
>the case, but you did need to have "Quicktime" installed to view the
>diagrams.
>
>The USPTO also takes credit cards over the web to order complete patents and
>they usually arrive in a couple days. I think that it's one of the best
>things the governmetn does (but damn those pharma companies with their
>hundreds of claims clogging up the works.)
>
In searching for the older ones, there is a certain art to using the
search engine. It helps to have alternate terminology in mind for
defining your search, names of inventors and companies, rough date
ranges, etc.

I had looked up some patents my father had worked on, and did not find
all of them in my initial search.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

3931. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-17 23:22:45 UTC
From: averyfineman@aol.com
Message-ID: <20021117182245.24784.00000926@mb-mp.aol.com>
Source record: 39894

In article <utb4imkhi8h9ae@corp.supernews.com>, Roy Lewallen <w7el@eznec.com>
writes:

>I've built DC receivers without an RF stage (using a diode ring mixer)
>and found the noise figure to be entirely adequate up to about 20
>meters. On 15 meters and above, an RF stage would be a good idea.

A diode mixer of any kind is passive. Its conversion gain is
therefore negative. There's a trade-off there insofar as sensitivity
is concerned: Eliminating gain ahead of a mixer requires more
gain behind the mixer...a very low-noise AF amplifier behind it...
which requires very considerable shielding and layout to keep
from picking up all kinds of EM garbage.

A ring or bridge diode mixer can be made to keep most of the LO
out of the input circuit (it is better than a regenerative detector and
far better than a superregen), but it isn't perfect, either. An RF
amplifier ahead of it brings such LO leakage down to levels only a
lab setup can measure.

>The
>MC1350 is a very noisy amplifier, so I wouldn't recommend using it as an
>RF stage. Or as an IF stage unless you have a fair amount of low noise
>gain ahead of it.

I beg to disagree. The MC1350 die is based on the MC1590 metal-
can-mounted original. For both the 1350 and 1590 the Noise Figure
is 6 db at 45 MHz, 7 db at 58 MHz in the factory test circuit which
has 50 Ohms in and out, bandwidth of 4.5 MHz...lower-frequency NF
is a bit better. Power gain with tuned circuits is easily 50 db at low
VHF and that translates to a voltage gain of about 316 times.

At a 6 db NF the noise power added by the amplifier is close to 3
times (in power) that of an ideal no-noise amplifier of the same power
gain. The input of a 1350 or 1590, each side of differential input, is
5 KOhms in parallel with about 2 pFd. The equivalent noise voltage
of just a 5 K resistance with a bandwidth of 3 KHz is close to 0.5 uV
at slightly-hotter than standard temperature of 290 Kelvin (allowing
for some IC heat build-up). Assuming a 6 db NF, the equivalent
input noise would then be about 0.87 uV (SQRT(3)*0.5uV) just from
the amplifier stage. Combined (since random noise power always
adds), that would be a total of about 1.0 uV equivalent across the
5 K input resistance of the 1350/1590.

Since the input resistance is moderately high, a 1:10 turns ratio
input transformer nicely fits a 50 Ohm to 5 KOhm impedance

match, coax to IC single-ended input. That would make the equivalent noise voltage at the 50 Ohm level about 0.1 uV for a source resistance plus that added by the IC. That should fit a normal sensitivity criterion established by existing receivers for a 3 KHz bandwidth. In actual practice on HF bands from 5 MHz and up, the equivalent input noise was found to be about 0.2 uV at a 3 KHz bandwidth...but that may be due to home workshop instrument calibration tolerances.

[I prefer calculations at voltage levels rather than write a bunch of minus exponents for powers...others will differ on method but all come out to be the same in the end]

The 1350/1590 isn't the "best" for extreme S/N but it is quite acceptible on HF where the atmospherics and ambient EMI is often above 0.2 uV at the antenna. That IC isn't the "best" for intermodulation but a tuned input and output circuit helps that. Input and output admittance is very forgiving of matching and tuned circuits handle the parallel capacitances at each end. The gain control range is claimed as 0 to 60 db attenuation but I would suggest that 0 to about 45 db is more practical and that is on par with existing RF gain controls on existing receivers. That IC is not all that swift on extremes of temperatures to military environments (Hughes Missle Div. needed more stability than the MC1590 provided), but less-stringent vehicle environments and room temperature locations should be just fine.

Motorola designed and produced a number of ICs that were intended for consumer electronics, particular TV receivers. The competition in consumer electronics is fierce and, eventually, Motorola stopped and sold die rights of some packages to other IC manufacturers. That isn't a black mark on the IC design, just a hard fact in mass marketing.

I personally prefer an active device that doesn't have curlicue-shaped admittance/impedance curves over a frequency range. Makes matching over wide frequency spans MUCH easier and the 1350/1590 behaves well in that regard...forward trans-admittance is nicely flat up to 60 MHz with little fall-off at the high end. Reverse is very low and the only possible feedback comes from inattention to reasonable physical layout.

The separate gain control pin works very well as an LO input for a mixer, either balanced or unbalanced. Motorola didn't publish much information on mixer circuit applications so that must be breadboarded and checked. Conversion gain is not a problem. 3rd Order IP is low; one can't always get everything for $1.19. :-)

Len Anderson
retired (from regular hours) electronic engineer person

3932. Re: Famous Patents

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-18 00:57:26 UTC
From: la8ak.xnd@online.no
Message-ID: <3dd83754.201514143@news.online.no>
Source record: 39896

On 17 Nov 2002 21:15:54 GMT, et472@FreeNet.Carleton.CA (Michael Black) wrote:

>Joe Leikhim (jleikhim@nettally.com) writes:
>> I think the "pulse counting FM demodulator" is pretty neat.
>>
>That one dates from 1946 or 47. I have about four issues of QST
>from that era, and there is an article about pulse-counting detectors
>in one. I'm sure it references the patent, and is either written by
>the inventor or mentions it. If I felt like digging, I could find it.
>Someone with that era of QST on CDROM could dig it out, and make it
>easier for you to dig out the patent.
>
> Michael VE2BVW
>
>
just checked W0IYH index file, could it be one of these...(?)

September 1946
Tilton "A New Approach to FM Reception" p.73
(double down-convert FM band to 10 MHZ to 200 kHz
RC-coupled amps)

July 1947
Goodman "Low Frequency NBFM" p.21

January 1946
Grammer "A New FM Detector Circuit" p.26

December 1945
Geist "Simplified FM" p.29

will be pleased to receive any feedback to add key-words to the index

73
Jan-Martin
LA8AK

--
remove ,xnd to reply

3933. Re: Amplifier imput impedance circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-18 00:57:27 UTC
From: la8ak.xnd@online.no
Message-ID: <3dd839e3.202169762@news.online.no>
Source record: 39895

On Sun, 17 Nov 2002 12:22:14 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>Download program TRIODE1 from website below for full analysis/design of
>Class A,B,C power amps, grounded cathode. (Unsuitable for grounded grid).
>Design includes output tank and Pi-match.
>
>An example design, built into the program, is based on a 3-500Z. Hit one
>key and you have it all. Ready for changing operating angle, HT, bias
>conditions, etc.
>
>Grid driving impedance is one of the computed circuit parameters.
>
>A neutralising circuit is not included in the analysis. You will have to
>sort that out for yourself.
>
>Program TRIODE1 downloads in a few seconds. No unzipping inconvenience. Run
>immediately
>---
>==========================
>Regards from Reg G4FGQ
>For Free Radio Design Software
>Go to http://www.g4fgq.com
>==========================
>
>
the next program I would like to see is for Zwischenbasis amplifier,
it is an interesting amplifier for receivers input stages and mixer
post-amplifiers. It seems to have been used mainly in Germany and
European continent, then forgotten for 40 years and now interesting
for high grade communication receivers

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

3934. W7EL 40m optimized QRP VFO help please!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-18 02:30:40 UTC
From: Mike Srock <msrock@chartermi.net>
Message-ID: <utgk6deq9v0jec@corp.supernews.com>
Source record: 39797

Hi Group.

I am building an optimized W7EL 40 meter QRP rig from the 1994 ARRL handbook.

I am not good with the dead bug construction so I designed five 2 inch square boards
using winboard by IVEX. This kept me below the 100 pin per board limit on the demo and
made it more modularized. (I can provide the board designs to anyone who would like to
try it.) It will all fit into a 2x3x5 project box when done with enough room for a keyer board too.
I actually finish construction of the boards a couple of years ago and I am just now getting back to it.

Anyway here is the problem. I can't seem to get the VFO to oscillate to save my life.
The vfo board has all the parts associated with the 2N4416 very close together to mock as much
as posible point to point construction.
I have tried the following things:.....

I have swapped out the 2N4416 with a MPF102. I also tried some others I had around .(just because I had some)

I have modified the board design to compact the parts for the oscillator even more and move the
coil closer to the FET.

I have rewound the coil and added one extra turn on each side of the tap. (just a guess)

I have tried adding a 4x6 pcb copper down under the board and connecting it to the VFO
ground for a ground plane.

I have rebuilt this thing several times trying different components.
I am ordering a handful of 2n4416 and 2n5486 FETs to play with.
The 5486 FET is supposed to be better gain than the 4416.

I believe I got better parts density with the pcb than I could have got with dead bug so I don't think that is the problem
I am lacking a ground plane and I don't know if that would stop it from working. Is there any modifications to the circuit
that need to be made to get it to oscillate without a huge ground plane? I can't believe that all hartley oscillators are built dead

bug. Maybe I have the wrong core for the coil. I am ordering a new one just in case.

When I use my signal generator to inject a signal before the buffers the radio receives signals and sounds pretty healthy so
I am really frustrated about not being able to figure it out.

I appreciate any comments that can help me get this thing going. I can email designs, drawings and pictures to anyone
interested in helping or using the board designs. If you would like me to email files to you please contact me directly.

Of course it is entirely possible I have made a mistake in the board design. An extra set of eyes or two might see something I
missed. (I hope)

And Roy if you are out here, I hope you don't mind me sharing my board designs. I am not taking credit for your work or asking
any money. Just sharing with fellow hams. If this is not ok let me know. I am hoping that more people will build the rig if we can
come up with a proven board design. It is much easier than dead bug for a lot of us!

I am looking forward to the responses!

Thanks!!

Mike

73 DE KB8RAQ

3935. Re: W7EL 40m optimized QRP VFO help please!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-18 08:08:27 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <uth7vsnkqu0me9@corp.supernews.com>
Source record: 39798

That oscillator, which comes from Hayward & DeMaw's _Solid State Design for the Radio Amateur_ is very forgiving, so something major is wrong. I've built many, many of them and haven't had one fail to start yet. Here are some things to check:

1. Are you using the right core material for your inductor?
2. Are you sure you have the pinout right for your FET?
3. Do you have the diode in backward?
4. Is the coil connected so the tap is about 1/4 of the way up from ground, not 1/4 of the way down from the top?
5. Are you sure your method of detecting oscillation is working? The oscillator does produce a healthy signal when it's running, though.

If you're sure you have these things right, then what I'd do next is to simplify the circuit to reduce the variables. Remove the 10k resistor going to Q2, and the 15 pF capacitor going to the RIT diode D1. If it doesn't start, then disconnect all the capacitors going to the top of the inductor L1, and temporarily tack in a capacitor of roughly 150 pF, connected from the top of L1 to ground. That's just about as simple as it gets, and I'd be very surprised if it still fails. If it does run with these simplifications, then replace one at a time until you find which one makes it quit, and figure out why.

I don't mind a bit your sharing your board. The rig was actually produced and sold as a kit by at least a couple of companies over the years, and many, many copies have been made of it.

Note there's an error on the schematic in the QST article (my fault) -- the phasing of T1 is incorrect. Also, D1 wasn't identified on the parts list. It's a 15V, 400mW zener. And on p. 18, Q7 - Q10 should read Q6 - Q9 respectively.

73,
Roy, W7EL

Mike Srock wrote:
> Hi Group.
>
> I am building an optimized W7EL 40 meter QRP rig from the 1994 ARRL
> handbook.
>
> I am not good with the dead bug construction so I designed five 2 inch
> square boards
> using winboard by IVEX. This kept me below the 100 pin per board limit on
> the demo and
> made it more modularized. (I can provide the board designs to anyone who

> would like to
> try it.) It will all fit into a 2x3x5 project box when done with enough
> room for a keyer board too.
> I actually finish construction of the boards a couple of years ago and I am
> just now getting back to it.
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> Anyway here is the problem. I can't seem to get the VFO to oscillate to
> save my life.
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> as posible point to point construction.
> I have tried the following things:.....
>
> I have swapped out the 2N4416 with a MPF102. I also tried some others I had
> around .(just because I had some)
>
> I have modified the board design to compact the parts for the oscillator
> even more and move the
> coil closer to the FET.
>
> I have rewound the coil and added one extra turn on each side of the tap.
> (just a guess)
>
> I have tried adding a 4x6 pcb copper down under the board and connecting it
> to the VFO
> ground for a ground plane.
>
> I have rebuilt this thing several times trying different components.
> I am ordering a handful of 2n4416 and 2n5486 FETs to play with.
> The 5486 FET is supposed to be better gain than the 4416.
>
> I believe I got better parts density with the pcb than I could have got with
> dead bug so I don't think that is the problem
> I am lacking a ground plane and I don't know if that would stop it from
> working. Is there any modifications to the circuit
> that need to be made to get it to oscillate without a huge ground plane? I
> can't believe that all hartley oscillators are built dead
> bug. Maybe I have the wrong core for the coil. I am ordering a new one
> just in case.
>
> When I use my signal generator to inject a signal before the buffers the
> radio receives signals and sounds pretty healthy so
> I am really frustrated about not being able to figure it out.
>
> I appreciate any comments that can help me get this thing going. I can
> email designs, drawings and pictures to anyone
> interested in helping or using the board designs. If you would like me to
> email files to you please contact me directly.
>
> Of course it is entirely possible I have made a mistake in the board design.

> An extra set of eyes or two might see something I
> missed. (I hope)
>
> And Roy if you are out here, I hope you don't mind me sharing my board
> designs. I am not taking credit for your work or asking
> any money. Just sharing with fellow hams. If this is not ok let me know.
> I am hoping that more people will build the rig if we can
> come up with a proven board design. It is much easier than dead bug for a
> lot of us!
>
> I am looking forward to the responses!
>
> Thanks!!
>
> Mike
>
> 73 DE KB8RAQ
>
>
>
>
>
>

3936. Re: ardf fox-hunting

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-18 10:01:43 UTC
From: Markus L <uo9oew@lnubb.pbz>
Message-ID: <3dd8ba6a$0$223$4d4ebb8e@read-nat.news.nl.uu.net>
Source record: 39799

"Jokie" <jokiedokie@planet.nl> wrote in message
news:ar6dnemik1@reader13.wxs.nl...
> Could anyone tell me where i can find a layout of a transmitter for
> foxhunting if possible with MO1 to MO5 in cw.I would like to bild it by
myself.

http://www.qsl.net/on7yd/ardfbrew.htm
http://www.xs4all.nl/~pa0nhc/ardf/tx80/tx80.htm
http://www.ardf.ch/Technik/Tx_80m.htm
http://guenther.fromhagen.bei.t-online.de/seite5.htm
http://members.aol.com/dl3bbx/Page4.html

73, Markus HB9BRJ

3937. Re: Vector Voltmeter Probes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-18 16:34:45 UTC
From: Rick Karlquist <richard@karlquist.remove.this.com>
Message-ID: <FE8C9.42361$__1.23719@rwcrnsc51.ops.asp.att.net>
Source record: 39800

The only part in the probe that might be hard to get
is the P-channel FET. Any decent Schottky
quad can be used for the sampler and the rest
of the parts are ubiquitous.

Its the same problem in the 4815 vector
impedance meter (the newer 4193 uses N-channel
FETs).

You might try asking George Sandford (in NJ) about
your probes. He rebuilds 4815 probes, so he
should be able to work on 8505 probes as well.

[I don't have contact into for George Sandford]

Rick Karlquist N6RK
(who works for Agilent)

"Gary Schafer" <gaschafer@attbi.com> wrote in message
news:3dd6b649.3843314@netnews.attbi.com...
> On Fri, 15 Nov 2002 18:49:07 -0700, Wes Stewart <n7ws@nowhere.com>
> wrote:
>
> >On Fri, 15 Nov 2002 16:43:39 -0800, "Km" <kmarch@ix.netcom.com> wrote:
> >
> >|I have an HP Vector Voltmeter which is missing the probes. Does anyone
have
> >|the schematic for such probes or better yet a pair of probes I can
salvage?
> >|Thanks, Bob
> >
> >I think you're screwed but look here for a scanned image of the probe
> >schematic:
> >
> >http://users.triconet.org/wesandlinda/8505_Probe.gif
> >
> >As far as I know the parts are made of unobtainum. If you find
> >surplus probes let me know as I would like to have spares. If mine
> >ever fail, I'm screwed.
> >
> >Wes
> >|
> >
> ----------
> Hi Wes,
>

> I have an 8505 too. I have the probes but neither one works! Do you
> know what the diodes
> and the amp are?
>
> Thanks
> Gary K4FMX

3938. Modern test probes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-18 17:17:50 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <arb7buohg0@216.39.176.137>
Source record: 39801

This may be old news to some of you homebrewers/repair folks out there but I finally come up with a solution for probing PCB SMT components. The problem I experienced was in getting standard test probes into tightly component packed areas. The probes I have on hand are just too blunt.

At first I tried using alligator clips between the test probes and straight pins. The problem with this is that my alligator clips didn't make firm contact with the body of the pins. The other day I was in a 'goods' store and noticed sewing needles. These have a square head which my alligators can firmly grasp and very sharp thin points. Problem solved!

73 de Jack

3939. white LED ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-18 18:03:25 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <utiarnbsr3qi37@corp.supernews.com>
Source record: 39802

How many companies make white LEDs and who are the top 2 or 3? Are most made here or in the east?
tnx
hank wd5jfr

3940. Re: white LED ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-18 19:06:13 UTC
From: Bill M <exray@no>
Message-ID: <utiead4kcjmn02@corp.supernews.com>
Source record: 39803

Henry Kolesnik wrote:
>
> How many companies make white LEDs and who are the top 2 or 3? Are most
> made here or in the east?
> tnx
> hank wd5jfr

You may find some info on this page...
http://www.uwgb.edu/nevermab/led.htm

-BM

3941. UTC power transformer R-5 specs request.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-18 20:39:02 UTC
From: porreta99@yahoo.com
Message-ID: <61c031e6.0211181239.52824600@posting.google.com>
Source record: 39804

Hi.

I have a UTC power transformer marked R-5 that came in a home brew 6L6 P-P amp that I got on a estate sale. I wanted to use in a project I have in mind but do not have the exact specs. Any help would be greatly appreciated.

Thanks.
--
Elias

3942. Re: ardf fox-hunting

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-18 21:31:51 UTC
From: Jokie <jokiedokie@planet.nl>
Message-ID: <arbm8a$p31$1@reader12.wxs.nl>
Source record: 39805

Thanks folks for repley on my question about ARDF-TX
It sure will help to inprove my results in hunting.
Hope to work you in future.

Atlas <nospam.shf@pandora.be> schreef in berichtnieuws
7fKB9.5049$9W3.528910474@hebe.telenet-ops.be...
> For what band? 80m or 2m
>
>
>
>

3943. Re: white LED ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-18 21:42:58 UTC
From: "Mike G." <nospam@my.email.address>
Message-ID: <m8mitugko5qnpa9huc90fnqcop1tm15rr5@4ax.com>
Source record: 39806

On Mon, 18 Nov 2002 12:03:25 -0600, "Henry Kolesnik" <wd5jfr@oklahoma.net>
wrote:

>How many companies make white LEDs and who are the top 2 or 3? Are most
>made here or in the east?
>tnx
>hank wd5jfr

If you are looking for manufacturers and not retailers, here's probably the
top two companies. Maybe there's a couple more, but I forget right now who
they might be.

http://www.cree.com (HQ in Durham, NC)

Cree has a unique method of growing their own synthetic diamond substrate
(silicon carbide) to build their devices on. The thermal properties of
diamond are several times better than GAAS or Silicon, so they can make
smaller chips with the same thermal properties. They just can't make the
wafers as big.

http://www.nichia.com/ (HQ in Tokushima, Japan)

Nichia uses indium gallium nitride. If you are loking to order some, they
can take factory orders as small as $20. Don't know about Cree. Probably
have to go through a distributor.

In fact the two companies just settled a major law suit with a
cross-license agreement over LED manufacturing (including white).

That's probably more info than you were looking for, but what the heck!

Cheers,
Mike - KD6PKJ

3944. Re: UTC power transformer R-5 specs request.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-18 23:26:03 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <HdpC9.367$Bc.97118@newsfep2-win.server.ntli.net>
Source record: 39812

> I have a UTC power transformer marked R-5 that came in a home brew 6L6
> P-P amp that I got on a estate sale. I wanted to use in a project I
> have in mind but do not have the exact specs. Any help would be
> greatly appreciated.
=======
If there is little clue what the connections are you can measure the winding resistances and you 'll quickly find the 117 V primary winding . If not 100 % sure connect the assumed primary winding to a variac and you find the other winding voltages and/or get confirmation of the primary winding.
To check the current rating of each secundary winding , by using light bulbs or resistors (car bulbs or resistors for filament windings) increase the load until the voltage has dropped by 5 % . That's a safe max load for that winding .
Be your own transformer 'detective'.

Frank gm0csz.kn6wh@ntlworld.com

3945. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-18 23:29:45 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <utitv8natkq035@corp.supernews.com>
Source record: 39807

I'm glad my posting brought forth such an informative and reasoned response. I'd like to add just a couple of other notes based on my limited experience.

The comment regarding LO radiation through the mixer is well taken. The only convenient data points I have are my little "Optimized" 40 meter transceiver (described in August 1980 QST), and a similar rig built for 30 meters. When receiving, they have nothing ahead of the mixer except the transmit LPF. The "Optimized" mixer is a homebuilt diode ring using 1N914 type diodes, and the LO level is high enough to switch the diodes quite well. The measured LO output at the antenna connector is -63 dBm, or 500 pW, or over 90 dB below the QRP transmitter output of 1.5 watts. Although this isn't necessarily representative of all diode ring mixers, no special care was made to balance it or reduce the radiation. Because of the rig's small size, internal wiring is short, but often routed in less than an optimum manner. This level of radiation shouldn't be hard for a casual builder to achieve. It's up to the builder to decide whether an RF amplifier is worthwhile solely for reduction of LO leakage, but I suspect that most people will be satisfied with this level. This isn't to say that there might not be other good reasons to include an RF stage.

In a rig similar to the "Optimized" transceiver, a considerably larger value of LO feedthrough (-44 dBm) was found. This was tracked down to the LO feeding through the transmitter stages, even though they were biased off. The path was effectively eliminated by shorting the driver stage collector to ground with an SD210 DMOS FET when receiving. After the modification, the LO leakage is about the same as the "Optimized" rig. This rig uses a Mini-Circuits TFM-2 mixer.

Regarding using the MC1350 as an RF stage, the user should be aware that the noise figure of 6 dB or so is valid only when it's running wide open. When the gain is reduced 20 dB, the noise figure rises to about 15 dB, and with 30 dB of gain reduction to 19 dB. This isn't as bad as reducing the gain with an attenuator right at the input, but if the rig is designed with excessive RF gain so that the MC1350 isn't running wide open, the noise figure could easily get bad enough to reduce performance even at HF. I've used it as an IF amplifier and find it to be a very handy device.

One final note on using the MC1350 as a mixer. Any device used as a mixer for a direct conversion receiver should be carefully evaluated for immunity to AM demodulation. This is one of the major potential problems with DC receivers. Tests should be done with various source impedances as well as differing signal levels, not just under 50 ohm laboratory

conditions. In the process of designing what became the "Optimized" rig, I found the diode ring mixer to be the best in this regard, and some time later Rick Campbell came to the same conclusion after his own evaluation of various candidates. Some high-level switching mixers available today might be as good or better, but they should be carefully evaluated before being pressed into service. AM demodulation generally isn't a problem in superhet rigs, so this property of a mixer is often ignored when evaluating mixers for uses other than DC receivers.

Roy Lewallen, W7EL

Avery Fineman wrote:
> In article <utb4imkhi8h9ae@corp.supernews.com>, Roy Lewallen <w7el@eznec.com>
> writes:
>
>
>>I've built DC receivers without an RF stage (using a diode ring mixer)
>>and found the noise figure to be entirely adequate up to about 20
>>meters. On 15 meters and above, an RF stage would be a good idea.
>
>
> A diode mixer of any kind is passive. Its conversion gain is
> therefore negative. There's a trade-off there insofar as sensitivity
> is concerned: Eliminating gain ahead of a mixer requires more
> gain behind the mixer...a very low-noise AF amplifier behind it...
> which requires very considerable shielding and layout to keep
> from picking up all kinds of EM garbage.
>
> A ring or bridge diode mixer can be made to keep most of the LO
> out of the input circuit (it is better than a regenerative detector and
> far better than a superregen), but it isn't perfect, either. An RF
> amplifier ahead of it brings such LO leakage down to levels only a
> lab setup can measure.
>
>
>>The
>>MC1350 is a very noisy amplifier, so I wouldn't recommend using it as an
>>RF stage. Or as an IF stage unless you have a fair amount of low noise
>>gain ahead of it.
>
>
> I beg to disagree. The MC1350 die is based on the MC1590 metal-
> can-mounted original. For both the 1350 and 1590 the Noise Figure
> is 6 db at 45 MHz, 7 db at 58 MHz in the factory test circuit which
> has 50 Ohms in and out, bandwidth of 4.5 MHz...lower-frequency NF
> is a bit better. Power gain with tuned circuits is easily 50 db at low
> VHF and that translates to a voltage gain of about 316 times.
>
> At a 6 db NF the noise power added by the amplifier is close to 3
> times (in power) that of an ideal no-noise amplifier of the same power
> gain. The input of a 1350 or 1590, each side of differential input, is

> 5 KOhms in parallel with about 2 pFd. The equivalent noise voltage
> of just a 5 K resistance with a bandwidth of 3 KHz is close to 0.5 uV
> at slightly-hotter than standard temperature of 290 Kelvin (allowing
> for some IC heat build-up). Assuming a 6 db NF, the equivalent
> input noise would then be about 0.87 uV (SQRT(3)*0.5uV) just from
> the amplifier stage. Combined (since random noise power always
> adds), that would be a total of about 1.0 uV equivalent across the
> 5 K input resistance of the 1350/1590.
>
> Since the input resistance is moderately high, a 1:10 turns ratio
> input transformer nicely fits a 50 Ohm to 5 KOhm impedance
> match, coax to IC single-ended input. That would make the
> equivalent noise voltage at the 50 Ohm level about 0.1 uV for a
> source resistance plus that added by the IC. That should fit a
> normal sensitivity criterion established by existing receivers for
> a 3 KHz bandwidth. In actual practice on HF bands from 5 MHz
> and up, the equivalent input noise was found to be about 0.2 uV
> at a 3 KHz bandwidth...but that may be due to home workshop
> instrument calibration tolerances.
>
> [I prefer calculations at voltage levels rather than write a bunch
> of minus exponents for powers...others will differ on method but
> all come out to be the same in the end]
>
> The 1350/1590 isn't the "best" for extreme S/N but it is quite
> acceptible on HF where the atmospherics and ambient EMI is
> often above 0.2 uV at the antenna. That IC isn't the "best" for
> intermodulation but a tuned input and output circuit helps that.
> Input and output admittance is very forgiving of matching and
> tuned circuits handle the parallel capacitances at each end.
> The gain control range is claimed as 0 to 60 db attenuation but
> I would suggest that 0 to about 45 db is more practical and that
> is on par with existing RF gain controls on existing receivers.
> That IC is not all that swift on extremes of temperatures to
> military environments (Hughes Missle Div. needed more
> stability than the MC1590 provided), but less-stringent vehicle
> environments and room temperature locations should be just fine.
>
> Motorola designed and produced a number of ICs that were
> intended for consumer electronics, particular TV receivers. The
> competition in consumer electronics is fierce and, eventually,
> Motorola stopped and sold die rights of some packages to
> other IC manufacturers. That isn't a black mark on the IC design,
> just a hard fact in mass marketing.
>
> I personally prefer an active device that doesn't have curlicue-
> shaped admittance/impedance curves over a frequency range.
> Makes matching over wide frequency spans MUCH easier and
> the 1350/1590 behaves well in that regard...forward trans-
> admittance is nicely flat up to 60 MHz with little fall-off at the

> high end. Reverse is very low and the only possible feedback
> comes from inattention to reasonable physical layout.
>
> The separate gain control pin works very well as an LO input
> for a mixer, either balanced or unbalanced. Motorola didn't
> publish much information on mixer circuit applications so that
> must be breadboarded and checked. Conversion gain is not a
> problem. 3rd Order IP is low; one can't always get everything
> for $1.19. :-)
>
> Len Anderson
> retired (from regular hours) electronic engineer person
>
>
>
>

3946. Re: W7EL 40m optimized QRP VFO help please!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-19 00:01:56 UTC
From: Mike Srock <msrock@chartermi.net>
Message-ID: <utivrj7tp63k9a@corp.supernews.com>
Source record: 39808

Hi Roy.

Good suggestions. I will try them out.
I am ordering new FETs and a new core.

I have checked the pinouts on the FETs a bunch but I will check again.
The diode is connected the right way.
The coil is installed as described.
I am using a 100mhz scope to check for oscillation. I checked it against my sig gen before testing.

I will try your other suggestions too. I am hoping it is the core.
Should it be T-44-6?

I am using the schematic out of the ARRL handbook from 94
Is that one correct? The 15v zener is listed.

Thanks Roy!

I will post progress.

Mike
"Roy Lewallen" <w7el@eznec.com> wrote in message
news:uth7vsnkqu0me9@corp.supernews.com...
> That oscillator, which comes from Hayward & DeMaw's _Solid State Design
> for the Radio Amateur_ is very forgiving, so something major is wrong.
> I've built many, many of them and haven't had one fail to start yet.
> Here are some things to check:
>
> 1. Are you using the right core material for your inductor?
> 2. Are you sure you have the pinout right for your FET?
> 3. Do you have the diode in backward?
> 4. Is the coil connected so the tap is about 1/4 of the way up from
> ground, not 1/4 of the way down from the top?
> 5. Are you sure your method of detecting oscillation is working? The
> oscillator does produce a healthy signal when it's running, though.
>
> If you're sure you have these things right, then what I'd do next is to
> simplify the circuit to reduce the variables. Remove the 10k resistor
> going to Q2, and the 15 pF capacitor going to the RIT diode D1. If it
> doesn't start, then disconnect all the capacitors going to the top of
> the inductor L1, and temporarily tack in a capacitor of roughly 150 pF,
> connected from the top of L1 to ground. That's just about as simple as
> it gets, and I'd be very surprised if it still fails. If it does run
> with these simplifications, then replace one at a time until you find
> which one makes it quit, and figure out why.

>
> I don't mind a bit your sharing your board. The rig was actually
> produced and sold as a kit by at least a couple of companies over the
> years, and many, many copies have been made of it.
>
> Note there's an error on the schematic in the QST article (my fault) --
> the phasing of T1 is incorrect. Also, D1 wasn't identified on the parts
> list. It's a 15V, 400mW zener. And on p. 18, Q7 - Q10 should read Q6 -
> Q9 respectively.
>
> 73,
> Roy, W7EL
>
> Mike Srock wrote:
> > Hi Group.
> >
> > I am building an optimized W7EL 40 meter QRP rig from the 1994 ARRL
> > handbook.
> >
> > I am not good with the dead bug construction so I designed five 2 inch
> > square boards
> > using winboard by IVEX. This kept me below the 100 pin per board limit
on
> > the demo and
> > made it more modularized. (I can provide the board designs to anyone
who
> > would like to
> > try it.) It will all fit into a 2x3x5 project box when done with enough
> > room for a keyer board too.
> > I actually finish construction of the boards a couple of years ago and I
am
> > just now getting back to it.
> >
> > Anyway here is the problem. I can't seem to get the VFO to oscillate
to
> > save my life.
> > The vfo board has all the parts associated with the 2N4416 very close
> > together to mock as much
> > as posible point to point construction.
> > I have tried the following things:.....
> >
> > I have swapped out the 2N4416 with a MPF102. I also tried some others I
had
> > around .(just because I had some)
> >
> > I have modified the board design to compact the parts for the oscillator
> > even more and move the
> > coil closer to the FET.
> >
> > I have rewound the coil and added one extra turn on each side of the

tap.
> > (just a guess)
> >
> > I have tried adding a 4x6 pcb copper down under the board and connecting
it
> > to the VFO
> > ground for a ground plane.
> >
> > I have rebuilt this thing several times trying different components.
> > I am ordering a handful of 2n4416 and 2n5486 FETs to play with.
> > The 5486 FET is supposed to be better gain than the 4416.
> >
> > I believe I got better parts density with the pcb than I could have got
with
> > dead bug so I don't think that is the problem
> > I am lacking a ground plane and I don't know if that would stop it from
> > working. Is there any modifications to the circuit
> > that need to be made to get it to oscillate without a huge ground plane?
I
> > can't believe that all hartley oscillators are built dead
> > bug. Maybe I have the wrong core for the coil. I am ordering a new one
> > just in case.
> >
> > When I use my signal generator to inject a signal before the buffers the
> > radio receives signals and sounds pretty healthy so
> > I am really frustrated about not being able to figure it out.
> >
> > I appreciate any comments that can help me get this thing going. I can
> > email designs, drawings and pictures to anyone
> > interested in helping or using the board designs. If you would like me
to
> > email files to you please contact me directly.
> >
> > Of course it is entirely possible I have made a mistake in the board
design.
> > An extra set of eyes or two might see something I
> > missed. (I hope)
> >
> > And Roy if you are out here, I hope you don't mind me sharing my board
> > designs. I am not taking credit for your work or asking
> > any money. Just sharing with fellow hams. If this is not ok let me
know.
> > I am hoping that more people will build the rig if we can
> > come up with a proven board design. It is much easier than dead bug for
a
> > lot of us!
> >
> > I am looking forward to the responses!
> >
> > Thanks!!

> >
> > Mike
> >
> > 73 DE KB8RAQ
> >
> >
> >
> >
> >
> >
>

3947. Re: Modern test probes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-19 02:07:22 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <srKdneXrkNhIAUSgXTWcow@comcast.com>
Source record: 39809

Do you snip the end (the thread end) off the end of the needle so as to grab the pin?

also Jack

"Jack Taylor" <n7oo@theriver.com> wrote in message news:arb7buohg0@216.39.176.137...
> This may be old news to some of you homebrewers/repair folks out there but I
> finally come up with a solution for probing PCB SMT components. The problem
> I experienced was in getting standard test probes into tightly component
> packed areas. The probes I have on hand are just too blunt.
>
> At first I tried using alligator clips between the test probes and straight
> pins. The problem with this is that my alligator clips didn't make firm
> contact with the body of the pins. The other day I was in a 'goods' store
> and noticed sewing needles. These have a square head which my alligators
> can firmly grasp and very sharp thin points. Problem solved!
>
> 73 de Jack
>
>

3948. Re: Modern test probes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-19 07:21:37 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0211182321.45b07ebd@posting.google.com>
Source record: 39810

"john walton" <jdwalton@comcast.net> wrote in message
news:<srKdneXrkNhIAUSgXTWcow@comcast.com>...
> Do you snip the end (the thread end) off the end of the needle so as to grab
> the pin?
>
> also Jack

Hi Jack,
obviosly, they are the needles for sewing machines, not for hand sewing.

73 de Ivan

3949. Homebrew tubes (was: Building a variable condenser?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-19 07:42:00 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0211182342.425690e4@posting.google.com>
Source record: 39811
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

cornytheclown@hotmail.com (cornytheclown) wrote in message
news:<8e8f59d4.0211162108.70a10fd7@posting.google.com>...
...
> I really enjoy building my components, I hope to one day be able to
> fabricate my own triode and receive with it. I know of home built
> tubes but dont know how well they work in radio work, just something
> to waste winter time on....
...

Hi Corny,
I remember an article about making triodes from car bulbs. The guy used a classic two-filament bulb - I don't know whether from headlights or from end lights. He covered a part of the glass jacket with metallic foil - this was the anode. Yes, hot glass leads electrons fairly well. One of the filaments was a directly heated cathode, the other filament was the grid. The guy remembers he could read newspapers in the glow of his radio...
It may be a problem to get a suitable bulb nowadays. It should be a vacuum type. Gas filled or even halogen ones seem to be no good. Both filaments have often a common lead, but you need to separate them. Nevertheless, this may give you an idea.

BR from Ivan

3950. Re: W7EL 40m optimized QRP VFO help please!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-19 11:46:38 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <utk94rtg5m9p67@corp.supernews.com>
Source record: 39813

Mike Srock wrote:
> Hi Roy.
>
> Good suggestions. I will try them out.
> I am ordering new FETs and a new core.
>
> I have checked the pinouts on the FETs a bunch but I will check again.
> The diode is connected the right way.

Actually, it'll oscillate fine without the diode, so you could disconnect it for a test. But the temperature stability will be rotten, so don't leave it off for real operation.

> The coil is installed as described.
> I am using a 100mhz scope to check for oscillation. I checked it against my
> sig gen before testing.

That sounds ok.

> I will try your other suggestions too. I am hoping it is the core.
> Should it be T-44-6?

Yes. The material (type 6 powdered iron) is the important thing; a different size will affect the frequency but it should still oscillate. A type 6 powdered iron core is yellow with a glossy finish. Type 2 (red) will also work, but with slightly fewer turns and with a poorer temperature coefficient.

> I am using the schematic out of the ARRL handbook from 94
> Is that one correct? The 15v zener is listed.

It took several attempts to get the buffer right, and I submitted an improved design along the way. (In the improved design, the feedback resistor is 27k and goes from Q3C to Q2B, the 10 pF capacitor is gone, and T1 phasing is unimportant.) I'm sure we'd gotten it right by '94 -- in fact, I didn't realize it was in that recent of a Handbook. It was in for a couple of years after the QST article, then was out. They must have run it again for a while.

> Thanks Roy!
>
> I will post progress.

Good luck!

Roy Lewallen, W7EL

3951. Re: Modern test probes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-19 13:14:10 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <ardqlb$g0n$1@newsg2.svr.pol.co.uk>
Source record: 39820

"Jack Taylor" <n7oo@theriver.com> wrote in message
news:arb7buohg0@216.39.176.137...
> This may be old news to some of you homebrewers/repair folks out there but
I
> finally come up with a solution for probing PCB SMT components. The
problem
> I experienced was in getting standard test probes into tightly component
> packed areas. The probes I have on hand are just too blunt.

They are more expensive, of course, but you can buy small needle-pointed spring-loaded probes specifically made for this type of measurement. The spring-loading helps prevent the tip slipping. Tiny clip-on probes are also available.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

3952. Re: UTC power transformer R-5 specs request.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-19 13:17:27 UTC
From: Tom Coates <tecoates@comcast.net>
Message-ID: <w5ecna8hAvd1pEegXTWcpg@comcast.com>
Source record: 39814

The RTMA published a standard color code for transformer leads in my 1953 ARRL Handbook. If the transformer is still in the circuit, this may be obvious, but here it is:

Black: Primary
If tapped: Common: Black
Tap: Black and Yellow Striped
Finish: Black and Red Striped
High Voltage: Red
Rectifier Filament: Yellow
Center Tap: Yellow and Blue Striped
Filament No. 1: Green
Center Tap: Red and Yellow Striped
Filament No. 2: Brown
Center Tap: Brown and Yelllow
Filament No. 3: Slate
Filament No. 3 Slate and Yellow

HTH

Tom, N3IJ

"Mazur" <porreta99@yahoo.com> wrote in message
news:61c031e6.0211181239.52824600@posting.google.com...
> Hi.
>
> I have a UTC power transformer marked R-5 that came in a home brew 6L6
> P-P amp that I got on a estate sale. I wanted to use in a project I
> have in mind but do not have the exact specs. Any help would be
> greatly appreciated.
>
> Thanks.
> --
> Elias

3953. Thordarsen Meissner website?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-19 14:07:54 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <HtnC6QN6Wk29Ew$3@fslife.co.uk>
Source record: 39815

Does anyone know if the above company are represented on the web?

I was unable to find them using Google!

Thanks
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3954. Re: UTC power transformer R-5 specs request.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-19 14:13:03 UTC
From: Tom Coates <tecoates@comcast.net>
Message-ID: <wJGcnbiLOM1y20egXTWcpw@comcast.com>
Source record: 39816

Ooops. Last line has a minor typo. This is the corrected version:

Black: Primary
If tapped: Common: Black
Tap: Black and Yellow Striped
Finish: Black and Red Striped
High Voltage: Red
Rectifier Filament: Yellow
Center Tap: Yellow and Blue Striped
Filament No. 1: Green
Center Tap: Red and Yellow Striped
Filament No. 2: Brown
Center Tap: Brown and Yelllow
Filament No. 3: Slate
Center Tap: Slate and Yellow

I wonder if it is possible to estimate power capacity by comparing the weight of the unknown transformer to the weight of a known item, perhaps from a catalog. This would provide a check on Frank's helpful suggestion.

Tom, N3IJ

3955. Re: 8405A Vector Voltmeter Probes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-19 15:12:56 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3DDA54F8.15907ADD@ix.netcom.com>
Source record: 39817

Rick Karlquist wrote:
>
> The only part in the probe that might be hard to get
> is the P-channel FET. Any decent Schottky
> quad can be used for the sampler and the rest
> of the parts are ubiquitous.
>
>

and it's the 8405 that the drawing refers to, not the 8505, fwiw, and
not just any old P-channel fet either, I've tried it!

dr

3956. Re: Thordarsen Meissner website?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-19 15:33:43 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <ardlkm$t2k$1@sparta.btinternet.com>
Source record: 39818

Phil, as a rough guess those names disappeared from the Google) about 60 or 70 years ago. Any radio stuff with their names on it must already be locked up in museum glass cases by now.

Reg, G4FGQ

==========
"Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message news:HtnC6QN6Wk29Ew$3@fslife.co.uk...
> Does anyone know if the above company are represented on the web?
>
> I was unable to find them using Google!
>
> Thanks
> --
> Philip de Cadenet G4ZOW
> Transmitters 'R' Us
> http://www.transmittersrus.com

3957. Re: Thordarsen Meissner website?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-19 16:07:16 UTC
From: Ricardo Martins <ricardo.martins@pt.uu.net>
Message-ID: <3DDA61B4.CB6DF5C3@pt.uu.net>
Source record: 39819

Hello Philip,

Try "Thordarson Meissner" ....they do transformers.. don't know if it is
what you are looking for.

73 de CT2GQV

Philip de Cadenet wrote:
>
> Does anyone know if the above company are represented on the web?
>
> I was unable to find them using Google!
>
> Thanks
> --
> Philip de Cadenet G4ZOW
> Transmitters 'R' Us
> http://www.transmittersrus.com

--
Ricardo Martins

3958. Re: Homebrew tubes (was: Building a variable condenser?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-19 18:06:38 UTC
From: mcalhoun@ksu.edu
Message-ID: <arduje$k8a@unix1.cc.ksu.edu>
Source record: 39821
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

>> I really enjoy building my components, I hope to one day be able to
>> fabricate my own triode and receive with it. I know of home built tubes...

>I remember an article about making triodes from car bulbs. The guy
>used a classic two-filament bulb ....

Several months ago I read an (old) article about building an oscillator
using a 6H6 (IIRC; a dual diode) by using the metal shell as the plate,
so the basic idea sounds solid.

I'd give a cite for the article, but my house is still up on stilts
while the basement is being replaced, and all my ham stuff it up there
with it (I've lived in a detached garage for 9 weeks today!)

--Myron, W0PBV.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

3959. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-19 20:44:11 UTC
From: N2EY@AOL.COM
Message-ID: <c2356669.0211191244.604e5d5@posting.google.com>
Source record: 39822

"Jason" <kc7eip_nospam@shaw.ca> wrote in message
news:<tMwz9.775668$Ag2.26874233@news2.calgary.shaw.ca>...
> Well i am in the process of designing my own 40 meter txcvr.

Cool!

What power level and modes?

73 de Jim, N2EY

3960. Re: Thordarsen Meissner website?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-19 22:51:41 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <2T2ulIX9Bs29Ewa1@fslife.co.uk>
Source record: 39823

>Phil, as a rough guess those names disappeared from the Google) about 60 or
>70 years ago. Any radio stuff with their names on it must already be locked
>up in museum glass cases by now.
>---
>Reg, G4FGQ
>
>==========
>"Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message
>news:HtnC6QN6Wk29Ew$3@fslife.co.uk...
>> Does anyone know if the above company are represented on the web?
>>
>> I was unable to find them using Google!
Thanks Reg.

Well I did think they were old names however I did find reference to
them or him in Chicago but no website.

Maybe the company has shrunk!

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3961. Re: Thordarsen Meissner website?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-19 22:53:14 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <+j$s5iXaDs29EwYb@fslife.co.uk>
Source record: 39824

Hi,

>Try "Thordarson Meissner" ....they do transformers.. don't know if it is
>what you are looking for.
>
>73 de CT2GQV
Many thanks for that.

I'll try again.

I'm after RF plate choke manufacturers, not dealers.

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

3962. Icom 706 mk11

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-20 01:14:20 UTC
From: Bob Owen <slides@ihug.co.nz>
Message-ID: <aren9u$fm6$1@lust.ihug.co.nz>
Source record: 39825

Hi I am looking for a main board for an Icom 706 mk11, mine corded out
Cheers Bob

3963. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-20 02:20:03 UTC
From: averyfineman@aol.com
Message-ID: <20021119212003.23768.00001707@mb-md.aol.com>
Source record: 39826

In article <utitv8natkq035@corp.supernews.com>, Roy Lewallen <w7el@eznec.com>
writes:

>The comment regarding LO radiation through the mixer is well taken. The
>only convenient data points I have are my little "Optimized" 40 meter
>transceiver (described in August 1980 QST), and a similar rig built for
>30 meters. When receiving, they have nothing ahead of the mixer except
>the transmit LPF. The "Optimized" mixer is a homebuilt diode ring using
>1N914 type diodes, and the LO level is high enough to switch the diodes
>quite well. The measured LO output at the antenna connector is -63 dBm,
>or 500 pW, or over 90 dB below the QRP transmitter output of 1.5 watts.
>Although this isn't necessarily representative of all diode ring mixers,
>no special care was made to balance it or reduce the radiation. Because
>of the rig's small size, internal wiring is short, but often routed in
>less than an optimum manner. This level of radiation shouldn't be hard
>for a casual builder to achieve. It's up to the builder to decide
>whether an RF amplifier is worthwhile solely for reduction of LO
>leakage, but I suspect that most people will be satisfied with this
>level. This isn't to say that there might not be other good reasons to
>include an RF stage.

An LO leakage of -63 dbm should be in the "stealth" category!
:-)

A four-diode ring mixer will have the lowest LO leakage to the
input with a trifilar input transformer. LO injection at the
center of the secondary winding should be at least 40 db down.
A balanced input transformer (trifilar winding) is very easy to do
with a toroidal core and a hand drill (electric or manual). Cut
three lengths of coil wire to about a quarter wavelength of the
highest frequency expected, secure one end in a vise or similar,
chuck all three in the drill and wind it up to maybe three or four
full twists per inch. Cut off the chuck and vise ends, wind the
toroid, buzz out which wire was which with an ohmmeter. For
a further buzz check, make sure there aren't any shorts
between the lengths. Single-enameled coil wire is surprisingly
resistant to damage this way every place but at the ends.
Quadrifilar winding can be done this way for a 2:1:1 transformer
having the two primary windings in series.

>Regarding using the MC1350 as an RF stage, the user should be aware that
>the noise figure of 6 dB or so is valid only when it's running wide
>open. When the gain is reduced 20 dB, the noise figure rises to about 15
>dB, and with 30 dB of gain reduction to 19 dB. This isn't as bad as
>reducing the gain with an attenuator right at the input, but if the rig

>is designed with excessive RF gain so that the MC1350 isn't running wide
>open, the noise figure could easily get bad enough to reduce performance
>even at HF. I've used it as an IF amplifier and find it to be a very
>handy device.

Correct, but if the RF amplifier stage has deliberately-reduced gain
as for AGC or manual RF gain adjustment, the amplifier-added
noise-equivalent doesn't matter as much since the input signal
level will be higher. Looking at NF in db for various gains, using
the 1350/1590 as an example (it will apply to any other amplifier
but with different numbers):

Given a 300 K ambient, 3 KHz BW, and 5 KOhms input R, the
noise voltage is about 0.5 uV or 50 x 10^(-18) W. Noise Factor
(db) represents the additional noise added to thermal noise by
the entire amplifier and that adds in power terms, not voltage.
For 6 db NF, the equivalent total noise power at the input is
249.1*10^(-18) W [(50 + 199.1)*10^(-18)]. For 15 db NF that
would be a total of 1.63*10^(-15) W and for 19 db NF that
would be a total of 4.02*10^(-15) W [50 + 4022]. In converting
that to uV times gain for an output voltage, the example would be:

50 db gain, 6 db NF: Input equiv.noise = 1.12 uV, output = 354 uV
30 db gain, 15 db NF: Input equiv.noise = 2.86 uV, output = 90.4 uV
20 db gain, 19 db NF: Input equiv.noise = 4.48 uV, output = 44.8 uV

Note: The example uses a 5 K value for internal resistance in
the 1350/1590 device. If there is a 1:10 turns ratio coupler to the
input, the equivalent noise voltages referred to the antenna input
would be 10 times less.

The output can be related back to the input to compute a signal+
noise to noise ratio, generally accepted as 10:1. For a theoretical
0 db NF input, only thermal noise at input, that level would be
4.5 uV. At a 6 db NF plus thermal noise at input, the sensitivity
level would be 11.4 uV. The comparison category has to enter in
after that.

If the reduction in active device gain is to hold a certain output level,
then an increased NF (as above) only has effect on signal-to-noise
ratios at maximum gain...reducing the gain also reduces the total
equivalent noise at the input - more than the NF value indicates - to
hold output signal level (or even close to that). There are other
criteria, of course, but the general effect is that controlled gain
reduction just reduces the noise.

>One final note on using the MC1350 as a mixer. Any device used as a
>mixer for a direct conversion receiver should be carefully evaluated for
>immunity to AM demodulation. This is one of the major potential problems
>with DC receivers.

I will agree that input signal levels to any active mixer must be kept
below their IP but a differential input active mixer would concern

itself with common-mode input distortion. Other than that, I'm not quite understanding what was meant above. A direct-conversion receiver will handle both DSB and SSB AM. I can understand AM broadcast problems...a friend lives close to 50 KW KMPC station in the middle of San Fernando Valley (the only sizeable BC station in the midst of a packed urban area here)...that signal tends to creep into most any bit of electronics within several blocks. :-)

>evaluated before being pressed into service. AM demodulation generally
>isn't a problem in superhet rigs, so this property of a mixer is often
>ignored when evaluating mixers for uses other than DC receivers.

Few active devices are categorized at all for mixers yet nearly all differential input active devices with a separate common gain control will function nicely as a mixer. It's not a complex task to measure one separately to get performance values, even with just one test signal generator (LO input to common gain control pin part of the setup).

A suggestion on configuration of a direct-conversion CW receiver with very high-level IP: Have the LO run the same with both Rx and Tx, key-down turns on the Tx output stage which can be coupled directly out to the antenna through a toroid transformer arrangement. That transformer would be essentially a directional coupler connection and would eliminate any antenna switching or break-in circuits. The only warning would be the Tx output level and the maximum mixer input levels using a diode ring, that level determined by the directivity of the directional coupler arrangment. Probably been done before...:-)

Len Anderson
retired (from regular hours) electronic engineer person

3964. Re: W7EL 40m optimized QRP VFO help please!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-20 02:24:29 UTC
From: Mike Srock <msrock@chartermi.net>
Message-ID: <utlsirc9ld4m38@corp.supernews.com>
Source record: 39827

Ok, It oscillates!!!

I removed the 10k and 15 pf and it was still dead.
So, I removed all the caps up to Q1... Success!!!
I started putting them back starting with the 12pf.... ok
then the 30 pf, still good!
When I put the 220 back it went dead again.
It is labeled 221k. I believe that this is a 220pf. I am not sure why the
VFO doesn't like it. I will try a different one.

The schematic in the 94 handbook appears to have the changes you described.

Mike
"Roy Lewallen" <w7el@eznec.com> wrote in message
news:utk94rtg5m9p67@corp.supernews.com...
> Mike Srock wrote:
> > Hi Roy.
> >
> > Good suggestions. I will try them out.
> > I am ordering new FETs and a new core.
> >
> > I have checked the pinouts on the FETs a bunch but I will check again.
> > The diode is connected the right way.
>
> Actually, it'll oscillate fine without the diode, so you could
> disconnect it for a test. But the temperature stability will be rotten,
> so don't leave it off for real operation.
>
> > The coil is installed as described.
> > I am using a 100mhz scope to check for oscillation. I checked it
against my
> > sig gen before testing.
>
> That sounds ok.
>
> > I will try your other suggestions too. I am hoping it is the core.
> > Should it be T-44-6?
>
> Yes. The material (type 6 powdered iron) is the important thing; a
> different size will affect the frequency but it should still oscillate.
> A type 6 powdered iron core is yellow with a glossy finish. Type 2 (red)
> will also work, but with slightly fewer turns and with a poorer
> temperature coefficient.
>
> > I am using the schematic out of the ARRL handbook from 94

> > Is that one correct? The 15v zener is listed.
>
> It took several attempts to get the buffer right, and I submitted an
> improved design along the way. (In the improved design, the feedback
> resistor is 27k and goes from Q3C to Q2B, the 10 pF capacitor is gone,
> and T1 phasing is unimportant.) I'm sure we'd gotten it right by '94 --
> in fact, I didn't realize it was in that recent of a Handbook. It was in
> for a couple of years after the QST article, then was out. They must
> have run it again for a while.
>
> > Thanks Roy!
> >
> > I will post progress.
>
> Good luck!
>
> Roy Lewallen, W7EL
>

3965. Re: Homebrew tubes (was: Building a variable condenser?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-20 03:38:58 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <mtDC9.80180$NH2.4969@sccrnsc01>
Source record: 39828
Cross-posted to: rec.radio.amateur.homebrew,se.hobby.amatorradio

Myron A Calhoun wrote:
>>>I really enjoy building my components, I hope to one day be able to
>>>fabricate my own triode and receive with it. I know of home built tubes...
>>
>
>>I remember an article about making triodes from car bulbs. The guy
>>used a classic two-filament bulb ....
>
>
> Several months ago I read an (old) article about building an oscillator
> using a 6H6 (IIRC; a dual diode) by using the metal shell as the plate,
> so the basic idea sounds solid.
>
> I'd give a cite for the article, but my house is still up on stilts
> while the basement is being replaced, and all my ham stuff it up there
> with it (I've lived in a detached garage for 9 weeks today!)
>
> --Myron, W0PBV.
Back to the Variable cap, CQ a few years ago had a article on building
them from copper pipe. I don't have the issue right now, I'm in the
middle of a move.
Bill Higdon

3966. Re: Thordarsen Meissner website?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-20 05:01:46 UTC
From: Tom Coates <tecoates@comcast.net>
Message-ID: <okOdnXy20YKnikagXTWcqA@comcast.com>
Source record: 39829

Try this:
http://www.rfparts.com/

Tom, N3IJ

"Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message
news:+j$s5iXaDs29EwYb@fslife.co.uk...
> Hi,
>
> >Try "Thordarson Meissner" ....they do transformers.. don't know if it is
> >what you are looking for.
> >
> >73 de CT2GQV
> Many thanks for that.
>
> I'll try again.
>
> I'm after RF plate choke manufacturers, not dealers.
>
> (((73)))
> --
> Philip de Cadenet G4ZOW
> Transmitters 'R' Us
> http://www.transmittersrus.com

3967. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-20 06:02:16 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <utm9b51vg4k911@corp.supernews.com>
Source record: 39830

Avery Fineman wrote:
>. . .
> In article <utitv8natkq035@corp.supernews.com>, Roy Lewallen <w7el@eznec.com>
> writes:
>
>>One final note on using the MC1350 as a mixer. Any device used as a
>>mixer for a direct conversion receiver should be carefully evaluated for
>>immunity to AM demodulation. This is one of the major potential problems
>>with DC receivers.
>
>
> I will agree that input signal levels to any active mixer must be kept
> below their IP but a differential input active mixer would concern
> itself with common-mode input distortion. Other than that, I'm not
> quite understanding what was meant above. A direct-conversion
> receiver will handle both DSB and SSB AM. I can understand AM
> broadcast problems...a friend lives close to 50 KW KMPC station
> in the middle of San Fernando Valley (the only sizeable BC station
> in the midst of a packed urban area here)...that signal tends to
> creep into most any bit of electronics within several blocks. :-)

>. . .

I believe your "common-mode input distortion" is what I'm calling (by its symptomatic name) "AM demodulation". Unless a mixer is perfectly balanced, there will be some second order distortion, and of course none are perfectly balanced. When presented with an A.M. signal, the result will be demodulated audio at the output of the mixer. In DC receivers, unlike superhets, this can't be separated from the desired signal, so is amplified along with it. AM signals can be huge -- I've measured KGEI in the San Francisco area (at 7335 kHz as I recall) at 0.25 volts RMS at my antenna terminals here near Portland under unusually good skip conditions. And with DC receiver audio gain typically exceeding 100 dB, even extremely inefficient demodulation is plenty to result in the demodulated audio overwhelming the signals you're trying to hear. In Europe, the situation is much worse, especially on 40 meters. So a DC receiver's mixer has to withstand these very strong AM signals (those that get through whatever front end filtering is present) without generating any detected audio. Anyone who has made a casual DC receiver has almost surely heard this background of broadcast audio unless he's fortunate enough to live in an isolated area. And even a fairly strong diode ring gets overloaded quite easily by AM stations in Europe unless relatively sharp filters precede it.

Of course, you can reduce the required audio gain if you add an RF amplifier. But then the signal is larger going into the mixer, which can aggravate overload. I feel the best approach for a DC receiver is to keep the signal at the mixer input as small as possible, even if it means you need more audio gain. Of course, the emphasis of my work on DC receivers has been for backpackable portable gear, where current drain has to be kept reasonable. If one has the option of dumping a watt or two into a mixer, the tradeoffs become weighted differently.

Roy Lewallen, W7EL

3968. Re: UTC power transformer R-5 specs request.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-20 14:03:06 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0211200603.1eb6178d@posting.google.com>
Source record: 39831

"Tom Coates" <tecoates@comcast.net> wrote in message
news:<wJGcnbiLOM1y20egXTWcpw@comcast.com>...

[snipped]

> I wonder if it is possible to estimate power capacity by comparing the
> weight of the unknown transformer to the weight of a known item, perhaps
> from a catalog. This would provide a check on Frank's helpful suggestion.
>

I can't recall the formula, but it is possible to calculate the power rating of a transformer from the size of the iron core. Maybe someone else here knows the equation. It is usually used for transformers in KW class amplifiers, so I do not know how accurate it would be for small ones.

Another good guess would be from the size of the wires. This would be the windings, not the leads to the outside world (sometimes the winding wires are brought directly out, however). Of course, I would not want to take one apart just to see what wire size was used.

Jim
N8EE

3969. FA: Heavy Duty Panel Meters!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-20 14:10:40 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <AJMC9.142411$Ru1.1908732@news1.east.cox.net>
Source record: 39832
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment

0-400 AC Amps Panel Meter..

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4660&item=1790249337

0-500 AC Amps Panel Meter..

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4660&item=1790103419

0-1.2 kiloamp DC Panel Meter

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4660&item=1790101327

0-1 kiloamp DC Panel Meter..

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4660&item=1790099842

thanks for looking!!

3970. Re: Homebrew tubes (was: Building a variable condenser?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-20 14:18:19 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <ORMC9.1461$7O.97234@newsfep1-win.server.ntli.net>
Source record: 39833

> Back to the Variable cap, CQ a few years ago had a article on building
> them from copper pipe. I don't have the issue right now, I'm in the
> middle of a move.
==========
That's probably a gamma match type of (variable) capacitor where a teflon insulated copper rod/tube slides inside a copper tube.

Frank gm0csz.kn6wh@ntlworld.com

3971. Re: FA: Heavy Duty Panel Meters!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-20 14:21:50 UTC
From: Boris Mohar <borism-notrequired-@sympatico.ca>
Message-ID: <5g6ntu4aqc7qk3ju9nnf6f945npogvcijv@4ax.com>
Source record: 39834
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment

On Wed, 20 Nov 2002 14:10:40 GMT, "ga_boneyard" <ga_boneyard@hotmail.com>
wrote:

>0-400 AC Amps Panel Meter..
>
>http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4660&item=1790249337
>
>0-500 AC Amps Panel Meter..
>
>http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4660&item=1790103419
>
>0-1.2 kiloamp DC Panel Meter
>
>http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4660&item=1790101327
>
>0-1 kiloamp DC Panel Meter..
>
>http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4660&item=1790099842
>
>
>thanks for looking!!
>

Beware that those meters likely need a expensive calibrated shunt
resistor to display the correct current. By themselves they are just mV
meters.

Regards,

Boris Mohar
Viatrack Printed Circuit Designs

3972. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-20 14:34:39 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3DDB9DAF.CB883A46@cox.net>
Source record: 39835

Roy Lewallen wrote:
>
> I feel the best approach for a DC receiver is to
> keep the signal at the mixer input as small as possible, even if it
> means you need more audio gain. Of course, the emphasis of my work on DC
> receivers has been for backpackable portable gear, where current drain
> has to be kept reasonable. If one has the option of dumping a watt or
> two into a mixer, the tradeoffs become weighted differently.
>
> Roy Lewallen, W7EL

I agree with Roy. The IP3 rating of a mixer describes how off frequency signals can mix together to create on frequency junk which will be heard in the rcvr audio. I have heard some describe the situation on 40m in Europe
as a constant "roar" in the 40m cw band as all the very high level short wave broadcast signals above 7.1 MHz mix together to create a wall of noise
in the cw band due to receiver IP3 short comings.

I am not sure what the IP3 rating of a typical diode mixer is, but suppose that
it is +25 dbm. A rule of thumb is that two signals about 23 db lower than that,
spaced apart appropriately will create a distortion product signal in the audio
passband of the receiver. In this case, the signal would have to be about +2 dbm,
which is extremely stout.

The way IP3 works is that for every 1 db of gain introduced in front of this mixer, the
IP3 capability will decrease by 3 db. So if you placed a MC1350 with 60 db of gain
in front of this mixer to use as an RF amplifier, the IP3 rating of the mixer would
decrease by 180 db. You now have a mixer with an effective IP rating of -155 dbm, with
RF distortion products being produced by signals as small as -178 dbm. That is quite a
change!

Since best case receiver sensitivity of a cw receiver with a 500 Hz audio filter is
-148 dbm, and since 40m back ground noise doesn't really get any better

than -115 dbm,
such a configuration would create IM images from every signal and all the noise in
the passband of the receiver front end mixer for perhaps a MHz or two on either side
of what the receiver is tuned to. This is really, really, really, not good.

Because of this problem, good receivers (DC as well as superhet) try to minimize the
receiver gain in front of the main receiver filter.

In a superhet, this is the crystal filter. The MC1350 IF amp is usually placed
after the crystal filter, which is why it is referred to as an IF amp. Its large gain
has been protected from off frequency signals by the selectivity of the crystal
filter.

In a DC receiver, this is the audio filter, either a passive L/C filter such as used in the R2
or an R/C active filter, or simple audio gain shaping. This filtering limits the large signals
that will be seen to only the receiver passband, removing the large off frequency components,
and thus these off frequency signals cannot mix together to create distortion products
in those later, high gain, overload prone receiver stages.

The main message here is to introduce tight filtering as soon as possible in the receiver gain
structure, and minimize the gain in front of that filtering.

In receiver design there is a classic trade off between best receiver sensitivity (usually
involving the use of RF preamps in front of the first receive mixer) and best high level
signal performance (usually no RF preamp and/or the use of an attenuator in the RF front end).
Receiver pre-amps produce gain ahead of the first mixer, hurting IP3, but improving sensitivity.
Hence the tradeoff. The Adventure Radio Society (ARS) web site has a measurement of this trade
called the receiver factor. It takes into account the IP3 (high level signal capability) and the
noise figure (weak signal reception capability) of the receiver. Ideally, we want both. We want
to be able to work an extremely weak signal in the presence of huge signals all around.

On 40m, even in the quietest of times, band noise is high enough that a RF preamp will not
improve sensitivity, as the noise is way above receiver sensitivity.

DC receivers are quite capable of beating the best commercial rigs in the above sensitivity/high
level signal tradeoff while at the same time consuming only a tiny fraction of their receiver power.

- Dan Tayloe, N7VE; Phoenix, Az; Az ScQRPions

3973. SAW filter in cordless phone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-20 14:42:10 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0211200642.796c7ccb@posting.google.com>
Source record: 39836

I have an old 49 MHz cordless phone.

I have figured out what the basic stages are in the circuit, and there is a round flat package in the input stage of the receiver. It is maybe a little smaller than a dime and perhaps 3 to 4 times as thick, and is 'silver' color.

My guess is that it is a SAW filter. From what I know about the things, they are not tuneable, so it would have to cover the entire 'Cordless Phone Band', or at least the channels used by this receiver.

Do you think my guess is right? What sort of things could this be used for? Has anyone on this group played with SAW filters?

Jim
N8EE

PS. I should have saved the second cordless phone. Then I would have two filters!

3974. Re: Homebrew tubes (was: Building a variable condenser?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-20 15:01:31 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <ftNC9.63203$P31.33457@rwcrnsc53>
Source record: 39837

Frank Dinger wrote:
>>Back to the Variable cap, CQ a few years ago had a article on building
>>them from copper pipe. I don't have the issue right now, I'm in the
>>middle of a move.
>
> ==========
> That's probably a gamma match type of (variable) capacitor where a teflon
> insulated copper rod/tube slides inside a copper tube.
>
> Frank gm0csz.kn6wh@ntlworld.com
>
>
>
Close Frank,
It uses nylon screws as sliders with air dielectric(sp), there was a
table of working volts & pf for each combination of tubes. I was looking
at building a tube rcvr, a 360 pf at 250 volts took a total of 12" of
tube. If I used 2 sections (in a U) it took 6" etc. It was suggested to
use a chunk of "all thread" for the tuning motion.
Every thing was from the local hardware store (or super store)

3975. Re: SAW filter in cordless phone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-20 16:09:54 UTC
From: Gary Tait <taitg@hurontel.on.ca>
Message-ID: <pqcntu4nke7nsgbvdg86s27obr5g75boob@4ax.com>
Source record: 39838

On 20 Nov 2002 06:42:10 -0800, jim.bolinger@lintek.aeroflex.com (JLB)
wrote:

>I have an old 49 MHz cordless phone.
>
>I have figured out what the basic stages are in the circuit, and there
>is a round flat package in the input stage of the receiver. It is
>maybe a little smaller than a dime and perhaps 3 to 4 times as thick,
>and is 'silver' color.
>
>My guess is that it is a SAW filter. From what I know about the
>things, they are not tuneable, so it would have to cover the entire
>'Cordless Phone Band', or at least the channels used by this receiver.
>
>Do you think my guess is right? What sort of things could this be
>used for? Has anyone on this group played with SAW filters?
>
>Jim
>N8EE

Other than playing with some 10.7 Mhz IF ones, not really.
The frquency is usually labelled on top, and depending on
the bandwidth an frequency, couldhave interesting uses.
>
>PS. I should have saved the second cordless phone. Then I would have
>two filters!

3976. Cellphone> 33CM/900Mhz project addenedum

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-20 16:16:35 UTC
From: Gary Tait <taitg@hurontel.on.ca>
Message-ID: <2vcntukj1j70bakimhns480824qnvuvbto@4ax.com>
Source record: 39839

I have received a couple of emails asking how to get started.

I have three basic recommendations:

1: Learn the RF/IF circuittry of the phone, what the RX LO should be, what the IFs are (they usually have a two or 3 stage IF).

2: Get datasheets, they can be an invaluable resource to figuring out what the frequencies are, how to program the PLLs for the frequencies desired, and even sometimes have sample circuits.

3: Read up on cellular phreaking philes, there is a lot of good info there on how cell-phones work.

3977. Re: Homebrew tubes (was: Building a variable condenser?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-21 03:56:12 UTC
From: cornytheclown@hotmail.com
Message-ID: <8e8f59d4.0211201956.25bdc980@posting.google.com>
Source record: 39840

Bill Higdon <w.higdon@attbi.com> wrote in message
news:<ftNC9.63203$P31.33457@rwcrnsc53>...
> Frank Dinger wrote:
> >>Back to the Variable cap, CQ a few years ago had a article on building
> >>them from copper pipe. I don't have the issue right now, I'm in the
> >>middle of a move.
> >
> > ==============
> > That's probably a gamma match type of (variable) capacitor where a teflon
> > insulated copper rod/tube slides inside a copper tube.
> >
> > Frank gm0csz.kn6wh@ntlworld.com
> >
> >
> >
> Close Frank,
> It uses nylon screws as sliders with air dielectric(sp), there was a
> table of working volts & pf for each combination of tubes. I was looking
> at building a tube rcvr, a 360 pf at 250 volts took a total of 12" of
> tube. If I used 2 sections (in a U) it took 6" etc. It was suggested to
> use a chunk of "all thread" for the tuning motion.
> Every thing was from the local hardware store (or super store)

A simple capacitor to build would be a neutralizing type condenser.
Build a u shaped platform, hang one large square or circle of metal in
a stationary position on one "leg" of the U and then attach another
piece of metal to a section of allthread that screws thru a bolt
mounted on the other "leg" of the U, I have not tried this yet but
have seen a few neutralizing capacitors and they look fairly easy to
homebrew. You could probably rig up a nice looking slide type dial
using this method too, well nice, probably not nice looking, lol.

I built a vernier drive a couple of years back using a very large
plastic wheel mounted on my capacitor shaft and then used a u shaped
metal holder to mount a knob and a shaft. I used a large rubber band
between the shaft and the wheel, I forget the ratio but it was very
high. nasty looking and probably not the quality you guys who are
really into radio require but for I was quite proud of it.

3978. Wiring a 5 pin mic to a 3 pin radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-21 04:31:11 UTC
From: tayl0rr@yahoo.com
Message-ID: <ff33c2c3.0211202031.cd79883@posting.google.com>
Source record: 39841

I have an Atlas 210 that I would like to use a standard microphone on. Any help would be appreciated. I have the wiring diagram for the Atlas but I'm unsure as to wich wires from the realistic mic I should use. I can find the ptt wires that connect when the mic is keyed with an ohm meter, is there an easy way to determin which wire is audio out?

Thanks
Robert

3979. Re: Wiring a 5 pin mic to a 3 pin radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-21 05:28:08 UTC
From: Marty <vk2umj@NOSPAM.yahoo.com.au>
Message-ID: <b1_C9.80910$g9.227721@newsfeeds.bigpond.com>
Source record: 39842

"Robert" <tayl0rr@yahoo.com> wrote in message
news:ff33c2c3.0211202031.cd79883@posting.google.com...
> I have an Atlas 210 that I would like to use a standard microphone on.
> Any help would be appreciated. I have the wiring diagram for the
> Atlas but I'm unsure as to wich wires from the realistic mic I should
> use. I can find the ptt wires that connect when the mic is keyed with
> an ohm meter, is there an easy way to determin which wire is audio
> out?

Take the back off the microphone and look.......

Also, the audio out will usually be the wire that is wrapped in the braided shield, so try stripping a little off the end of the cable and see which wire that is (possibly either yellow or white...)

Outgoing mail is certified Virus Free.
Checked by AVG anti-virus system (http://www.grisoft.com).
Version: 6.0.419 / Virus Database: 235 - Release Date: 13/11/2002

3980. Re: SAW filter in cordless phone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-21 13:27:36 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0211210527.74402b70@posting.google.com>
Source record: 39843

Gary Tait <taitg@hurontel.on.ca> wrote in message
news:<pqcntu4nke7nsgbvdg86s27obr5g75boob@4ax.com>...

> Other than playing with some 10.7 Mhz IF ones, not really.
> The frquency is usually labelled on top, and depending on
> the bandwidth an frequency, couldhave interesting uses.

As far as I can tell, Gary, it is in the input stage before the mixer.
There are some numbers on it, one of which is forty-something (at
work now, so I can't run and look at it). This leads me to beleive
that it is wide enough to cover all the channels---the receive
channels anyway---so it would be a few hundred kHz wide.

One possibility is as a first IF filter for an HF receiver, maybe with
a tuneable second IF. Or possibly put it after a cable TV tuner and
have a mulitband VHF receiver, with appropriate detector stages of
course.

Jim
N8EE

3981. Re: Homebrew tubes (was: Building a variable condenser?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-21 14:49:41 UTC
From: Frank Dinger <gm0csz.kn6wh@ntlworld.com>
Message-ID: <QD6D9.1609$yY2.112206@newsfep1-win.server.ntli.net>
Source record: 39844

> A simple capacitor to build would be a neutralizing type condenser.
> Build a u shaped platform, hang one large square or circle of metal in
> a stationary position on one "leg" of the U and then attach another
> piece of metal to a section of allthread that screws thru a bolt
> mounted on the other "leg" of the U, I have not tried this yet but
> have seen a few neutralizing capacitors and they look fairly easy to
> homebrew. You could probably rig up a nice looking slide type dial
> using this method too, well nice, probably not nice looking, lol.
>
> I built a vernier drive a couple of years back using a very large
> plastic wheel mounted on my capacitor shaft and then used a u shaped
> metal holder to mount a knob and a shaft. I used a large rubber band
> between the shaft and the wheel, I forget the ratio but it was very
> high. nasty looking and probably not the quality you guys who are
> really into radio require but for I was quite proud of it.
=====
To add to the above : If a variable capacitor is involving a screw type
mechanism ,a suitable 'dial' can be made of a 10 or 14 turns potmeter knob
(for example those made by Beckman)
Depending on the number of turns the screw has to make to cause the required
change of capacitance (which largely depends on the screw's thread pitch) a
'reversed' co-axial reducer can be applied in series with the 10 or 14 turn
dial knob.
These rotary reducers normally have a 3:1 or 6:1 ratio. Using for example
the latter in reversed mode e.g. 1: 6 , a ten-turn knob would be able to
rotate the screw type mechanism 10 * 6 = 60 times,providing a resolution of
1 in 10*100= 1000 since the dial knob can be set to any of 100 positions for
any rotation. In this way
the variable capacitor (for example used for tuning) can be set accurately
with a high resolution.

Frank gm0csz.kn6wh@ntlworld.com

3982. Looking to build a novice transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-21 16:53:40 UTC
From: w3m78k_ep@yahoo.com
Message-ID: <158f6944.0211210853.43d7aaa7@posting.google.com>
Source record: 39845

Hi. I'm just about to get my tech w/code license. I'm a 38 yo guy in the Midwest. I got into amateur radio because I like the idea of building things (preferably with vacuum tubes) and I like CW more than voice. I'd like to build a transmitter, preferably one with VFO & 75-100 watts PEP. Anybody know of plans for such a device?

3983. Re: Looking to build a novice transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-21 17:32:48 UTC
From: Bill M <"exray\\@n-o- .caribe.net>">
Message-ID: <utq5uvvug8l4e@corp.supernews.com>
Source record: 39846

Lal Galil wrote:
> Hi. I'm just about to get my tech w/code license. I'm a 38 yo guy in
> the Midwest. I got into amateur radio because I like the idea of
> building things (preferably with vacuum tubes) and I like CW more than
> voice. I'd like to build a transmitter, preferably one with VFO &
> 75-100 watts PEP. Anybody know of plans for such a device?

There's plenty of circuits around but it is indeed a bit difficult to find a CW/75 watt/multiband/vfo rig project. I just went through the search and the best I could find were in the mid-60s ARRL handbooks. In the '65 Edition for example, there is a 12BY7/1625 project and a 6AG7/6146 project plus a VFO.
I wound up buying an old Harvey-Wells boatanchor xmtr to restore and will modify a nice/junk 5MHz VFO that I have sitting idle.
-Bill WX4A

3984. Freq counter kits?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-21 18:24:35 UTC
From: Bob Liesenfeld <robert.liesenfeld@neicoltech.org>
Message-ID: <3DDD24E2.740D0657@neicoltech.org>
Source record: 39697

Gang,
Who makes frequency counter kits these days? I'm looking for one
that does, say up to 500MHz, and has a 7 seg LED or LCD type display.

Thanks

Bob WB0POQ

3985. FS: TUBES, no reasonable offer will be refused.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-21 18:26:46 UTC
From: Murray Pasternack <w6krc@arrl.net>
Message-ID: <Gz9D9.1549$mr2.56376@news1.west.cox.net>
Source record: 39698
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

email w6krc@arrl.net for list of receiving, TV, & special purpose tubes

3986. Re: Wiring a 5 pin mic to a 3 pin radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-21 18:43:47 UTC
From: Dan/W4NTI <w4nti@NOSPAMmindspring.com>
Message-ID: <arj9gonvv1@slb4.atl.mindspring.net>
Source record: 39699

Both good suggestions. Also if you have a Voltmeter (Ohmeter actually) put
it in the lowest range. Put one lead on common (shield) and tap the other
lead to the unknown audio line. You will hear a sharp click when you find
it.

This does not work on all mics however.

Dan/W4NTI

"Marty" <vk2umj@NOSPAM.yahoo.com.au> wrote in message
news:b1_C9.80910$g9.227721@newsfeeds.bigpond.com...
> "Robert" <tayl0rr@yahoo.com> wrote in message
> news:ff33c2c3.0211202031.cd79883@posting.google.com...
> > I have an Atlas 210 that I would like to use a standard microphone on.
> > Any help would be appreciated. I have the wiring diagram for the
> > Atlas but I'm unsure as to wich wires from the realistic mic I should
> > use. I can find the ptt wires that connect when the mic is keyed with
> > an ohm meter, is there an easy way to determin which wire is audio
> > out?
>
> Take the back off the microphone and look.......
>
> Also, the audio out will usually be the wire that is wrapped in the
braided
> shield, so try stripping a little off the end of the cable and see which
> wire that is (possibly either yellow or white...)
>
>
>
> ---
> Outgoing mail is certified Virus Free.
> Checked by AVG anti-virus system (http://www.grisoft.com).
> Version: 6.0.419 / Virus Database: 235 - Release Date: 13/11/2002
>
>

3987. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-21 19:33:43 UTC
From: averyfineman@aol.com
Message-ID: <20021121143343.20031.00000801@mb-cm.aol.com>
Source record: 39700

In article <3DDB9DAF.CB883A46@cox.net>, Dan Tayloe <dtayloe@cox.net> writes:

>Roy Lewallen wrote:
>>
>> I feel the best approach for a DC receiver is to
>> keep the signal at the mixer input as small as possible, even if it
>> means you need more audio gain. Of course, the emphasis of my work on DC
>> receivers has been for backpackable portable gear, where current drain
>> has to be kept reasonable. If one has the option of dumping a watt or
>> two into a mixer, the tradeoffs become weighted differently.
>>
>> Roy Lewallen, W7EL
>
>I agree with Roy. The IP3 rating of a mixer describes how off frequency
>signals can mix together to create on frequency junk which will be heard
>in the rcvr audio. I have heard some describe the situation on 40m in Europe
>as a constant "roar" in the 40m cw band as all the very high level short
>wave broadcast signals above 7.1 MHz mix together to create a wall of noise
>in the cw band due to receiver IP3 short comings.
>
>I am not sure what the IP3 rating of a typical diode mixer is, but suppose
that
>it is +25 dbm. A rule of thumb is that two signals about 23 db lower than
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>spaced apart appropriately will create a distortion product signal in the
audio
>passband of the receiver. In this case, the signal would have to be about +2
dbm,
>which is extremely stout.
>
>The way IP3 works is that for every 1 db of gain introduced in front of this
mixer, the
>IP3 capability will decrease by 3 db. So if you placed a MC1350 with 60 db of
gain
>in front of this mixer to use as an RF amplifier, the IP3 rating of the mixer
would
>decrease by 180 db. You now have a mixer with an effective IP rating of -155
dbm, with
>RF distortion products being produced by signals as small as -178 dbm. That
is quite
>a change!

...except that IP3 applies to ANY amplifier device added in front of the
mixer so
the intermodulation condition goes to the front-end instead of the mixer.

[a
practical wide-open gain of the 1350/1590 is about 50 db in voltage, not 60
db]

One cure for out-of-band signals is a passive band-pass filter. For a 500
Ohm
impedance, 20% BW, 3-section, "top-coupled resonator" BPF with
capacitive Q of 1000, inductive Q of 100, these values would be:
L1 = 1.153 uHy, C1 = 400 pFd (both in shunt)
C2 = 30 pFd (series)
L3 = 1.102 uHy, C3 = 390 pFd (both in shunt)
C4 = 30 pFd (series)
L5 = 1.153 uHy, C5 = 400 pFd (both in shunt)
With the given unloaded Qs, insertion loss at 7.148 MHz (geometric band
center)
is 1.9 db. Higher Qs result in less insertion loss. Insertion loss
variation within
the 40m bandpass is less than 0.5 db with the given unloaded Qs. The most
dramatic effect is the attenuation at AM BC, a theoretical 144db at 1.0 MHz
with about 98 db at 2.67 MHz. In practicality such attenuation won't be
attained
without something heavy (such as a double nested cast aluminum box) in the
way of shielding.

Tuning of this type of filter is absurdly easy: Short the inductors not
being tuned,
adjust the unshorted inductors for a resonance at band center (7.148 MHz).
A
dipper of some sort will work or use 10 Ohm or so resistors in place of
shorting
jumpers and brute-force feed the filter with a high level signal to peak the
coils.
The "brute-force" method is preferred due to de-tuning of dippers from over-
coupling.

For a 50 Ohm input-output BPF, multiply the Ls by 10, divide Cs by 10. For
the
500 Ohm filter values with a 50 Ohm input, replace C1 with a shunt-series of
C1A (shunt) of 1200 pFd, C1B (series) of 600 pFd. That yields an
approximate
input Z of 60 Ohms (actual Z of most BPFs varies considerably over
passband).
>
>Since best case receiver sensitivity of a cw receiver with a 500 Hz audio
filter is
>-148 dbm, and since 40m back ground noise doesn't really get any better than
>-115 dbm, such a configuration would create IM images from every signal and
all
>the noise in the passband of the receiver front end mixer for perhaps a MHz or

>two on either side of what the receiver is tuned to. This is really, really, really, not
>good.

Agreed, but that raises a point on just exactly what is wanted in the way of performance: High sensitivity or high IP3? Trying to do both at the same time
requires considerably more work in the design-breadboard stage. Ulrich Rhode's
book on that covers it well, paying a lot of attention to all kinds of IM nasties.

If input sensitivity is on the order of -115 dbm, then a practical diode mixer of
8 db conversion loss would put the mixer output level at -123 dbm. The "base-
band" output of a direct-conversion mixer would be at about 0.16 uV maximum.

That low a level, even at audio ranges, is not trivial. Shot noise, 1/f noise, etc.
at audio frequencies start manifesting themselves and that is an added problem having nothing to do with RF stages.

>Because of this problem, good receivers (DC as well as superhet) try to
>minimize the receiver gain in front of the main receiver filter.

:-) That gets into a (sometimes) subjective definition of "good."

Any receiver with high IP3 -and- high sensitivity criteria has to pay attention to both high-level input linearity (for minimum IM) and thermal noise at the front end. For portable "QRP" applications needing low primary power drain there has to be some compromise. In general, a high-IP3 diode mixer has a high LO injection level which requires higher power drain for the LO; for +20 dbm LO input (100 mW), the LO circuit might consume 200 mW of primary power (total including VFO), more for higher LO level. An RF amplifier ahead of the mixer might have a 12 mA at 12 VDC power demand or about 144 mW from the supply. It's a compromise depending on the type of transceiver, where it is used, kind of primary power.

>DC receivers are quite capable of beating the best commercial rigs in
>the above sensitivity/high level signal tradeoff while at the same time
>consuming only a tiny fraction of their receiver power.

I'll agree in general terms, but consider an application such as a portable QRP transceiver. If power demand is an important criterion, then many of contemporary line-powered transceiver features cannot be used unless such features are available in newer 5 V and 3 V SOC devices (DDS chips, etc.). Digital frequency display takes some power, even with CMOS drivers and LCD panels...and such features often involve more complexity than the RF and AF circuits.

Can direct-conversion rigs "beat" conventional receiver designs?
At the risk of controversy, I'd say no...they can MEET them with
a lot of care and attention. Their simplicity is certainly a factor,
another thing to consider in homebrew projects.

Len Anderson
retired (from regular hours) electronic engineer person

3988. New program STUMATCH

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-21 20:01:55 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <arje3j$4hd$2@knossos.btinternet.com>
Source record: 39701

NOW AVAILABLE ** New Program STUMATCH.exe"

This program assists with the design of stub-line transformers used for such purposes as matching the feedpoint impedance of radio antennas to the Zo impedance of the transmission line from the transmitter. The program is applicable to both balanced-pair and coaxial lines. These and similar types of transmission line transformers have traditionally been designed with the aid of Smith Charts. The superiority of this program in respect of time, operating simplicity, accuracy and user appreciation is clearly seen.

Download STUMATCH from website below.

==========
Regards from Reg G4FGQ
For Free Radio Design Software
Go to http://www.g4fgq.com
==========

3989. Re: Looking to build a novice transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-21 23:44:06 UTC
From: scott <acepilot@bloomer.net>
Message-ID: <3DDD6FC5.EF430931@bloomer.net>
Source record: 39702

Glass Transistors?!?! Actually, I second what Bill M wrote...try a larger hamfest and look for an old tube rig, maybe a Heathkit HW-101 would be just what you're looking for....

Scott
N0EDV

Lal Galil wrote:

> Hi. I'm just about to get my tech w/code license. I'm a 38 yo guy in
> the Midwest. I got into amateur radio because I like the idea of
> building things (preferably with vacuum tubes) and I like CW more than
> voice. I'd like to build a transmitter, preferably one with VFO &
> 75-100 watts PEP. Anybody know of plans for such a device?

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

3990. Re: Freq counter kits?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-22 00:00:03 UTC
From: scott <acepilot@bloomer.net>
Message-ID: <3DDD7383.A62B3046@bloomer.net>
Source record: 39703

Looking at your email address, are you affiliated with NEI (the tech school) in Minneapolis? I graduated there in 1983 and took more courses in 1988.

Anyhow, Digikey has an Intersil chip that was a freq. counter, totalizer, ratio counter, etc for $30 something, some years back. Might check their website, I believe www.digikey.com.

You might be able to find some 74S series chips to make a divide by 100 counter since the Intersil chip only goes up to 10 MHz.....

Actually, here is what I found at DigiKey....

ICM7216DIPI
IC COUNTER/TIMER
FREQ 8DIG 28DIP
Intersil

Contact our Technical

Support Dept at

1-800-344-4539

Sorry for the formatting (cut & paste). It is an obsolete part, but maybe they have or can still get. About $29. They also used to have a data book for these chips...might still be able to get it also.

Scott
N0EDV

Bob Liesenfeld wrote:

> Gang,
> Who makes frequency counter kits these days? I'm looking for one
> that does, say up to 500MHz, and has a 7 seg LED or LCD type display.
>
> Thanks
>
> Bob WB0POQ

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

3991. Need help cross ref. this RF transistor CD3581 (marked CTC CD3581 C0721)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-22 00:11:04 UTC
From: Tony <as8383@netzero.net>
Message-ID: <sCeD9.15144$Gc.419841@twister.austin.rr.com>
Source record: 39704
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,rec.radio.amateur

Can't find this thing in the cross ref. I have ..

It's a high power RF transistor and I think it's UHF (or at least usable there). I need to
know all the specs and what it crosses to.

Thanks,

N5GPI

3992. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-22 00:46:05 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3DDD7E7C.EB5640F@cox.net>
Source record: 39705

> Can direct-conversion rigs "beat" conventional receiver designs?
> At the risk of controversy, I'd say no...they can MEET them with
> a lot of care and attention. Their simplicity is certainly a factor,
> another thing to consider in homebrew projects.

You might take a look at the following link:

http://redhotradio.com/

and follow the link to the NorCal 30. It uses phasing to get single sided
reception from quadrature detected DC audio. This DC transceiver design draws
only 13 ma but in most respects has a tougher receiver than anything currently
on the market.

Since this design emphasizes both low cost and low current drain, it is certainly
possible to do even better.

- Dan, N7VE

3993. Looking for uA78GKC or crossover.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-22 02:08:26 UTC
From: martin <marty1kay@earthlink.net>
Message-ID: <ukgD9.2694$OZ4.282795@newsread1.prod.itd.earthlink.net>
Source record: 39706
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.homebrew

I have an old low voltage power supply which uses a uA78GKC (TO-3 case 4-pins) voltage regulator that I need to replace.

I haven't been able to locate a new one or find a crossover.

I'm hoping that I can find either that piece or a direct replacement so I don't have to rebuild the whole board.

Would anyone know where I can find a uA78GKC or a replacement with specs and circuit
information?

TIA, Marty K1FHR

3994. Re: Freq counter kits?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-22 02:40:17 UTC
From: Norman Franklin <normanf@pacbell.net>
Message-ID: <3DDD99A9.EECEF04C@pacbell.net>
Source record: 39707

Bob,
Try here http://www.aade.com/index.html. This is the site for Almost
All Digital
Electronics in Washington State. He has some very compact and nice
frequency
counter kit. I bought the DFD4. This can be used as the frequency
display for a
homebrew receiver or transmiter. Or as a stand along frequency counter.
The
DFD4 goes from 0 to 2.0 GHz.

Norman KG6NMT

Bob Liesenfeld wrote:

> Gang,
> Who makes frequency counter kits these days? I'm looking for one
> that does, say up to 500MHz, and has a 7 seg LED or LCD type display.
>
> Thanks
>
> Bob WB0POQ

3995. Re: Looking for uA78GKC or crossover.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-22 03:36:57 UTC
From: Bob Stein <w6nbi@earthlink.net>
Message-ID: <3DDDA688.3010207@earthlink.net>
Source record: 39708
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.homebrew

martin wrote:
> I have an old low voltage power supply which uses a uA78GKC (TO-3 case
> 4-pins) voltage regulator that I need to replace.
>
> I haven't been able to locate a new one or find a crossover.
>
> I'm hoping that I can find either that piece or a direct replacement so I
> don't have to rebuild the whole board.
>
> Would anyone know where I can find a uA78GKC or a replacement with specs and
> circuit
> information?
>
> TIA, Marty K1FHR
>
>

The ECG cross reference shows ECG1926 as a replacement, but no specs.
I hope this helps.

Bob, W6NBI

3996. Re: Looking for uA78GKC or crossover.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-22 09:52:30 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3dddfd6f.414072@news.freeserve.net>
Source record: 39709
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.homebrew

Available at www.rswww.com part no 307-339.
hth Mike W
--
On Fri, 22 Nov 2002 02:08:26 GMT, "martin" <marty1kay@earthlink.net>
wrote:

>I have an old low voltage power supply which uses a uA78GKC (TO-3 case
>4-pins) voltage regulator that I need to replace.
>
>I haven't been able to locate a new one or find a crossover.
>
>I'm hoping that I can find either that piece or a direct replacement so I
>don't have to rebuild the whole board.
>
>Would anyone know where I can find a uA78GKC or a replacement with specs and
>circuit
>information?
>
>TIA, Marty K1FHR
>
>

3997. Re: Need help cross ref. this RF transistor CD3581 (marked CTC CD3581 C0721)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-22 09:54:01 UTC
From: "Mike G." <nospam@my.email.address>
Message-ID: <pnrrtuku8louk2gkuuhf5d4rqhqqigai5o@4ax.com>
Source record: 39710
Cross-posted to: alt.ham-radio.hf,rec.radio.amateur.homebrew,rec.radio.amateur

N5GPI,

You probably WONT find it in any cross reference book either. That's an old CTC part from probably the 70's. Let's see, Acrian bought CTC back in the early 80's, then Acrian went out of business sometime later. GHz Technology picked up some of the product line and continued to manufacture it for customers left hanging by the Acrian crash. You might check with GHz. Here's a good page you can visit and maybe match up the case drawings with what you have and go from there...

http://www.ghz.com/products/vhf.aspx

Oh yeah, earlier this year GHz was bought by Advanced Power Technology, but they still maintain their old web site. If you see something close, drop them an email and ask about your part. Maybe they may still have an old CTC catalog laying around and could give you some info from it.

The last hope to find out anything would be Richardson Electronics. They have been distributing RF power transistors for longer than I've been around. I think they used to carry Acrian and CTC parts way back when. You can find them at http://rfwireless.rell.com/.

73's and good luck! (You'll probably need some!)
Mike - KD6PKJ

On Fri, 22 Nov 2002 00:11:04 GMT, "Tony" <as8383@netzero.net> wrote:

>Can't find this thing in the cross ref. I have ..
>
>
>It's a high power RF transistor and I think it's UHF (or at least usable
>there). I need to
>know all the specs and what it crosses to.
>
>Thanks,
>
>N5GPI

3998. Re: Looking for uA78GKC or crossover.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-22 12:47:19 UTC
From: "Thomas C. Sefranek" <WA1RHP@ARRL.net>
Message-ID: <rHpD9.3445$OZ4.367062@newsread1.prod.itd.earthlink.net>
Source record: 39711
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.homebrew

martin <marty1kay@earthlink.net> wrote in message
news:ukgD9.2694$OZ4.282795@newsread1.prod.itd.earthlink.net...
> I have an old low voltage power supply which uses a uA78GKC (TO-3 case
> 4-pins) voltage regulator that I need to replace.
>
> I haven't been able to locate a new one or find a crossover.
>
> I'm hoping that I can find either that piece or a direct replacement so I
> don't have to rebuild the whole board.
>
> Would anyone know where I can find a uA78GKC or a replacement with specs
and
> circuit
> information?

I have uA78HGKCs

>
> TIA, Marty K1FHR
>

--
*
| __O Thomas C. Sefranek WA1RHP@ARRL.net
|_-\<,_ Amateur Radio Operator: WA1RHP
(*)/ (*) Bicycle mobile on 145.41, 448.625 MHz

http://hamradio.cmcorp.com/inventory/Inventory.html
http://www.harvardrepeater.org

3999. Re: Freq counter kits?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-22 12:54:55 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <CIpD9.689$pc.140250@news.iquest.net>
Source record: 39712

I have an ADDE FC kit that I use quite a bit.

It's a good benchtop tool to say the least.

"Norman Franklin" <normanf@pacbell.net> wrote in message
news:3DDD99A9.EECEF04C@pacbell.net...
> Bob,
> Try here http://www.aade.com/index.html. This is the site for Almost
> All Digital
> Electronics in Washington State. He has some very compact and nice
> frequency
> counter kit. I bought the DFD4. This can be used as the frequency
> display for a
> homebrew receiver or transmiter. Or as a stand along frequency counter.
> The
> DFD4 goes from 0 to 2.0 GHz.
>
> Norman KG6NMT
>
> Bob Liesenfeld wrote:
>
> > Gang,
> > Who makes frequency counter kits these days? I'm looking for one
> > that does, say up to 500MHz, and has a 7 seg LED or LCD type display.
> >
> > Thanks
> >
> > Bob WB0POQ
>

4000. FS: SK-41- & SK-400 SOCKETS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-22 14:16:46 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <i%qD9.20237$vM1.1445910@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39713

EIMAC SK-410 NOS, & SK-400 air socket

check on ebay under seller heytubeguy

4001. More UA78 questions - was RE: looking for

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-22 14:46:14 UTC
From: Lou <tech@dp.net>
Message-ID: <arlisc$1dee$1@news.dp.net>
Source record: 39714
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.homebrew

UA78HCSC and UA78HG

Both of these numbers were found on 2 separate yet supposedly identical parts/units. They were 4 pin regulators used in a 5-15VDC 7 AMP Power Supply. Now, the HG number came from the manual itself for the power supply I purchased originally. The HCSC was on a spare unit I bought - found on E-Bay about a year ago. It may have been replaced and for all I know not quite up to par with the HG. I've never run the spare unit through it's paces yet. I don't have any listings to confirm or deny this. BUT if someone has these parts and willing to sell them, or know of a source thereof, I'd be happy to hear from them. OR something equivalent. As the other gentleman alluded to, I don't want to have to "redesign" these power supplies.

E: MAIL: TECH@DP.NET

"Thomas C. Sefranek" <WA1RHP@ARRL.net> wrote in message
news:rHpD9.3445$OZ4.367062@newsread1.prod.itd.earthlink.net...
>
> martin <marty1kay@earthlink.net> wrote in message
> news:ukgD9.2694$OZ4.282795@newsread1.prod.itd.earthlink.net...
> > I have an old low voltage power supply which uses a uA78GKC (TO-3 case
> > 4-pins) voltage regulator that I need to replace.
> >
> > I haven't been able to locate a new one or find a crossover.
> >
> > I'm hoping that I can find either that piece or a direct replacement so
I
> > don't have to rebuild the whole board.
> >
> > Would anyone know where I can find a uA78GKC or a replacement with specs
> and
> > circuit
> > information?
>
> I have uA78HGKCs
>
> >
> > TIA, Marty K1FHR
> >
>
> --
> *
> | __O Thomas C. Sefranek WA1RHP@ARRL.net
> |_-\<,_ Amateur Radio Operator: WA1RHP

> (*)/ (*) Bicycle mobile on 145.41, 448.625 MHz
>
> http://hamradio.cmcorp.com/inventory/Inventory.html
> http://www.harvardrepeater.org
>
>

4002. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-22 15:41:42 UTC
From: Ed Juge/NM <ed@juge.org>
Message-ID: <8lsD9.18948$NV.369353@news.direcpc.com>
Source record: 39715

I saw the ads, too, Roger, and never paid them any attention

My reaction was, "Ho, hum... someone is trying to get back in the Heathkit business" and I assumed it would be a typical kit... buildable but with the usual compromises in performance, stability, calibration, reliability and such. With the quality of today's radios, who needs it? (Boy, was I wrong!!)

At the time, I was interested in the Yaesu FT-817 portable so began reading some QRP newsgroups. Bought an 817, in fact, and really loved it. But what I was reading caused me to look further at the Elecraft K2. QST's lab, for instance, said it had THE BEST performance, in the presence of close-in interference, EVER tested in their lab. In fact, as a result of the K2, they have since begun testing strong signal handling at 2KHz in addition to the old test of 10KHz .(I think that's right.)

Anyway, I bought and built mine nearly 2 years ago. Performance is superb. I have done A/B tests between it and my Icom 756PRO for a number of visitors to my shack. In dozen of cases we could (sometimes easily) copy a signal on the K2 that was not copyable on the PRO. Not once has the reverse been true. I never turned the 817 on again and finally sold it. And BTW, my PRO had the edge over the FT-1000D it replaced.

The K2 is a very small radio so many lesser-used functions are accessible via menus... not as convenient as having everything on a front-panel knob or switch but perfectly okay. The basic kit, before some of the later options, had no cuts or jumpers on any board. Exquisitely done design... several boards that all plug easily into each other. Building the kit was great fun and took about 45-50 hours for the radio, SSB, noise blanker, auto-tuner, and 160 meter kit. (my first kits in 30 years and with much worse eyesight now than then.) Some cuts & jumpers were involved with the later options like the RS-232 (computer control of the K2 and K2 output to your logging program among other things) and audio filter, though not objectionable. My 100-watt amp option will be installed next week giving me continuously-variable power from about 1 watt to 100. The overall size of the unit doesn't change with this option.

Everything you will need to tune it up, except a VOM, is included in the kit.

It is well worth a serious look!

73... Ed, W5EJ

----- Original Message -----
From: "Roger Halstead" <rdhalste@tm.net>
Newsgroups: rec.radio.amateur.homebrew

Sent: Wednesday, November 06, 2002 8:59 PM
Subject: Re: K2 Owners

4003. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-22 17:00:16 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <utsolceiebeh9f@corp.supernews.com>
Source record: 39716

The envelope continues to get pushed. Did you see Dan Tayloe's test results of the prototype NC-30? Seems like Fifield can't let Burdick out-do him! The receiver on the NC-30 just blows away the K2 (and everything else). Norcal expects to be kitting the NC-30 in January, and sometime later Red Hot will take it up.

So, maybe this time next year Wayne will be tired of hearing all the oohs and ahs about the NC-30 and come up with a K-somethingoranother to blow it away!

..

"Ed Juge/NM" <ed@juge.org> wrote in message news:8lsD9.18948$NV.369353@news.direcpc.com...

> I have done A/B tests between it and my Icom 756PRO for a
> number of visitors to my shack. In dozen of cases we could
> (sometimes easily) copy a signal on the K2 that was not
> copyable on the PRO. Not once has the reverse been true.

4004. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-22 18:25:25 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <ryuD9.694$pc.142558@news.iquest.net>
Source record: 39717

From what little I've seen about the NC30...I will be ordering the moment I can.

I really enjoy working 30m.

--

==========
KB9BVN/QRP - New Whiteland IN - EM69WN
QRP-ARCI #10223 QRP-L #1540 FIST #5695
FISTS CC #764 - Proud Member ARRL
HEATH HW-9 @ 2W or NORCAL 40A @ 1.3W
INTO INFAMOUS AF4PS ATTIC DIPOLE
SOC #400 AND FLYING PIGS QRP #-57
==========

"xpyttl" <xpyttl_nospam@earthling.net> wrote in message
news:utsolceiebeh9f@corp.supernews.com...
> The envelope continues to get pushed. Did you see Dan Tayloe's test
results
> of the prototype NC-30? Seems like Fifield can't let Burdick out-do him!
> The receiver on the NC-30 just blows away the K2 (and everything else).
> Norcal expects to be kitting the NC-30 in January, and sometime later Red
> Hot will take it up.
>
> So, maybe this time next year Wayne will be tired of hearing all the oohs
> and ahs about the NC-30 and come up with a K-somethingoranother to blow it
> away!
>
> ..
>
> "Ed Juge/NM" <ed@juge.org> wrote in message
> news:8lsD9.18948$NV.369353@news.direcpc.com...
>
> > I have done A/B tests between it and my Icom 756PRO for a
> > number of visitors to my shack. In dozen of cases we could
> > (sometimes easily) copy a signal on the K2 that was not
> > copyable on the PRO. Not once has the reverse been true.
>
>

4005. Re: Looking to build a novice transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-22 18:39:36 UTC
From: snarflemike@yahoo.com
Message-ID: <20619edc.0211221039.220ca67b@posting.google.com>
Source record: 39718

w3m78k_ep@yahoo.com (Lal Galil) wrote in message
news:<158f6944.0211210853.43d7aaa7@posting.google.com>...
> Hi. I'm just about to get my tech w/code license. I'm a 38 yo guy in
> the Midwest. I got into amateur radio because I like the idea of
> building things (preferably with vacuum tubes) and I like CW more than
> voice. I'd like to build a transmitter, preferably one with VFO &
> 75-100 watts PEP. Anybody know of plans for such a device?

I think your best bet would be to build one of the typical MOPA
(oscillator-amplifier) crystal-controlled rigs from the '50s/'60s, and
then find a VFO at a hamfest or on ebay to add on. Do you have any
tubes that you want to use, or are you starting from zero?

BTW, most such rigs are going to use an 807, 1625, 6146 or sweep tube
final. Typically you'll be looking at 40-60W output. Just raise your
antenna another 5 feet and it will sound like 75W ;+) You can also run
two PA tubes in parallel to get your 100W out.

Let me strongly recommend that you join the glowbugs email list, where
the focus is on homebrewing and operating tube ham gear. The group is
quite friendly and will definitely help you with your project. Here's
the list info from the radio groups FAQ:

For homebuilding transmitters and receivers using tube technology,
there is the Glowbugs e-list; send an email to:
majordomo@piobaire.mines.uidaho.edu and only write:
subscribe glowbugs <your@address.here>

Come on by and we'll try and get you set up! I'll even pitch in a
5763 oscillator tube and a sweep tube PA to get you started if you
need 'em.

73,
Mike, KK6GM

4006. Re: Freq counter kits?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-22 19:14:21 UTC
From: averyfineman@aol.com
Message-ID: <20021122141421.10145.00000536@mb-cd.aol.com>
Source record: 39719

In article <3DDD7383.A62B3046@bloomer.net>, scott <acepilot@bloomer.net>
writes:

>Looking at your email address, are you affiliated with NEI (the tech
>school) in Minneapolis? I graduated there in 1983 and took more courses
>in 1988.
>
>Anyhow, Digikey has an Intersil chip that was a freq. counter, totalizer,
>ratio counter, etc for $30 something, some years back. Might check their
>website, I believe www.digikey.com.
>
>You might be able to find some 74S series chips to make a divide by 100
>counter since the Intersil chip only goes up to 10 MHz.....

From www.intersil.com, their ICM7216B universal counter IC is
still around (datasheet date is Feb 02). Intersil yields only four
distributors: Arrow, Avnet, Newark, and Nu Horizons. Only
Newark had any in stock (178 qty) as of late Thursday afternoon
and singles price was $34.72. The Intersil datasheet displays
several schematics. The B suffix is the all-purpose IC while the
D suffix indicates only frequency counting. Judging from longevity
in prior distributor catalogs and low quantities now, it might not
last too many more years in inventory. :-(

There are several divide by 10 digital ICs available as prescalers,
FAST, ACT, and HCT suitable. Any wideband differential output
amplifer handling relatively low resistance loads can work into an
R-S flip-flop for squaring-up the input (amplifier supply rails not
more than NAND gates used for the R-S flip-flops)...use Schnitt
trigger NANDs if desired, but not absolutely necessary.

A friend built one about a decade ago, still working well. For
really nit-picky accuracy in the time base (better than 5 PPM)
an external crystal reference oscillator can be used.

Len Anderson
retired (from regular hours) electronic engineer person

4007. Elecraft K2/100 CQ Mag. Review Available (.pdf)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-22 19:17:47 UTC
From: Eric Swartz WA6HHQ - Elecraft <eric@elecraft.com>
Message-ID: <3DDE82DB.766E1BB3@elecraft.com>
Source record: 39720
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

CQ Magazine has just given us their November 2002 review of the K2/100 in .pdf format. You can download it from the Elecraft web page at:

http://www.elecraft.com/TechNotes/CQ_K2_100_Review.pdf

73, Eric WA6HHQ
http://www.elecraft.com

4008. Re: Amplifier imput impedance circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-22 23:59:54 UTC
From: Skipp <IhateSpamAtAlltimes@yahoo.com>
Message-ID: <armgdqet1@woodrow.ucdavis.edu>
Source record: 39721

Hi there,

Save yourself some work and just clone the circuit of the Heathkit SB-1000
or the Ameritron Equivalent.

From memory, the imput impedance is about 130 ohms for a single tube.

cheers
skipp
http://sonic.ucdavis.edu

: gw <gw@webhideout.com> wrote:
: Hello to all. I am thinking about building my first tube amp using a
: single 3-500 z. By using the info from the data sheet on this tube,
: how do i come up with the input impedance of this tube? Thanks.

: GW

4009. Re: Radio Frequency Choke manufacturers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 00:12:03 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <nJzD9.144502$E54.350752@news1.east.cox.net>
Source record: 39722

Hammond makes some RF chokes.

Peter

"Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message
news:O7ga4ON$z9EwHC@fslife.co.uk...
> Can anyone on the group supply me with any RF plate choke manufacturers
> that are still in business?
>
> I believe R.S. Miller are no more.
>
> Any others?
>
> (((73)))
> --
> Philip de Cadenet G4ZOW
> Transmitters 'R' Us
> http://www.transmittersrus.com

4010. FA Electronic Books

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 00:35:53 UTC
From: "W. Richards" <wrichar2@rochester.rr.com>
Message-ID: <J3AD9.160527$c51.48386495@twister.nyroc.rr.com>
Source record: 39723

The following books are on Ebay:

Handbook of Electronic Semiconductors

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=29375&item=1970634562

Electronics for Scientists

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=29375&item=1970636659

Electronic Compoents Handbook

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=29375&item=1970237921

Transistor Circuit Design by Texas Instruments

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=29375&item=1585308735

Thanks for looking.

4011. Re: Data on Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 01:15:17 UTC
From: starsekr@aol.com
Message-ID: <f2828edc.0211221715.57354f7b@posting.google.com>
Source record: 39724

"Hugh Colborn" <dontspamstockden@tiscali.co.uk> wrote in message
news:<3dd4b2ed_1@mk-nntp-2.news.uk.tiscali.com>...
> "Robert Offer" <robert@g1zjp.freeserve.co.uk> wrote in message
> news:aqrnvj$p69$1@news5.svr.pol.co.uk...
> > Hi all,
> > I have some stud mounted diodes - reference CV7160 (? manuf IOR) and
> > CV7262. >

Bob, just to confuse things further, My 1990 copy of International
Semiconductor Directory shows that Marconi Electronic Devices
producted a line of UHF Mixer and UHF Detector diodes with numbers
like CV7109 and CV 7180 up through numbers like CV8100's. I didn't
find your particular numbers though.

73's
Jim, KA6TPR

4012. Re: Looking to build a novice transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 01:37:08 UTC
From: n2ey@aol.com
Message-ID: <20021122203708.04214.00000666@mb-cc.aol.com>
Source record: 39726

In article <158f6944.0211210853.43d7aaa7@posting.google.com>,
w3m78k_ep@yahoo.com (Lal Galil) writes:

>Hi. I'm just about to get my tech w/code license. I'm a 38 yo guy in
>the Midwest. I got into amateur radio because I like the idea of
>building things (preferably with vacuum tubes) and I like CW more than
>voice. I'd like to build a transmitter, preferably one with VFO &
>75-100 watts PEP. Anybody know of plans for such a device?
>
There are lots of good designs out there - main problem is what parts you have and what bands you want to use. I strongly suggest starting out on 80 and 40 meters, and also going for General as soon as practical.

Here are some classic designs, if you have access to old QSTs:

"All Band CW Transmitter For The Novice", QST, August, 1960. 6AG7 feeding 807 or 1625, 40-50 watts input. Rather compact - I'd use a bigger chassis. Plug in coils. Power supply requires a fairly high-voltage transformer if you want full power.

"65 Watts At Low Cost", QST, March 1961 and first edition of "Understanding Amateur Radio". 6K6GT feeding parallel 6BG6Gs, 65-75 watts input. Many other tube types can be used. Uses relatively low B+ and relatively common parts on a big chassis - lots of room for substitution, changes and experiments. Good for up to about 100 watts with an adequate power supply.

"An Easy To Build VFO" , QST, February, 1962. 12AU7A driving a 6AU6, output on 80 and 40 meters. Based on a design by W2YM design, but is more complete and easily used with most Novice-type transmitters of the era.

Please take KK6GM's advice about the glowbug reflector. Lots of good info and knowledgeable folks, plus sources of parts.

73 de Jim, N2EY

4013. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 01:37:09 UTC
From: n2ey@aol.com
Message-ID: <20021122203709.04214.00000667@mb-cc.aol.com>
Source record: 39725

In article <utsolceiebeh9f@corp.supernews.com>, "xpyttl"
<xpyttl_nospam@earthling.net> writes:

>The envelope continues to get pushed. Did you see Dan Tayloe's test results
>of the prototype NC-30? Seems like Fifield can't let Burdick out-do him!
>The receiver on the NC-30 just blows away the K2 (and everything else).

Better numbers, yes, but not a lot better. Still amazing, particularly
considering the simplicity and very low current drain.

The compromise in the NC-30 design is the relative lack of unwanted-sideband
suppression. And so far it's only a monoband design.

But just wait.......;-)

>Norcal expects to be kitting the NC-30 in January, and sometime later Red
>Hot will take it up.
>
>So, maybe this time next year Wayne will be tired of hearing all the oohs
>and ahs about the NC-30 and come up with a K-somethingoranother to blow it
>away!

K3, anyone?

73 de Jim, N2EY

4014. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 05:23:53 UTC
From: averyfineman@aol.com
Message-ID: <20021123002353.03526.00001045@mb-cj.aol.com>
Source record: 39727

In article <3DDD7E7C.EB5640F@cox.net>, Dan Tayloe <dtayloe@cox.net> writes:

>> Can direct-conversion rigs "beat" conventional receiver designs?
>> At the risk of controversy, I'd say no...they can MEET them with
>> a lot of care and attention. Their simplicity is certainly a factor,
>> another thing to consider in homebrew projects.
>
>You might take a look at the following link:
>
>http://redhotradio.com/
>
>and follow the link to the NorCal 30. It uses phasing to get single sided
>reception from quadrature detected DC audio. This DC transceiver design draws
>only 13 ma but in most respects has a tougher receiver than anything currently
>on the market.

Thank you for the link. Interesting information even though no
NorCal kit was available. The schematic diagrams were fuzzy
in small details, not discernable enough when using Acrobat
5.0 for viewing.

As to being a "tougher receiver than anything currently on the
market," I will dispute that several ways. Let me begin by
saying I do not deal in radios nor am I promoting any radio kit
sales. This thread title reads "brainstorming designs for new
40 meter transceiver." I'll put on my "design review meeting"
hat, a familiar article on both sides of the meeting table.

The basic architecture of the NorCal30 could be adapted to 40m
monoband. There should be no problem dropping frequency.

The switched-multiplexer mixer concept is interesting (and
patented) but there seems to be more complexity there (VFO
tripling to get injection at 4X frequency of a direct diode ring
mixer circuit). This is an advantage for SSB but no discernable
advantage for CW. A superhet receiver with sharp crystal filter
of 300 to 500 Hz BW would have better skirt selectivity at the
so-called "image" on CW.

The claimed sensitivity figure uses a 3 db signal-plus-noise to
noise ratio, which is not the standard EIA test value of 10 db.
There is no guarantee that the "minimum discernable signal"
test level is accurately calibrated...is there a list of test
equipment in deriving this?

The claimed minimum discernable signal level of -136 dbm is equal to 35.4 nanoVolts in a 50 Ohm system. If the mixer conversion gain is 0 db (no loss at all) then that is equivalent audio of 35.4 nV peak on a random noise floor of 26.2 nV. That is hardly trivial for a new design even though it is bandpass filtered by later low-pass and high-pass active filters. If that coexists in the same box as a switching regulator, there must be adequate layout and shielding from switcher noise. Those are added problems for a new design.

I will remain skeptical on the IP3 values claimed for this mixer until proven independently. Higher RF input levels would manifest themselves as higher AF levels along the chain of four audio amplification blocks. With no gain budget tabulation versus RF input level, there is no quick verification that some audio stage might go into limiting or saturation from high RF input levels. I'm sure it is a good chain, but the fuzzy image of the schematic doesn't allow a good viewing of parts values to complete the evaluation.

>Since this design emphasizes both low cost and low current drain, it is
>certainly possible to do even better.

The specification for transmit power supply demand is 9.36 W (12 VDC at 0.78 mA) for a 5.0 W RF output. That is an efficiency of 53.4% for a Class C stage. Not close to optimum possible.

Use of a switching regulator to get more than one supply voltage is fine but the distinction on using only two large cells as a basic battery is not spelled out. Since the 3 V rail has much less current demand, a buck regulator to supply that from a 12 V battery source seems more efficient for portable use and make it compatible with 12 VDC vehicle electrical systems as an alternate power source.

"Whisper" low current demand circuitry can be applied to RF stages as well. My little Oregon Scientific clock radio tuning to WWVB has no power switch and its main current drain is the LCD panel. There are many similar applications found in today's consumer electronics market radios...such as the nice PR giveaway auto-tuning FM radio with clock from Analog Devices that I sometimes use (one battery cell).

<"design review hat" off>

Normally, "brainstorming" a new design should take into account as many possible ways to accomplish something with an addition of practicality necessary for homebrewing. All I've offered is some suggestions, some possibilities.

I don't sell radios or components in any form.

"Good" design of a system and all its circuits has to be
judged by the designer and his/her capabilities...each one
is unique and the criteria for each one is variable. If the
experimentation leads to something new and better in
some way, then that should be an excellent outcome.
If not, but the project works, then that is its own reward.

4015. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 08:54:26 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <utugi3runlvr69@corp.supernews.com>
Source record: 39728

Just a brief comment. While IP3 is as important for DC receivers as for superhets, second order distortion (or imbalance, or common mode susceptibility or conversion) can easily be the limiting factor in DC receiver performance and usefulness. But because of the preponderance of superhets, this characteristic is seldom even mentioned, let alone evaluated. The result can easily be a DC receiver that looks fantastic on laboratory IP3 tests but that's unusable because of a constant jumbled background (or foreground) din of demodulated AM. It's not a little, minor effect. It's something that requires at least as much attention as, and probably more attention than, IP3 in considering mixer choices. And it can present at least as great a challenge to overcome.

Roy Lewallen, W7EL

4016. WTB Keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 09:23:02 UTC
From: Paul Cooper <plcooper@starband.net>
Message-ID: <3DDF4902.8070309@starband.net>
Source record: 39729

WTB Heath HD-10 keyer in good condx.

Paul, K6PY

4017. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 13:44:01 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3DDF8655.7C802D86@cox.net>
Source record: 39730

The IP2 dynamic range for the Norcal 30 prototype has been measured at 104 db, which compares favorably with the top two current best receviers, the K2 at 101 db, or the FT-1000MP at 94 db (data taken from the ARS review of the K2).

Unlike many other DC rigs that I have built before, I have never heard demodulated SWBC due to front end overload when using this arrangement, which was indeed a pleasant surprise.

- Dan, N7VE

Roy Lewallen wrote:
>
> Just a brief comment. While IP3 is as important for DC receivers as for
> superhets, second order distortion (or imbalance, or common mode
> susceptibility or conversion) can easily be the limiting factor in DC
> receiver performance and usefulness. But because of the preponderance of
> superhets, this characteristic is seldom even mentioned, let alone
> evaluated. The result can easily be a DC receiver that looks fantastic
> on laboratory IP3 tests but that's unusable because of a constant
> jumbled background (or foreground) din of demodulated AM. It's not a
> little, minor effect. It's something that requires at least as much
> attention as, and probably more attention than, IP3 in considering mixer
> choices. And it can present at least as great a challenge to overcome.
>
> Roy Lewallen, W7EL

4018. ADDING TONES TO A YAESU FT-225RD

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 15:47:18 UTC
From: dss117@aol.com
Message-ID: <20021123104718.24121.00000045@mb-cv.aol.com>
Source record: 39731

I have a 2-m Yaesu FT-225RD and need to add a tone board for repeater use. I can get a nice tone unit from Com-Spec, but can't figure out where to conect it to the radio.
Anyone try this with this rig?

4019. Re: Looking to build a novice transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 17:00:40 UTC
From: John Patterson <jwp1775@earthlink.net>
Message-ID: <YuOD9.5732$OZ4.598537@newsread1.prod.itd.earthlink.net>
Source record: 39732

You didn't mention your level of electronics knowledge or your experience in electronic construction, so I'm assumming you're basically competent at both and equipped with the basic tools, etc. That being the case, any of the projects recommended by the other respondents will work fine.

But don't think you have to look for "that perfect project" that has just what you're looking for -- many of the 50's -- 60's ARRL Handbooks had great sections that talked about transmitter circuits individually. After perusing one or more of these gems, you may want to use a Vackar oscillator (or a Colpitts, or a Pierce, etc.), followed by a buffer stage, followed by any of the popular low power PA stages of the time (807, 1625, 6146, 6DQ6, etc.). You may want to use a pi-net output coupling circuit, or link coupling. You may want to take into consideration what type antenna sytem you'll be feeding.

The point is, you'll have more options than trying to duplicate a project from an article or a handbook. And that leads to one of the many joys of homebrewing, trying out different stuff! And that leads to one of the greatest joys of homebrewing, learning new stuff!

Either way, You'll have a great time!

Good Luck & 73.....John, K9OF

"Lal Galil" <w3m78k_ep@yahoo.com> wrote in message
news:158f6944.0211210853.43d7aaa7@posting.google.com...
> Hi. I'm just about to get my tech w/code license. I'm a 38 yo guy in
> the Midwest. I got into amateur radio because I like the idea of
> building things (preferably with vacuum tubes) and I like CW more than
> voice. I'd like to build a transmitter, preferably one with VFO &
> 75-100 watts PEP. Anybody know of plans for such a device?
>

4020. Using fundamental xtals for overtones

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 18:02:14 UTC
From: ae517@FreeNet.Carleton.CA
Message-ID: <arofr6$462$1@freenet9.carleton.ca>
Source record: 39734

If one were to use a fundamental xtal in an overtone
oscillator circuit, other than the frequency being offset
somewhat, would there be any difference in it's operation
w.r.t. a true overtone xtal?

I looking to build a reference oscillator, but it need
only be within a Mhz or two of 135 MHz, so I'm wondering
if I can use a cheap microprocessor xtal.

tnx de va3rr
--
73 de va3rr/aa8lu
http://www.qsl.net/va3rr

4021. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 18:03:16 UTC
From: Jason <kc7eip_nospam@shaw.ca>
Message-ID: <EpPD9.866040$v53.32341949@news3.calgary.shaw.ca>
Source record: 39733

Well i was intending on building A Cw only at qrp levels.. But as I have found out that my concepts although not to far fetched :) are a bit costly in making them functional. Ah why can't things just work how you imagined them to :).. stupid physics... But in the coarse of working things out i did find a design that i am impressed with and hopefully plan to duplicate the 2n2/40...

"N2EY" <N2EY@AOL.COM> wrote in message
news:c2356669.0211191244.604e5d5@posting.google.com...
> "Jason" <kc7eip_nospam@shaw.ca> wrote in message
news:<tMwz9.775668$Ag2.26874233@news2.calgary.shaw.ca>...
> > Well i am in the process of designing my own 40 meter txcvr.
>
> Cool!
>
> What power level and modes?
>
> 73 de Jim, N2EY

4022. Re: Using fundamental xtals for overtones

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 18:30:07 UTC
From: Bill M <"exray\\@n-o- .caribe.net>">
Message-ID: <utvi9dpopk2v74@corp.supernews.com>
Source record: 39735

Russ Renaud wrote:
> If one were to use a fundamental xtal in an overtone
> oscillator circuit, other than the frequency being offset
> somewhat, would there be any difference in it's operation
> w.r.t. a true overtone xtal?
>
> I looking to build a reference oscillator, but it need
> only be within a Mhz or two of 135 MHz, so I'm wondering
> if I can use a cheap microprocessor xtal.
>
> tnx de va3rr
> --
> 73 de va3rr/aa8lu
> http://www.qsl.net/va3rr

I've got some surplus xtals marked 137.500 if that will do you any good.
I have no idea of their cut, etc. They are pulls from Cable TV
modulators.
I'll be happy to send you one if you pass along your address.
-Bill WX4A
exray @t caribe.net

4023. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 18:41:10 UTC
From: Jason <kc7eip_nospam@shaw.ca>
Message-ID: <aZPD9.12420$ea.345671@news2.calgary.shaw.ca>
Source record: 39736

Well I'd like to thank everyone for their Help.. I've learned quite a bit from every one over the past couple of days..(making sure to save all the posts just incase i forget a tidbit of info).. All the links and Data have been really helpful... So now I'm stuck with the problem... In wading through all the info I've come across the 2n2/40..Nice looking setup and easy enough for me to reproduce (hopefully) so i may be building that as my Christmas present for myself I got side tracked from my initial task of designing my own txcvr.. :)... but now that i am back on track for now here is what I have concluded so far..

1.) Going from a 10k 10 turn pot to a Microcontroler adjusted voltage is not as easy or as cheap as i thought it would be.
2.) Tuning resolution is sacrificed for price reduction.
3.) There are 800 ways to skin a cat :)
4.) It's cheaper to use a reversevoltage diode then to buy all new parts when you hookup power backwards. well mostly new parts any way.. from XYL " Hey honey what's that smell??"
5.) I love this hobby.

"Dan Tayloe" <dtayloe@cox.net> wrote in message news:3DDF8655.7C802D86@cox.net...
> The IP2 dynamic range for the Norcal 30 prototype has been measured at
> 104 db, which compares favorably with the top two current best
> receviers, the K2 at 101 db, or the FT-1000MP at 94 db (data taken from
> the ARS review of the K2).
>
> Unlike many other DC rigs that I have built before, I have never heard
> demodulated SWBC due to front end overload when using this arrangement,
> which was indeed a pleasant surprise.
>
> - Dan, N7VE
>
> Roy Lewallen wrote:
> >
> > Just a brief comment. While IP3 is as important for DC receivers as for
> > superhets, second order distortion (or imbalance, or common mode
> > susceptibility or conversion) can easily be the limiting factor in DC
> > receiver performance and usefulness. But because of the preponderance of
> > superhets, this characteristic is seldom even mentioned, let alone
> > evaluated. The result can easily be a DC receiver that looks fantastic
> > on laboratory IP3 tests but that's unusable because of a constant
> > jumbled background (or foreground) din of demodulated AM. It's not a
> > little, minor effect. It's something that requires at least as much
> > attention as, and probably more attention than, IP3 in considering mixer
> > choices. And it can present at least as great a challenge to overcome.

> >
> > Roy Lewallen, W7EL

4024. Guts of an IC-45?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 18:52:16 UTC
From: hollandguy@aol.com
Message-ID: <20021123135216.05656.00000106@mb-df.aol.com>
Source record: 39737

Does anyone know where the backup battery is in the Icom IC-45 UHF radio? My manual does not show where it is, and I can't spot it by taking the covers off.

Thanks very much.
Max

4025. Re: Guts of an IC-45?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 19:34:08 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <QKQD9.22294$vM1.1603654@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39738

I don't think that this unit has a backup battery. If it is anything like the IC-25, you need to have it hooked up to 12V all the time in order to keep the memories.

Pete

4026. VFO Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 19:48:26 UTC
From: KU4YP <ku4yp@earthlink.net>
Message-ID: <eYQD9.6285$It3.589986@newsread2.prod.itd.earthlink.net>
Source record: 39739

hello all,

have a question. i am putting together a novice AM/CW station here (knightkit t-60/r-55a) just for straight key nights and wanting to play am radio (plus, i have not even begun to gather parts for my 813's driving 813's tx, but that is another story.). anyway, question is, i have a siltronix model 90 vfo that i have had for some time and do not use. i was looking for a vfo for the t-60 and thought, why can't i mod the siltronix vfo for the ham bands. i have a few 243 crystals around, but would like vfo coverage. wanted 5 band coverage 80-10, no warc.

has anyone ever done this? or am i venturing into stupid here?

thanks in advance.

--
73 de KU4YP "There is no spoon....."
Michael Prevatt
Willow Oak, Florida
Homepage: http://home.earthlink.net/~ku4yp

4027. Re: VFO Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 20:07:43 UTC
From: Bill M <"exray\\@n-o- .caribe.net>">
Message-ID: <utvo0gdjd6qac0@corp.supernews.com>
Source record: 39740

KU4YP wrote:
> hello all,
>
> have a question. i am putting together a novice AM/CW station here
> (knightkit t-60/r-55a) just for straight key nights and wanting to play am
> radio (plus, i have not even begun to gather parts for my 813's driving
> 813's tx, but that is another story.). anyway, question is, i have a
> siltronix model 90 vfo that i have had for some time and do not use. i was
> looking for a vfo for the t-60 and thought, why can't i mod the siltronix
> vfo for the ham bands. i have a few 243 crystals around, but would like vfo
> coverage. wanted 5 band coverage 80-10, no warc.
>
> has anyone ever done this? or am i venturing into stupid here?
>
> thanks in advance.

I'm not exactly sure but I think the Siltronix VFO would have a 5 or 6
Mhz output. You could probably push it up to 7 without much ado but to
get it down to 3.5 might take some more serious piddling.
I'm getting ready to perform the same surgery on an old Galaxy VFO.
-Bill M

4028. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 20:27:33 UTC
From: averyfineman@aol.com
Message-ID: <20021123152733.25964.00000742@mb-fg.aol.com>
Source record: 39741

In article <3DDF8655.7C802D86@cox.net>, Dan Tayloe <dtayloe@cox.net> writes:

>The IP2 dynamic range for the Norcal 30 prototype has been measured at
>104 db, which compares favorably with the top two current best
>receviers, the K2 at 101 db, or the FT-1000MP at 94 db (data taken from
>the ARS review of the K2).
>
>Unlike many other DC rigs that I have built before, I have never heard
>demodulated SWBC due to front end overload when using this arrangement,
>which was indeed a pleasant surprise.

I would be very interested in some stage-by-stage analysis
and spectral content in the NorCal 30 with high-level RF
input. The switched-multiplex mixer is certainly unique
enough...but it would appear (at first glance at a fuzzy
schematic) that successive audio stages would go into
limiting/saturation with high-level RF input. How would
that affect the preamp or phasing blocks insofar as
close, but not on-frequency RF input?

Len Anderson
retired (from regular hours) electronic engineer person

4029. Re: VFO Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-23 22:25:19 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <arov8ittm1@slb3.atl.mindspring.net>
Source record: 39742

KU4YP wrote:
> hello all,
>
> have a question. i am putting together a novice AM/CW station here
> (knightkit t-60/r-55a) just for straight key nights and wanting to play am
> radio (plus, i have not even begun to gather parts for my 813's driving
> 813's tx, but that is another story.). anyway, question is, i have a
> siltronix model 90 vfo that i have had for some time and do not use. i was
> looking for a vfo for the t-60 and thought, why can't i mod the siltronix
> vfo for the ham bands. i have a few 243 crystals around, but would like
vfo
> coverage. wanted 5 band coverage 80-10, no warc.
>
> has anyone ever done this? or am i venturing into stupid here?
>
> thanks in advance.

Generally speaking, you should expect reasonable frequency stability with the siltronix VFO which makes it tempting.

Personally, I'd suggest leaving it alone and mixing it with crystal oscillators to obtain the frequency ranges you need. Fooling with changing it's tuning range can work, but it can also be difficult to do on a commercial product. It would depend on the precise electrical and mechanical construction used by Siltronix.

True, there are a LOT of other approaches, some with very nice and clean outputs, but they usually involve a great deal more complex circuitry. Phase lock loops, Etc.

A simple mixer, using a double balanced diode mixer to reduce spurs, and some filtering after the mixer is pretty straightforward and would allow you to make 5 band coverage and so on with identical tuning stability and so on for each band.

Not only that, but adding a few other crystals to generate the proper frequencies would allow you to feed the Tx too eventually, and so you would have a transciever, of sorts.

Jim Pennell
N6BIU

4030. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-24 00:00:41 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3DE016DE.7C283ABB@cox.net>
Source record: 39743

The saving grace for this design is that the detector, besides having
only 1 db of loss, (which gives a 5 db sensitivity advantage over a
normal diode mixer), also has the advantage of performing its own
detection filtering. I.e., it has a settable bandpass detection
characteristic. In addition, the audio preamps have simple R/C
rolloff. The preamp rolloff and detection bandwidth has been optimized
for cw. That is it for filtering and gain until the R/C active filter.
The phasing stuff is unity gain.

Overall, it works well, even close in.

The differential properties of the post detector audio preamplifiers
also helps keeps out a lot of common mode crud. No special filtering is
required beyond what is normally done for power supply decoupling.

Low noise audio op-amps are very plentiful.

The design runs off 12v, which is converted to 5v and 3v by a switcher
chip for internal use.

- Dan, N7VE

Avery Fineman wrote:
>
> In article <3DDF8655.7C802D86@cox.net>, Dan Tayloe <dtayloe@cox.net> writes:
>
> >The IP2 dynamic range for the Norcal 30 prototype has been measured at
> >104 db, which compares favorably with the top two current best
> >receviers, the K2 at 101 db, or the FT-1000MP at 94 db (data taken from
> >the ARS review of the K2).
> >
> >Unlike many other DC rigs that I have built before, I have never heard
> >demodulated SWBC due to front end overload when using this arrangement,
> >which was indeed a pleasant surprise.
>
> I would be very interested in some stage-by-stage analysis
> and spectral content in the NorCal 30 with high-level RF
> input. The switched-multiplex mixer is certainly unique
> enough...but it would appear (at first glance at a fuzzy
> schematic) that successive audio stages would go into
> limiting/saturation with high-level RF input. How would
> that affect the preamp or phasing blocks insofar as
> close, but not on-frequency RF input?
>
> Len Anderson
> retired (from regular hours) electronic engineer person

4031. FS: JENSEN 8" ROUND SPEAKER

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-24 00:06:54 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <yKUD9.28721$hK4.2475457@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39744

Near mint Jensen 8" speaker + other goodies. On ebay under seller
heytubeguy

4032. Re: Using fundamental xtals for overtones

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-24 00:21:00 UTC
From: averyfineman@aol.com
Message-ID: <20021123192100.10767.00001151@mb-fh.aol.com>
Source record: 39745

In article <arofr6$462$1@freenet9.carleton.ca>, ae517@FreeNet.Carleton.CA (Russ Renaud) writes:

>If one were to use a fundamental xtal in an overtone
>oscillator circuit, other than the frequency being offset
>somewhat, would there be any difference in it's operation
>w.r.t. a true overtone xtal?

That depends on the quartz crystal cut. "Overtone" crystals have a more pronounced harmonic vibration characteristic than more conventional cuts. There's a bit more on this at the crystal producers' websites but they don't appear to characterize the "cheap microprocessor crystals" for overtone operation.

>I looking to build a reference oscillator, but it need
>only be within a Mhz or two of 135 MHz, so I'm wondering
>if I can use a cheap microprocessor xtal.

I would suggest two possibilities: A Colpitts type with collector tuned to second or third harmonic of crystal fundamental, probably with a tuned buffer following it to boost harmonic level...or any fundamental oscillator with a multiplier stage following.

Since Jameco still sells the Motorola MC145151 PLL chip, that and a prescaler chip at the input would allow you to set the exact frequency of a VCO driven by the loop filter. More complicated that way, but frequency will be held very well to what you might want.

Len Anderson
retired (from regular hours) electronic engineer person

4033. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-24 01:37:59 UTC
From: John Patterson <jwp1775@earthlink.net>
Message-ID: <X3WD9.6434$OZ4.673723@newsread1.prod.itd.earthlink.net>
Source record: 39746

+40 dBm = 10 watts. That's a lot of power when your talking about a front end. All I can say is, "Wow!".

"Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message news:NjH1R+DBPiz9EAnN@ifwtech.co.uk...
> Eddi wrote:
> >In <20021109100717.00112.00000330@mb-fz.aol.com> n2ey@aol.com (N2EY) writes:
> >
> >> [...]
> >> Argonaut V is obviously meant to compete with the K2
> >
> > The Argonout V is meant to compete with the SGC-2020.
> >
> >> and Orion is obviously meant to compete with the FT-1000.
> >
> > The FT-1000 would find it very hard to compete with a K2.
>
> Speaking of good receivers, take a look at the CDG2000 project, at
> www.warc.org.uk
>
> The architecture is very similar to the K2 - ham-band only and single
> conversion to 9MHz - but there are some significant refinements
> including G3SBI's H-mode FET mixer and VCO with very low phase noise.
> The resulting IP3 is around +40dBm (yes, plus forty!) and noise
> degradation is limited by other people's transmitted noise. In other
> words, the receiver front-end performance is no longer a limiting factor
> in what you can hear. This is probably *the* best amateur HB receiver
> front-end around today.
>
> Parts of the transceiver are "standard", for example the highly
> respected Bill Carver IF strip (they developed a new PC board for it,
> which may be useful for other projects). Also the transmitter is pretty
> ordinary as yet... though in time that may change.
>
> The big problem, of course, is that even when PC boards become
> available, it's is still a major HB project. You have to build your own
> case, and performance will depend on how successfully you shield some of
> the boards.
>
> Also the control interface is under continuous development. It is based
> on i2c protocols, so it's very adaptable... but only if you have the
> programming skill. All the code is published, but if you want something
> different from what's already available, you have to either program it

> yourself or persuade the main software developer that your changes would
> be useful to a lot of other people.
>
> Some examples of the CDG2000 have an extremely basic "programmer's"
> control interface which is not very practical on-air, while others are
> more operator-friendly but also require more controls, wiring and
> programming. DSP is coming... but that will require some further
> rebuilding as the DSP progressively replaces the existing hardware.
>
> As with any HB project, the great dread is that by the time you've built
> it, the main thing you've gained is the knowledge of how to do it
> *properly* next time... which you simply cannot face!
>
> Interestingly, the CDG developers say "If you want a transceiver that's
> darn good (through not quite as good as ours) because you mostly want to
> *use* it, then get a K2."
>
> --
> 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> Editor, 'The VHF/UHF DX Book'
> http://www.ifwtech.co.uk/g3sek
>

4034. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-24 03:25:41 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3DE046EB.DFD79D21@cox.net>
Source record: 39747

+40 dbm does not mean what you think it does. Measure the 3 db S+N/N MDS sensitivity of the receiver. Take two rf signal generators (nominally 20 and 40 KHz away from the receiver frequency) and increase both of their power to the point that a 3 db MDS IP3 spur signal is produced. To calculate IP3:

IP3 = 1.5*(Gen power - MDS) + MDS

If the MDS were -135 dbm and IP3 was +40 dbm, the two generators would produce a 3 db MDS spur at a signal level of only -18.3 dbm. This is of course no where near +40 dbm. I doubt the receiver front end could really survive 10 watts into the front end.

This is not to minimize the fact that an IP3 of +40 dbm is pretty good, it is just that it not obvious what that really means. It is certainly not obvious that two signals at -18.3 dbm could create a receiver spur in a radio with an IP3 of +40 dbm.

It is really, really hard to measure +40 IP3! I use a pair of HP8640b signal generators to make my measurements, and on the -20 dbm range the outputs of the generators start creating their own IP3 IM products. I can readily measure IP3 of +18.75 dbm (pushing the -30 dbm range to +3 or -27 dbm, and taking into account the 6 db loss I have in the splitter I use to combine the two generators).

In addition the signal generator need to be really, really clean or the noise skirts of the generator signal will start swamping the receiver. A HP8640b is pretty clean.

In my case, for a NC30, an IP3 of +18.75 dbm means two signals of strength -33 dbm each, creating an IP3 spur of -136.5 dbm when the two carriers are placed 5 and 10 KHz lower than the received frequency. Again, +19 dbm IP3 would not lead you to believe that two signals of -33 dbm would be capable of producing a receiver spur.

- Dan, N7VE

John Patterson wrote:
>
> +40 dBm = 10 watts. That's a lot of power when your talking about a front
> end. All I can say is, "Wow!".
>
> "Ian White, G3SEK" <G3SEK@ifwtech.co.uk> wrote in message
> news:NjH1R+DBPiz9EAnN@ifwtech.co.uk...
> > Eddi wrote:
> > >In <20021109100717.00112.00000330@mb-fz.aol.com> n2ey@aol.com (N2EY)
> writes:

> > >
> > >> [...]
> > >> Argonaut V is obviously meant to compete with the K2
> > >
> > > The Argonout V is meant to compete with the SGC-2020.
> > >
> > >> and Orion is obviously meant to compete with the FT-1000.
> > >
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> > www.warc.org.uk
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> > The architecture is very similar to the K2 - ham-band only and single
> > conversion to 9MHz - but there are some significant refinements
> > including G3SBI's H-mode FET mixer and VCO with very low phase noise.
> > The resulting IP3 is around +40dBm (yes, plus forty!) and noise
> > degradation is limited by other people's transmitted noise. In other
> > words, the receiver front-end performance is no longer a limiting factor
> > in what you can hear. This is probably *the* best amateur HB receiver
> > front-end around today.
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> > Parts of the transceiver are "standard", for example the highly
> > respected Bill Carver IF strip (they developed a new PC board for it,
> > which may be useful for other projects). Also the transmitter is pretty
> > ordinary as yet... though in time that may change.
> >
> > The big problem, of course, is that even when PC boards become
> > available, it's is still a major HB project. You have to build your own
> > case, and performance will depend on how successfully you shield some of
> > the boards.
> >
> > Also the control interface is under continuous development. It is based
> > on i2c protocols, so it's very adaptable... but only if you have the
> > programming skill. All the code is published, but if you want something
> > different from what's already available, you have to either program it
> > yourself or persuade the main software developer that your changes would
> > be useful to a lot of other people.
> >
> > Some examples of the CDG2000 have an extremely basic "programmer's"
> > control interface which is not very practical on-air, while others are
> > more operator-friendly but also require more controls, wiring and
> > programming. DSP is coming... but that will require some further
> > rebuilding as the DSP progressively replaces the existing hardware.
> >
> > As with any HB project, the great dread is that by the time you've built
> > it, the main thing you've gained is the knowledge of how to do it
> > *properly* next time... which you simply cannot face!
> >
> > Interestingly, the CDG developers say "If you want a transceiver that's

> > darn good (through not quite as good as ours) because you mostly want to
> > *use* it, then get a K2."
> >
> > --
> > 73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
> > Editor, 'The VHF/UHF DX Book'
> > http://www.ifwtech.co.uk/g3sek
> >

4035. Re: Radio Frequency Choke manufacturers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-24 03:36:32 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <7snd6sJAlE49EwoV@fslife.co.uk>
Source record: 39748

>Hammond makes some RF chokes.
Thanks Peter.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

4036. Re: Freq counter kits?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-24 04:26:50 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <rj2utuo1bi5tgcurejeb1iop02t501uki1@4ax.com>
Source record: 39749

On Thu, 21 Nov 2002 12:24:35 -0600 Bob Liesenfeld
<robert.liesenfeld@neicoltech.org> wrote:

> Who makes frequency counter kits these days? I'm looking for one
>that does, say up to 500MHz, and has a 7 seg LED or LCD type display.

You might well be able to build one, but I have several made by H-P
which are beautiful little units with greater accuracy and sensitivity
than you could ever hope to make on your own. Frequencys up to 525MHz
are available, but price goes up with frequency, from $50 to $120.

Email me if you are interested in specifics.

-

Jim Adney jadney@vwtype3.org
Madison, Wisconsin USA

4037. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-24 13:24:26 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <K9+UGsHKMN49EAvF@ifwtech.co.uk>
Source record: 39750

Dan Tayloe wrote:
>+40 dbm does not mean what you think it does. Measure the 3 db S+N/N
>MDS sensitivity of the receiver. Take two rf signal generators
>(nominally 20 and 40 KHz away from the receiver frequency) and increase
>both of their power to the point that a 3 db MDS IP3 spur signal is
>produced. To calculate IP3:
>
>IP3 = 1.5*(Gen power - MDS) + MDS
>
>If the MDS were -135 dbm and IP3 was +40 dbm, the two generators would
>produce a 3 db MDS spur at a signal level of only -18.3 dbm. This is of
>course no where near +40 dbm. I doubt the receiver front end could
>really survive 10 watts into the front end.
>
That's correct - IP3 is not a power *handling* level. The higher the
figure, the more obvious this becomes!

>This is not to minimize the fact that an IP3 of +40 dbm is pretty good,
>it is just that it not obvious what that really means. It is certainly
>not obvious that two signals at -18.3 dbm could create a receiver spur
>in a radio with an IP3 of +40 dbm.
>
Perhaps the best way to use IP3 figures is to note that most commercial
rigs don't manage more than the low +20s. So a +40dBm figure gives you
about
(2/3)*(40 - 20something) = 10-12dB more "headroom" in the signal levels
it can handle without noticeable IMD.

G3RZP wrote an interesting article in QEX for May/June 2002 reporting
measurements of strong signal levels around the 40m band in Europe (the
worst case he could find), and then worked out the IP3 performance
required to prevent IMD appearing in the amateur band.

At many times of day you might theoretically need an IP3 in the low to
mid +30s - but that is in order to prevent IMD appearing above the
receiver's MDS. The rigs with IP3s in the low +20s survive because the
IMD is masked by the "atmospheric" noise on the lower bands.

Equally important is the IMD between strong amateur signals, close to
the weak one you want to hear. Rigs like the K2 and CDG2000 preserve
their good IMD performance close-in, because they convert straight to a
narrow IF filter. That's where they score heavily over the commercial
rigs that up-convert to a wide first IF (typically 10-20kHz) - inside
this bandwidth, IP3 often degrades to about *minus* 20dBm.

Two nights of CQWW CW on 40m have just reminded me of this! With a typical +20dBm commercial rig, there was just the odd trace of BC IMD here and there in the bottom end; not strong enough to cause any trouble in practice. But the close-in IMD between the biggest CW signals sometimes made it hard going.

G3RZP also noted the value of an input attenuator, which effectively shifts the whole dynamic range upward. This helps both the BC and close-in IMD. Unfortunately the single 20dB step available in most mid-price rigs is way too big (wonder why - maybe it's the right value in JA?). I've modified both my rigs to 10dB, which reduces the IMD by 20dB without making the receiver too deaf, so works out pretty well in practice; but much finer steps would be desirable.

>It is really, really hard to measure +40 IP3!

Fortunately the CDG2000 measurements have been repeated by "Our Mutual Friend" in the USA, so the claimed performance is genuine.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4038. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-24 14:27:08 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <a_-cnRogptaUbX2gXTWc3g@ctc.net>
Source record: 39751

If +40 dbm does not mean 40 db above one milliwatt then why is the added and not just *40 db ? YOu have to refferance a db to something to have any meaning and normally the small m means one milliwatt.

If they want to use one generator at -130 dbm and another + 40 db from that , do not use +40 dbm, just use +40 db or -90 dbm.

"Dan Tayloe" <dtayloe@cox.net> wrote in message news:3DE046EB.DFD79D21@cox.net...
> +40 dbm does not mean what you think it does. Measure the 3 db S+N/N
> MDS sensitivity of the receiver. Take two rf signal generators
> (nominally 20 and 40 KHz away from the receiver frequency) and increase

4039. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-24 15:07:36 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <ZTCdna4fWO4YZH2gXTWc3Q@ctc.net>
Source record: 39752

OOPS. Left out the "m" in that sentence between the words "why" and "is".

"> If +40 dbm does not mean 40 db above one milliwatt then why is the added
and
> not just *40 db ? YOu have to refferance a db to

4040. SMA connector adaptor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-24 16:34:15 UTC
From: jimnluna <jimnlunax@intergate.com>
Message-ID: <ub7E9.4188$0n4.729961@newsfeed.slurp.net>
Source record: 39753

Best place to get these new or used
tnx
N5BLQ

4041. WTB: PL Tone Encoder Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-24 18:56:39 UTC
From: hollandguy@aol.com
Message-ID: <20021124135639.06788.00000133@mb-dd.aol.com>
Source record: 39754

Need a PL tone encoder board for my old, mobile FM rig.

Thanks.
73 de Jeff, WK3U
hollandguy@aol.com

4042. Re: SMA connector adaptor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-24 19:00:31 UTC
From: "Mike G." <nospam@my.email.address>
Message-ID: <6682uu85gn63ivth40an3dsdpb5ugn67pr@4ax.com>
Source record: 39755

On Sun, 24 Nov 2002 10:34:15 -0600, "jimnluna" <jimnlunax@intergate.com>
wrote:

>Best place to get these new or used
>tnx
>N5BLQ

I use http://www.pasternack.com/ on occation for my needs. Only sell new,
but cheaper than most. Great customer service. They have both "standard"
connectors and also ones that are designed for very high microwave freqs.
Just depends on how much you want to spend.

Cheers!
Mike - KD6PKJ

4043. Re: need an elmer...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-24 19:17:35 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <jB9E9.29879$hK4.2585071@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39756

That scope will do you little good at 2 meters...

--
||||||||||||||||||||||||||||||||||||||||
Brian Griffey

View the SkyWave Amplifier brochure at:
http://home.att.net/~briangriffey/SkyWave2879AB.pdf
||||||||||||||||||||||||||||||||||||||||

"Tazanator" <tazanator1@hotmail.com> wrote in message
news:Hz0x9.230104$%d2.76301@sccrnsc01...
> okay got a ociliscopr (philips PM3200) does 0-10Mhz was told I can
check
> output and signal strength on it ... how (I am tech so my freq's are 50
and
> up ... mostly 2 meters...)
> KB9YMX
>
>

4044. Re: Radio Frequency Choke manufacturers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-24 19:26:07 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <jJ9E9.29889$hK4.2585178@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39757

http://www.jwmiller.com/

http://www.gowanda.com/

http://www.fastron.de/home_eng.htm

--
||||||||||||||||||||||||||||||||||||||||
Brian Griffey

View the SkyWave Amplifier brochure at:
http://home.att.net/~briangriffey/SkyWave2879AB.pdf
||||||||||||||||||||||||||||||||||||||||

4045. Re: Data on Diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-24 19:30:06 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <2N9E9.29892$hK4.2585299@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39758

Try snooping around at http://www.irf.com/

--
||||||||||||||||||||||||||||||||||||||||
Brian Griffey

View the SkyWave Amplifier brochure at:
http://home.att.net/~briangriffey/SkyWave2879AB.pdf
||||||||||||||||||||||||||||||||||||||||

"starsekr" <starsekr@aol.com> wrote in message
news:f2828edc.0211221715.57354f7b@posting.google.com...
> "Hugh Colborn" <dontspamstockden@tiscali.co.uk> wrote in message
news:<3dd4b2ed_1@mk-nntp-2.news.uk.tiscali.com>...
> > "Robert Offer" <robert@g1zjp.freeserve.co.uk> wrote in message
> > news:aqrnvj$p69$1@news5.svr.pol.co.uk...
> > > Hi all,
> > > I have some stud mounted diodes - reference CV7160 (? manuf IOR) and
> > > CV7262. >

4046. Re: SMA connector adaptor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-24 21:39:41 UTC
From: jimnluna <jimnlunax@intergate.com>
Message-ID: <PFbE9.4887$0n4.845388@newsfeed.slurp.net>
Source record: 39759

tHANKS
Jim

"Mike G." <nospam@my.email.address> wrote in message
news:6682uu85gn63ivth40an3dsdpb5ugn67pr@4ax.com...
> On Sun, 24 Nov 2002 10:34:15 -0600, "jimnluna" <jimnlunax@intergate.com>
> wrote:
>
> >Best place to get these new or used
> >tnx
> >N5BLQ
>
> I use http://www.pasternack.com/ on occation for my needs. Only sell new,
> but cheaper than most. Great customer service. They have both "standard"
> connectors and also ones that are designed for very high microwave freqs.
> Just depends on how much you want to spend.
>
> Cheers!
> Mike - KD6PKJ
>

4047. Icom IC32 E

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-24 22:29:01 UTC
From: Peter Pohlmann <peter@e-partner.com>
Message-ID: <jocE9.268$l45.166127@news20.bellglobal.com>
Source record: 39760

Hello Friends,

I have a European Icom 32E . The bad thing is that I live in North America
and
this hand held can only do 12.5 khz steps. I would like to use it as a
packet radio
transceiver. Is there any way to get it to a 5 khz step ?

Thanks
VE3POH

4048. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-24 23:03:41 UTC
From: John Patterson <jwp1775@earthlink.net>
Message-ID: <hVcE9.8090$lt3.806478@newsread2.prod.itd.earthlink.net>
Source record: 39761

It's a fact -- dBm is an absolute power measurement. 0 dBm = 1 mW. 30 dB above that, +30 dBm = 1 watt. 10 dB above that is +40 dBm, which is and always has been just another way to say 10 watts.

I agree with Ralph; sounds like the rx measurement in question should be in dB, which is just a relative measurement.

I have seen this parameter listed at levels as high as +70 dBm -- totally ridiculous. Why is this parameter measured in dBm?

John

"Ralph Mowery" <rmowery@ctc.net> wrote in message news:ZTCdna4fWO4YZH2gXTWc3Q@ctc.net...
> OOPS. Left out the "m" in that sentence between the words "why" and "is".
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> "> If +40 dbm does not mean 40 db above one milliwatt then why is the added
> and
> > not just *40 db ? YOu have to refferance a db to
>
>
>

4049. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 00:00:46 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <OKdE9.30279$hK4.2614878@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39762

Another way of measuring IP3, as stated in the Mini-Circuits RF/IF Designer's Handbook is to use the formula,
IP3 = (P + A/2), where P is the combined power coming out of the two RF generators, and A is the spread between the desired tone and the IM sidebands. To do this properly, you really need to have some sort of isolation between the two RF sources, either by using attenuators or circulators. In order to override these system losses, you will need some sort of linear amplifier at the output of each of the RF generators. Finally, the combined RF power at the mixer input must be below the compression point of the mixer. For a Level 7 mixer, -20dBm would be an ok level. With some of the Mini-Circuits mixers, they would start to compress at -10 to -15dBm. I remember trying to characterize some of these mixers for SSB conversion loss, and didn't understand why the measured loss was higher than the manufacturer's stated loss.
Another interesting thing that I ran into when I was making some desense measurements on a narrowband system. The desired signal was at -140dBm, while the interfering signal level was varied, depending on frequency separation. The interesting thing was that, even with a 400MHz spread, there was enough broadband noise from the signal sources (8640Bs and 8642Bs) that I had to use some sort of tunable filter at the output of each generator. I had never realized before this point at time that the noise could be that far removed from the fundamental output of the RF generator. Finally, I didn't mention this alternate technique to minimize Mr.Tayloe's method; I think that the method that I use to characterize IP3 might be more of a "quick and dirty" approach. Thanks to you, Mr. Tayloe, for the insight that you provide to this group!

Pete KE9OA

4050. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 00:03:12 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3DE168F6.BCB9C5F9@cox.net>
Source record: 39763

IP3 is a mathematical concept. The term is called "third order intercept". IP3 spurs rise 3 db for every one db increase in the two off frequency, high level signals. At such a rate, the spur should eventually catch up in size with the interfering signals themselves. This "crossing condition" is what IP3 describes.

IP3 indicates this "crossing point". However, what we as hams what to know is what kind of signals can my receiver tolerate before I get spurious signals in my receiver. This is an entirely different question.

Rather than talk about IP3, which gives no real feel of the actual size of the signals that will cause MDS IP3 spurs, I think that IP3 dynamic range (or "spurious free dynamic range") is a better measure. This gives the span from the MDS (minimum discernible signal) of the receiver to the signal level that will cause IP3 spurs at an MDS level. If you tell me that my receiver has a IP3DR of 100 db, and that my sensitivity (MDS) is -135 dbm, then I know that I will get spurious responses in my receiver if the off frequency signals get above -35 dbm (100 - 135).

Although IP3DR seems to be a more usable number, it also does not tell the entire story. IP3 is usually measured with two strong signals at 20 and 40 KHz away from the desired frequency, producing a IP3 spur on frequency. However, in a contest situation, the "big guns" are usually up close an personal, and not 20 and 40 KHz away.

I like the ARRL swept IP3 dynamic range measurement, since it shows how resilient a receiver is to big signals close in. It is much, much easier to get a good IP3DR rating at 20 and 40 KHz away (or at 50 and 100 KHz away as some manufacturers rate their stuff), than it is to get a good rating at only 2 and 4 KHz away. The IP3 performance of all receivers get worse as the signals get close in. However, some receivers get worse a lot faster than others.

I know what a K2 does close in with IP3. It would be nice to hear how the CDG2000 performs close in as well.

The close in IP3 tests better reflect contest or DX pileup conditions. It is hard to work weak stations if it is buried in a roar of high level IP3 spurs.

John Patterson wrote:
>
> It's a fact -- dBm is an absolute power measurement. 0 dBm = 1 mW. 30 dB
> above that, +30 dBm = 1 watt. 10 dB above that is +40 dBm, which is and
> always has been just another way to say 10 watts.

>
> I agree with Ralph; sounds like the rx measurement in question should be in
> dB, which is just a relative measurement.
>
> I have seen this parameter listed at levels as high as +70 dBm -- totally
> ridiculous. Why is this parameter measured in dBm?
>
> John
>
> "Ralph Mowery" <rmowery@ctc.net> wrote in message
> news:ZTCdna4fWO4YZH2gXTWc3Q@ctc.net...
> > OOPS. Left out the "m" in that sentence between the words "why" and
> "is".
> >
> > "> If +40 dbm does not mean 40 db above one milliwatt then why is the
> added
> > and
> > > not just *40 db ? YOu have to refferance a db to
> >
> >
> >

4051. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 00:07:22 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <_QdE9.30289$hK4.2615842@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39764

Sorry folks, I made a mistake on that last formula. P should have been stated as the combined power of the two RF Generators at the RF input port of the DUT, not the combined power coming out of the generators themselves. There are test setup losses that need to be subtracted as a Calibration Factor. Must be late in the day!

Pete KE9OA

4052. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 00:11:44 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <CH82oQBArW49EA92@ifwtech.co.uk>
Source record: 39765

John Patterson wrote:
>It's a fact -- dBm is an absolute power measurement. 0 dBm = 1 mW. 30
>dB above that, +30 dBm = 1 watt. 10 dB above that is +40 dBm, which is
>and always has been just another way to say 10 watts.
>
>I agree with Ralph; sounds like the rx measurement in question should
>be in dB, which is just a relative measurement.
>
IP3 is an *absolute* power level, so dBm is correct.

On the other hand, the so-called "intermodulation-free dynamic range" is *relative* to the receiver's noise floor. Both ends of the dynamic range are absolute power levels measured in dBm, so the difference is in plain dB.

>I have seen this parameter listed at levels as high as +70 dBm --
>totally ridiculous.

Not today - the cellular industry is crazy about low intermod levels (because it creates QRM between channels) so everything gets characterized. Component such as connectors cause "almost no" IMD, so they have these very high IP3 levels... which, as Dan said, are a pig to measure.

>Why is this parameter measured in dBm?
>
Industry standard.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4053. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 00:20:10 UTC
From: John Patterson <jwp1775@earthlink.net>
Message-ID: <_0eE9.7860$OZ4.850232@newsread1.prod.itd.earthlink.net>
Source record: 39766

Tnx, Dan, for your explanation of "IP3".

I remember when DeMaw was doing the heavy lifting on RX performance measurements. If I recall correctly, he was the one who picked the 20 & 40 KHZ spacings. I agree that they do not represent real world operating conditions. My theory has always been that RX's in DeMaw's time were so poor that he had to use 20/40 to get reasonable numbers! :-)

But the current reality is different. Amplifiers and systems are better, signal sources are loaded with phase noise, limiting their usefulness, and we are stating theoretical results (IP3) in units that make no sense in the real world. Is there a movement to change this situation? Maybe use clean analog oscillators? Measure a different parameter than IP3? Is the ARRL on board with this, or are they sticking to DeMaw's system?

Again, tnx.

"Dan Tayloe" <dtayloe@cox.net> wrote in message
news:3DE168F6.BCB9C5F9@cox.net...
> IP3 is a mathematical concept. The term is called "third order
> intercept". IP3 spurs rise 3 db for every one db increase in the two
> off frequency, high level signals. At such a rate, the spur should
> eventually catch up in size with the interfering signals themselves.
> This "crossing condition" is what IP3 describes.
>
> IP3 indicates this "crossing point". However, what we as hams what to
> know is what kind of signals can my receiver tolerate before I get
> spurious signals in my receiver. This is an entirely different
> question.
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> Rather than talk about IP3, which gives no real feel of the actual size
> of the signals that will cause MDS IP3 spurs, I think that IP3 dynamic
> range (or "spurious free dynamic range") is a better measure. This
> gives the span from the MDS (minimum discernible signal) of the receiver
> to the signal level that will cause IP3 spurs at an MDS level. If you
> tell me that my receiver has a IP3DR of 100 db, and that my sensitivity
> (MDS) is -135 dbm, then I know that I will get spurious responses in my
> receiver if the off frequency signals get above -35 dbm (100 - 135).
>
> Although IP3DR seems to be a more usable number, it also does not tell
> the entire story. IP3 is usually measured with two strong signals at 20
> and 40 KHz away from the desired frequency, producing a IP3 spur on
> frequency. However, in a contest situation, the "big guns" are usually
> up close an personal, and not 20 and 40 KHz away.
>

> I like the ARRL swept IP3 dynamic range measurement, since it shows how
> resilient a receiver is to big signals close in. It is much, much
> easier to get a good IP3DR rating at 20 and 40 KHz away (or at 50 and
> 100 KHz away as some manufacturers rate their stuff), than it is to get
> a good rating at only 2 and 4 KHz away. The IP3 performance of all
> receivers get worse as the signals get close in. However, some
> receivers get worse a lot faster than others.
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> I know what a K2 does close in with IP3. It would be nice to hear how
> the CDG2000 performs close in as well.
>
> The close in IP3 tests better reflect contest or DX pileup conditions.
> It is hard to work weak stations if it is buried in a roar of high level
> IP3 spurs.
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> John Patterson wrote:
> >
> > It's a fact -- dBm is an absolute power measurement. 0 dBm = 1 mW. 30 dB
> > above that, +30 dBm = 1 watt. 10 dB above that is +40 dBm, which is and
> > always has been just another way to say 10 watts.
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> > I agree with Ralph; sounds like the rx measurement in question should be
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> > dB, which is just a relative measurement.
> >
> > I have seen this parameter listed at levels as high as +70 dBm --
totally
> > ridiculous. Why is this parameter measured in dBm?
> >
> > John
> >
> > "Ralph Mowery" <rmowery@ctc.net> wrote in message
> > news:ZTCdna4fWO4YZH2gXTWc3Q@ctc.net...
> > > OOPS. Left out the "m" in that sentence between the words "why" and
> > "is".
> > >
> > > "> If +40 dbm does not mean 40 db above one milliwatt then why is the
> > added
> > > and
> > > > not just *40 db ? YOu have to refferance a db to
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> > >
>

4054. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 00:33:47 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <LdeE9.30334$hK4.2618667@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39767

That is one of the good things about a single conversion receiver, but it doesn't have much to do with whether the design is upconversion or not. The upconversion topology used in a dual or triple conversion receiver isn't the limiting factor, as much as the reciprocal mixing that can occur at the 2nd mixer and/or 3rd mixers in a multiple conversion system. Because the roofing filter at the 1st I.F. is approximately 15kHz wide, there is more signal power appearing at the 2nd mixer than if a 2.4kHz filter were used. The maximum system bandwidth is defined by the first selective filter in the signal chain; by using a narrow roofing filter, close-in IM performance will be better than if a wider filter were used. If the LO had no noise sidebands, this wouldn't be an issue. A couple of ways to improve the synthesizer are to use a very narrow crystal filter at the output of the reference oscillator to clean up its sidebands, and to use a Modulated Fractional N Divider. With an MFD type of synthesizer, close-in phase noise is very low, because the noise is translated out several hundred kHz.

Pete KE9OA

4055. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 01:28:40 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <O_OdndPteeyJFnygXTWcoQ@ctc.net>
Source record: 39768

I should have read the thread more carefully. That calculated IP3 is just that, a calculated value and not what the receiver is really hit with. It is only a calculated point from two differant slopes converging. I never did like the calculated values if you can not reach them or if the device will not take it to prove the calculations work.

> That's correct - IP3 is not a power *handling* level. The higher the
> figure, the more obvious this becomes!
>
> >This is not to minimize the fact that an IP3 of +40 dbm is pretty good,
> >it is just that it not obvious what that really means. It is certainly
> >not obvious that two signals at -18.3 dbm could create a receiver spur
> >in a radio with an IP3 of +40 dbm.

4056. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 02:48:31 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uu33tk1fad4j19@corp.supernews.com>
Source record: 39769

"John Patterson" <jwp1775@earthlink.net> wrote in message
news:_0eE9.7860$OZ4.850232@newsread1.prod.itd.earthlink.net...

> we are stating theoretical results (IP3) in units that make no sense in
the
> real world.

Maybe the IP3 numbers don't fit your idea of a meaningful number, but it is a useful number, one of several. A receiver with a good IP3 number is a whole bunch more pleasant to operate than one with a crummy IP3. Maybe it isn't easy to intuit what it should be from the number and no experience, but it is still a good, useful, number. And when coupled with just a little bit of experience, it tells a whole lot about a receiver. Not everything, the other measurements mean something, too.

Of course we can come up with better numbers, but one problem with 'better' is that, by definition, it's different. Until someone like ARS does the 'better' test on a whole range of rigs, it's usefulness is pretty limited.

..

4057. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 03:41:34 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3DE19C24.C722A3A5@cox.net>
Source record: 39770

Do not get me wrong. I like what the ARRL has done in performing swept IP3 dynamic range measurements. These graphs go a long way in showing what happens with strong, off frequency signals both far out and close up.

If I could change anything, in addition to the wide range swept IP3 dynamic range charts (+/- 100 Khz range?), I would like to see a separate chart that zoomed in and focused on the IP3 dynamic range performance at +/- 10 KHz and less. Although the further out spacings are important, the real world benefit in IP3 performance is in this "close in" range. If receivers can handle the close in stuff, the far out stuff will not be a problem.

- Dan, N7VE

John Patterson wrote:
>
> Tnx, Dan, for your explanation of "IP3".
>
> I remember when DeMaw was doing the heavy lifting on RX performance
> measurements. If I recall correctly, he was the one who picked the 20 & 40
> KHZ spacings. I agree that they do not represent real world operating
> conditions. My theory has always been that RX's in DeMaw's time were so poor
> that he had to use 20/40 to get reasonable numbers! :-)
>
> But the current reality is different. Amplifiers and systems are better,
> signal sources are loaded with phase noise, limiting their usefulness, and
> we are stating theoretical results (IP3) in units that make no sense in the
> real world. Is there a movement to change this situation? Maybe use clean
> analog oscillators? Measure a different parameter than IP3? Is the ARRL on
> board with this, or are they sticking to DeMaw's system?
>
> Again, tnx.
>

4058. Re: Icom IC32 E

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 06:26:10 UTC
From: "Gary P. Fiber" <foo@bar.invalid>
Message-ID: <1dg3uu43brapjjo52blnptrdbdh94qvind@4ax.com>
Source record: 39771

On Sun, 24 Nov 2002 17:29:01 -0500, "Peter Pohlmann"
<peter@e-partner.com> wrote:

>Hello Friends,
>
>I have a European Icom 32E . The bad thing is that I live in North America
>and
>this hand held can only do 12.5 khz steps. I would like to use it as a
>packet radio
>transceiver. Is there any way to get it to a 5 khz step ?
>
>Thanks
>VE3POH
>
In the North American version the IC-32AT there was a reset function
you could do to toggle 5 and 12.5 kHz tuning steps. I am not sure if
the European version can do the same.

In most cases Icom uses different cpu's or cpu diode matrixes for
their different versions. I once changed a W2A from European to North
American version and it did require the installation of two new cpu's.

Gary K8IZ

4059. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 06:42:09 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <g5f3uuosudagf0u7i0u9n2a1ba7vl8jalv@4ax.com>
Source record: 39772

On Mon, 25 Nov 2002 00:03:12 GMT, Dan Tayloe <dtayloe@cox.net> wrote:

>Rather than talk about IP3, which gives no real feel of the actual size
>of the signals that will cause MDS IP3 spurs,

The IP3 figures are easily comparable (provided that you can agree on if you are talking about input or output IP3 :-). You can also calculate the absolute level of the spur and relate it to the band noise (not just receiver noise).

> I think that IP3 dynamic
>range (or "spurious free dynamic range") is a better measure. This
>gives the span from the MDS (minimum discernible signal) of the receiver
>to the signal level that will cause IP3 spurs at an MDS level. If you
>tell me that my receiver has a IP3DR of 100 db, and that my sensitivity
>(MDS) is -135 dbm, then I know that I will get spurious responses in my
>receiver if the off frequency signals get above -35 dbm (100 - 135).

The problem with this definition is that it contains the definition of the MDS, which depends of the receiver noise bandwidth (which could vary from several kHz for phone communication to 0.001 Hz for QRSS operation). Thus, both the IP3DR and MDS must be given in order to be able to make any real comparisons. To scale the figures to other bandwidths, you have to know the bandwidth used when measuring the MDS.

In my opinion, the IP3 and (the receiver noise figure from which the antenna temperature, noise power density and MDS for any given bandwidth can be calculated) will give the best picture of the receiver performance as long as you can agree on if you are talking about input or output IP3.

Paul OH3LWR

4060. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 08:24:11 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <t9GdGiGr4d49EAqQ@ifwtech.co.uk>
Source record: 39773

Dan Tayloe wrote:
>If I could change anything, in addition to the wide range swept IP3
>dynamic range charts (+/- 100 Khz range?), I would like to see a
>separate chart that zoomed in and focused on the IP3 dynamic range
>performance at +/- 10 KHz and less. Although the further out spacings
>are important, the real world benefit in IP3 performance is in this
>"close in" range.

The RadCom reviews by G3SJX have been doing this for well over 10 years, always presenting the results in the same way so there's a good database of comparable measurements. DL1BU's measurements for CQ-DL are comparable.

As well as table of close-in IMD performance at 7MHz (down to 3kHz spacing), G3SJX presents a composite graph of "effective selectivity" out to +/-30kHz. In the center is the IF filter curve, but rejection of very strong signals on the skirts of the passband is effectively limited by front-end performance, either oscillator sideband noise or two-tone IMD.

For a conventional rig with a 20-30kHz roofing filter, you can very clearly see how the close-in IMD performance deteriorates inside that filter's passband.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4061. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 09:52:58 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <+uypCjA6Lf49EAow@ifwtech.co.uk>
Source record: 39774

Dan Tayloe wrote:
>
>I know what a K2 does close in with IP3. It would be nice to hear how
>the CDG2000 performs close in as well.
>
There are no published detailed figures (but you may be able to get them
from HJ).

The design notes state that overall input IP3 is about +40dBm, except close-in. The mixer IP3 is 36-39dBm, and the loss of the bandswitched input filters is added to this to give the overall IP3.

Noise floor in 2.2kHz bandwidh is -127dBm (worst case) so the IFDR is (40 + 127)*2/3 = 111dB.

That simple analysis breaks down close-in, because "the IM3 of the post mixer amplifier is only +13 dBm. Hence close in, IM3 is degraded so that when the roofing filters offer less than 25 dB attenuation, the post mixer amplifier will dominate performance. This occurs closer in than . Signals this close in, but outside the quality filters, either SSB or CW, will suffer degraded IM3."

More details should be calculable from the detailed performance figures, which are at www.warc.org.uk

The close-in IMD problem is essentially solved for SSM, because the roofing filter is almost as narrow as the main "quality" IF filter. Receiver IMD is likely to be lost under the transmitted IMD.

For CW, the clo-in IMD is a huge improvement over the up-converting receivers with 10-20kHz roofing filters. The performance only degrades closer than +2 and -3.2 kHz, and that kind of performance limitation must be true in a similar way for the K2 and any other transceiver with a similar front-end. If you're really, really serious about CW, you'd use a narrower roofing filter for that mode... but then you're still limited by phase noise and key clicks (always other people's, of course).

It would be interesting to have both the CDG2000 and the K2 on the ARRL lab bench - and ultimately more important, on the operating bench.

>The close in IP3 tests better reflect contest or DX pileup conditions.
>It is hard to work weak stations if it is buried in a roar of high
>level IP3 spurs.
>
I can still hear them from last night... In reality a CW contest pileup is limited by on-frequency signals, because stations don't

operate significantly split. A worse situation is a CW DXpedition pileup where a weak station is operating "UP1", so the 3rd-order IMD from the pileup 1-2kHz away lands exactly you-know-where.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4062. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 10:43:52 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <arsut8$lkglo$1@ID-61331.news.dfncis.de>
Source record: 39775

"Avery Fineman" <averyfineman@aol.com> wrote in message
news:20021123002353.03526.00001045@mb-cj.aol.com...
> In article <3DDD7E7C.EB5640F@cox.net>, Dan Tayloe <dtayloe@cox.net>
writes:
>
> >> Can direct-conversion rigs "beat" conventional receiver designs?
> >> At the risk of controversy, I'd say no...they can MEET them with
> >> a lot of care and attention. Their simplicity is certainly a
factor,
> >> another thing to consider in homebrew projects.
> >
> >You might take a look at the following link:
> >
> >http://redhotradio.com/
> >

On the subject of Tayloe detectors, correspondents might be interested in my experiences with my own receiver which uses a Tayloe detector with 4-path audio polyphase network:
http://www.hanssummers.com/radio/polyphase/index.htm. Currently it is only for 80m but plans are afoot to make it multiband.

This page doesn't yet contain complete details, because the receiver is still under construction. The photos come from various stages of development so some are out of date. In particular, the "main" board is now sawn up and the RF sections placed in PCB-shielded modules. I lowered the gain of the pre-polyphase network amplifiers from 33dB to 24dB because I was worried about overloading (perhaps unnecessarily). I rebuilt the Tayloe detector and divide-by-4 more neatly and in a shielded enclosure. I repaired the clock in the top left of the front panel (previously the LED displays suffered melting damage due to overheating due to too low multiplex duty cycle). Both the frequency counter and the clock have On/Off switches in case I am paranoid about digital noise, but so far the noise levels aren't affected whether the units are On or Off.

This is my first ever rig, I have never owned a commercial station. I had my first QSO ever with it in March this year and have now had 130 QSO's with 16 countries from here in the UK, on 80m in conjunction with my one valve 10W tx http://www.hanssummers.com/radio/cwtx/index.htm. Usually I set the power to 4 or 5W, and many of my QSO's even with Sweden, Poland etc are 2-way QRP.

(One complaint about the contesters. Was enjoying a nice 2-way QRP QSO on Friday night with Carl SM6USL when the contest started at midnight, and suddenly there were QRO QRQ contesters all over us, so much QRP we couldn't even 73. I couldn't get a word in edgeways for the rest of the weekend

except some intra-G daytime Sunday...)

Whilst I have nothing to compare it with, and have no measurement equipment to determine performance, I think my receiver using the Tayloe detector sounds excellent.

73

Hans Summers, G0UPL
http://www.HansSummers.Com

4063. Re: Icom IC32 E

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 12:17:18 UTC
From: Peter Pohlmann <peter@e-partner.com>
Message-ID: <RwoE9.928$cx4.308171@news20.bellglobal.com>
Source record: 39776

Thanks for the info Gary.

How much might the cpu be ? I just hope it is socketed.
but not likely I think. I shall open the device and have a look.

VE3POH
Peter

"Gary P. Fiber" <foo@bar.invalid> wrote in message
news:1dg3uu43brapjjo52blnptrdbdh94qvind@4ax.com...
> On Sun, 24 Nov 2002 17:29:01 -0500, "Peter Pohlmann"
> <peter@e-partner.com> wrote:
>
> >Hello Friends,
> >
> >I have a European Icom 32E . The bad thing is that I live in North
America
> >and
> >this hand held can only do 12.5 khz steps. I would like to use it as a
> >packet radio
> >transceiver. Is there any way to get it to a 5 khz step ?
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> >Thanks
> >VE3POH
> >
> In the North American version the IC-32AT there was a reset function
> you could do to toggle 5 and 12.5 kHz tuning steps. I am not sure if
> the European version can do the same.
>
> In most cases Icom uses different cpu's or cpu diode matrixes for
> their different versions. I once changed a W2A from European to North
> American version and it did require the installation of two new cpu's.
>
> Gary K8IZ

4064. Re: W7EL 40m optimized QRP VFO help please!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 13:27:50 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <qzpE9.24666$vM1.1837424@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39777

I am not sure what kind of cap you are using, but you might want to try a high Q type, such as a Silver Mica or a Polystyrene. Be carefuly with Silver Micas; some of them do drift.

Pete

4065. WTD:Motorola Software GM300

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 14:30:47 UTC
From: KC0EH <okiemansc@yahoo.com>
Message-ID: <ruqE9.170$yy.144854@newsread1.prod.itd.earthlink.net>
Source record: 39778
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I am in need of a hopefully ham version of Motorola GM 300 version 4 or version5 software for converting it to the 440 band for repeater use.
THANKS,
...Charlie...KC0EH...

4066. HF PA project wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 14:59:06 UTC
From: Bjorn Henrik Vangstein <no.sp@m.no>
Message-ID: <mTqE9.2194$hV6.39342@news2.e.nsc.no>
Source record: 39779

I consider building a linear PA stage for HF (160-10 m), aprox. 1kW output.
I have studied the projects in ARRL's handbook but I'm looking for
alternative projects.
Does anyone have project descriptions (links to websites) with parts that
are possible find?

Thanks and 73 de
LA5MDA, Henrik

4067. Re: Icom IC32 E

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 15:27:25 UTC
From: "Gary P. Fiber" <foo@bar.invalid>
Message-ID: <e6g4uu8vjqosvag330qcplh4abvccr6lhm@4ax.com>
Source record: 39780

I am not sure if the CPU is still available. I no longer work for
Icom America. The CPU is smd technology and is soldered to the logic
board.

If you have a schematic you could try changing the diode matrix to
match the North American version or U.S.A. version. I don't remember
how the schematic is labeled.

Gary K8IZ

On Mon, 25 Nov 2002 07:17:18 -0500, "Peter Pohlmann"
<peter@e-partner.com> wrote:

>Thanks for the info Gary.
>
>How much might the cpu be ? I just hope it is socketed.
>but not likely I think. I shall open the device and have a look.
>
>VE3POH
>Peter
>
>
>"Gary P. Fiber" <foo@bar.invalid> wrote in message
>news:1dg3uu43brapjjo52blnptrdbdh94qvind@4ax.com...
>> On Sun, 24 Nov 2002 17:29:01 -0500, "Peter Pohlmann"
>> <peter@e-partner.com> wrote:
>>
>> >Hello Friends,
>> >
>> >I have a European Icom 32E . The bad thing is that I live in North
>America
>> >and
>> >this hand held can only do 12.5 khz steps. I would like to use it as a
>> >packet radio
>> >transceiver. Is there any way to get it to a 5 khz step ?
>> >
>> >Thanks
>> >VE3POH
>> >
>> In the North American version the IC-32AT there was a reset function
>> you could do to toggle 5 and 12.5 kHz tuning steps. I am not sure if
>> the European version can do the same.
>>
>> In most cases Icom uses different cpu's or cpu diode matrixes for
>> their different versions. I once changed a W2A from European to North

>> American version and it did require the installation of two new cpu's.
>>
>> Gary K8IZ
>

4068. Re: HF PA project wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 18:11:59 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <c_acnRRX9t7ZEX-gXTWc2Q@cnmnetwork.com>
Source record: 39783

I have a project that needs completion. But I assume you are in Norway, and
I am in Los Angeles. It would be impractical to get it to you.

73, Bob K6DDX

4069. Re: W7EL 40m optimized QRP VFO help please!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 18:58:23 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <uu4smdpv439sba@corp.supernews.com>
Source record: 39781

I ran a lot of experiments when designing that rig, and (as reported in the QST article) found that good quality NPO capacitors were the most reliably temperature stable. Some people have reported poor drift performance with NPOs of unknown parentage, but solved the problem by purchasing new ones from a reputable vendor. I've never seen the poor drift performance with any I've used.

I agree about silver mica capacitors. The stability (and Q) varies from part to part.

Polystyrene capacitors have a moderate but pretty predictable temperature coefficient. It turns out to be in the opposite direction from most inductors, but it's considerably higher than a decent inductor like the one used in the Optimized rig. From time to time someone designs (and publishes) a VFO designed with a rather poor inductor and a polystyrene capacitor that fortuitously match more or less in drift, accidentally resulting in decent performance. That's probably how polystyrene capacitors got the reputation of having lower drift than they really do. Needless to say, builders attempting to copy such a design are often disappointed by the drift. Trying to compensate a large error with an opposing large error is poor design practice that nearly always leads to grief.

The VFO in the Optimized rig typically drifts about 200 Hz from turn on at 40 meters without any temperature compensation. This drift can be reduced if desired by replacing a portion of the NPO capacitance with negative temperature coefficient parts.

Roy Lewallen, W7EL

Pete KE9OA wrote:
> I am not sure what kind of cap you are using, but you might want to try a
> high Q type, such as a Silver Mica or a Polystyrene. Be carefuly with
> Silver Micas; some of them do drift.
>
> Pete
>
>

4070. Re: Radio Frequency Choke manufacturers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 19:04:37 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <pcGZm0HFRn49EwY+@fslife.co.uk>
Source record: 39782

Hi Brian,

>http://www.jwmiller.com/
>
>http://www.gowanda.com/
>
>http://www.fastron.de/home_eng.htm
>
>--
>||||||||||||||||||||||||||||||||||||||
>Brian Griffey
>
>View the SkyWave Amplifier brochure at:
>http://home.att.net/~briangriffey/SkyWave2879AB.pdf
Thank you for the URL's.

I was made aware of Millers who I have just contacted.

Gowanda are represented here in the UK but not sure if they offer what
I'm after - plate chokes.

Fastron look OK.

Your amp has come on since it conception a couple of years back. I
remember all the grief you received on the CB ng. Good looking indeed.

Now all you need to do now is add six more 2879's, a switchable low pass
filter and forget about your home market where of course you have to
by-pass 10/11m.

I have two Metron amp's which equate to what you need. Shame they
haven't made them in nearly a decade.

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

4071. Rock-Mite question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-25 23:53:33 UTC
From: "Joe S." <joe@schlatter.org>
Message-ID: <arud2t01qrp@enews1.newsguy.com>
Source record: 39785

What do you Rock-Mite users out there use for batteries?

I have built a 40-meter RM and will put it in a box tonight. I have an Altoids box drilled and ready to go but I also have two of the beautiful anodized boxes from American Morse -- don't know which box to use.

I want to keep the battery size as small as possible. It seems that the options are:

-- eight AAA batteries; 12VDC but how long would they last?
-- eight AA batteries, 12VDC, bigger than AAA's, how long will these last?
-- two 9-volt batteries in series with something to drop voltage to 12 - 14 VDC; but how long would these last?
-- I found a sealed gel-cell, 12VDC, 1.3 A-Hr battery - but - it's the size of three Altoids boxes stacked; would probably last forever.

Also, what do you RM users recommend -- alkalines? Ni-Cads? NiMH?

Thanks for the assistance.

--

Regards,
Joe S.
W4HH

4072. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 00:02:54 UTC
From: averyfineman@aol.com
Message-ID: <20021125190254.25792.00001989@mb-fc.aol.com>
Source record: 39784

In article <arsut8$lkglo$1@ID-61331.news.dfncis.de>, "Hans Summers"
<Hans.Summers@Tudor.Com> writes:

>On the subject of Tayloe detectors, correspondents might be interested in my
>experiences with my own receiver which uses a Tayloe detector with 4-path
>audio polyphase network:
>http://www.hanssummers.com/radio/polyphase/index.htm. Currently it is only
>for 80m but plans are afoot to make it multiband.
>
>This page doesn't yet contain complete details, because the receiver is
>still under construction. The photos come from various stages of development
>so some are out of date. In particular, the "main" board is now sawn up and
>the RF sections placed in PCB-shielded modules. I lowered the gain of the
>pre-polyphase network amplifiers from 33dB to 24dB because I was worried
>about overloading (perhaps unnecessarily). I rebuilt the Tayloe detector and
>divide-by-4 more neatly and in a shielded enclosure. I repaired the clock in
>the top left of the front panel (previously the LED displays suffered
>melting damage due to overheating due to too low multiplex duty cycle). Both
>the frequency counter and the clock have On/Off switches in case I am
>paranoid about digital noise, but so far the noise levels aren't affected
>whether the units are On or Off.

It's always interesting to hear results obtained from those who've
tried something new!

One of the points I wanted to highlight originally was the effect of
strong near-frequency signals on direct-conversion receivers. As an
example, let's assume a strong signal is received at a level of -70
dbm (70.7 uV). An even stronger signal exists at -30 dbm just a
few KHz away. It is at a level of 7.07 mV at the antenna.

The NorCal 30 has an audio preamplifier stage with a voltage gain
of 100 to 200 (depending on source resistance equivalent of the
multiplexer-mixer). The example's strong signal winds up at 0.707
to 1.414 V out of the preamp or 1.0 to 2.0 V peak. If that strong
signal is frequency-separated by, say 4 KHz, it is within the
response region of the preamp (as far as I can tell from the
PacifiCon exhibit schematic). That's terribly close to the supply
rail level of +3 VDC and is at or very near limiting/clipping.

The examples I gave are not rare insofar as signal levels can go.
I've had stronger interfering signals from a ham station a few
blocks away. The example levels aren't within the IP3
intermodulation conditions of the mixer at all but they can effect
interference on a desired signal past the mixer. One saving
grace is that on-off keying desired signals may be less affected

by clipping/limiting at CW compared to SSB voice but they
should definitely be noticed.

One possible cure is passive lowpass filtering directly between
the mixer and any audio amplifier, but that adds bulk. Another
is increasing the supply rail voltage to increase the post-mixing
audio dynamic range. Yet another possibility is combining the
bandpass filtering as part of the preamplifier stage.

Out of curiosity, are you using a Gingell polyphase network or
another type? The common Gingell circuits have an inherent
bandpass characteristic in addition to relative quadrature phase
shifting.

Continued success on your homebrewing!

Len Anderson
retired (from regular hours) electronic engineer person

4073. Re: SMA connector adaptor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 00:42:46 UTC
From: averyfineman@aol.com
Message-ID: <20021125194246.26543.00000617@mb-fr.aol.com>
Source record: 39786

In article <ub7E9.4188$0n4.729961@newsfeed.slurp.net>, "jimnluna"
<jimnlunax@intergate.com> writes:

>Best place to get these new or used
>tnx
>N5BLQ

This is a bit late to mention, but I'd suggest looking into

www.k1cra.com aka "The Quilter's Husband."

He has both connectors and between-series adapters at
reasonable prices...a bit better than Pasternak Enterprises.

Len Anderson
retired (from regular hours) electronic engineer person

4074. 900MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 01:26:43 UTC
From: "Benjamin, KB9LFZ" <KB9LFZ@arrl.net>
Message-ID: <3de2cb1c$2_2@news.teranews.com>
Source record: 39787

Howdy!

Does anyone have any links what would lead me to some sites or have any good book titles that'll help instruct me on the fundamentals and how to build a 900MHz amateur transceiver?

Thanks!

73 de KB9LFZ
~Benjamin

4075. Re: W7EL 40m optimized QRP VFO help please!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 01:57:18 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <2yAE9.31744$hK4.2753971@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39788

Yes... the poystyrene are rock solid.

--
||||||||||||||||||||||||||||||||||||||||
Brian Griffey

View the SkyWave Amplifier brochure at:
http://home.att.net/~briangriffey/SkyWave2879AB.pdf
||||||||||||||||||||||||||||||||||||||||

"Pete KE9OA" <n.gianakopoulos@worldnet.att.net> wrote in message
news:qzpE9.24666$vM1.1837424@bgtnsc04-news.ops.worldnet.att.net...
> I am not sure what kind of cap you are using, but you might want to try a
> high Q type, such as a Silver Mica or a Polystyrene. Be carefuly with
> Silver Micas; some of them do drift.
>
> Pete

4076. Re: HF PA project wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 01:58:06 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <OyAE9.31745$hK4.2755149@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39789

www.communication-concepts.com

--
||||||||||||||||||||||||||||||||||||||||
Brian Griffey

View the SkyWave Amplifier brochure at:
http://home.att.net/~briangriffey/SkyWave2879AB.pdf
||||||||||||||||||||||||||||||||||||||||

"Bjorn Henrik Vangstein" <no.sp@m.no> wrote in message
news:mTqE9.2194$hV6.39342@news2.e.nsc.no...
> I consider building a linear PA stage for HF (160-10 m), aprox. 1kW
output.
> I have studied the projects in ARRL's handbook but I'm looking for
> alternative projects.
> Does anyone have project descriptions (links to websites) with parts that
> are possible find?
>
> Thanks and 73 de
> LA5MDA, Henrik
>
>

4077. Re: Radio Frequency Choke manufacturers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 02:00:34 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <6BAE9.31747$hK4.2755556@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39790

OK Philip, just adding my 2 cents coming in late on the conversation... lol
Good to hear from you!

--
||||||||||||||||||||||||||||||||||||||||
Brian Griffey

View the SkyWave Amplifier brochure at:
http://home.att.net/~briangriffey/SkyWave2879AB.pdf
||||||||||||||||||||||||||||||||||||||||

"Philip de Cadenet" <Philstheboss@thebbc.fslife.co.uk> wrote in message
news:pcGZm0HFRn49EwY+@fslife.co.uk...
> Hi Brian,
>
> >http://www.jwmiller.com/
> >
> >http://www.gowanda.com/
> >
> >http://www.fastron.de/home_eng.htm
> >
> >--
> >||||||||||||||||||||||||||||||||||||||||
> >Brian Griffey
> >
> >View the SkyWave Amplifier brochure at:
> >http://home.att.net/~briangriffey/SkyWave2879AB.pdf
> Thank you for the URL's.
>
> I was made aware of Millers who I have just contacted.
>
> Gowanda are represented here in the UK but not sure if they offer what
> I'm after - plate chokes.
>
> Fastron look OK.
>
> Your amp has come on since it conception a couple of years back. I
> remember all the grief you received on the CB ng. Good looking indeed.
>
> Now all you need to do now is add six more 2879's, a switchable low pass
> filter and forget about your home market where of course you have to
> by-pass 10/11m.
>
> I have two Metron amp's which equate to what you need. Shame they
> haven't made them in nearly a decade.

>
> (((73)))
> --
> Philip de Cadenet G4ZOW
> Transmitters 'R' Us
> http://www.transmittersrus.com

4078. Re: Using fundamental xtals for overtones

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 02:07:09 UTC
From: fmmck@aol.com
Message-ID: <20021125210709.27300.00000063@mb-ct.aol.com>
Source record: 39791

<< I looking to build a reference oscillator, but it need
only be within a Mhz or two of 135 MHz, so I'm wondering
if I can use a cheap microprocessor xtal. >>

Russ-

The exact frequency may not be important, but what about stability? Microcomputers usually don't have a stringent clock frequency requirement, but what about your application?

Another question, do you intend for your oscillator to operate at 135 MHz? Crystals oscillate in overtone mode at odd harmonics, but you'll seldom find one working any higher than the fifth harmonic, with third being more common. Further, higher frequency crystals (such as for a 27 MHz fundamental) are going to be extremely fragile and susceptable to being fractured by excessive drive.

A more practical approach might be to have your crystal oscillate at a lower frequency such as 9 MHz fundamental mode or 27 MHz third overtone (from a CB Set?), and follow the oscillator by a 5X frequency multiplier stage (or two 3X stages?). Depending on output level requirements, additional gain stages may be needed.

Len's suggestion of using a PLL is a very good one. If stability is needed, you can use an oven-controlled oscillator at a lower frequency, and phase lock a 135 MHz VCO to it. Even without the oven, it is likely to be more stable and reliable than a crystal oscillator oscillating at 135 MHz.

73, Fred, K4DII

4079. Re: VFO Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 02:20:17 UTC
From: fmmck@aol.com
Message-ID: <20021125212017.27300.00000064@mb-ct.aol.com>
Source record: 39792

<< why can't i mod the siltronix
vfo for the ham bands >>

KU4YP-

Do you know what company made the Siltronix? I understand it was a company like Swan that didn't want their name associated with CB!

If it is that simple, you may find that the VFO is internally identical to one of the other company's Ham VFOs. Adding a band switch and a few other components might make the conversion complete.

I would guess the VFO currently works at one quarter or one third of 27 MHz (6.75 or 9 MHz), and may be the same as the equivalent Ham VFO's 11 Meter circuit which might have existed prior to about 1958. If it is at 9 MHz, you can probably pad it down to cover the 7 MHz band, which would also handle the harmonically related bands (14, 21, 28 MHz).

This wouldn't help at 3.5 MHz, so a second circuit is needed. As you can see, it is getting complicated. Perhaps another look at E-Bay is in order!

73, Fred, K4DII

4080. Re: WTB: PL Tone Encoder Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 02:35:18 UTC
From: fmmck@aol.com
Message-ID: <20021125213518.27300.00000065@mb-ct.aol.com>
Source record: 39793

<< Need a PL tone encoder board for my old, mobile FM rig. >>

Jeff-

Look for products from a company called Comm-Spec. They are listed in the Amateur Electronics Supply catalog.

73, Fred, K4DII

4081. Re: Famous Patents

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 04:06:35 UTC
From: blackm00@cam.org
Message-ID: <6447bcd3.0211252006.41d19b46@posting.google.com>
Source record: 39794

la8ak.xnd@online.no (J M Noeding) wrote in message
news:<3dd83754.201514143@news.online.no>...
> On 17 Nov 2002 21:15:54 GMT, et472@FreeNet.Carleton.CA (Michael Black)
> wrote:
>
> >Joe Leikhim (jleikhim@nettally.com) writes:
> >> I think the "pulse counting FM demodulator" is pretty neat.
> >>
> >That one dates from 1946 or 47. I have about four issues of QST
> >from that era, and there is an article about pulse-counting detectors
> >in one. I'm sure it references the patent, and is either written by
> >the inventor or mentions it. If I felt like digging, I could find it.
> >Someone with that era of QST on CDROM could dig it out, and make it
> >easier for you to dig out the patent.
> >
> > Michael VE2BVW
> >
> >
> just checked W0IYH index file, could it be one of these...(?)
>
> September 1946
> Tilton "A New Approach to FM Reception" p.73
> (double down-convert FM band to 10 MHZ to 200 kHz
> RC-coupled amps)
>
> July 1947
> Goodman "Low Frequency NBFM" p.21
>
>
> January 1946
> Grammer "A New FM Detector Circuit" p.26
>
> December 1945
> Geist "Simplified FM" p.29
>
> will be pleased to receive any feedback to add key-words to the index
>
> 73
> Jan-Martin
> LA8AK
As usual, I found the article when I wasn't looking for it.

It is the September 1946 article.

The article does mention the US patent for the pulse counting detector, number 2,137,859 issued to W.W. Moe and assigned to General Electric. I didn't check the patent, but I think it's just the actual detector, while the article is about a complete receiver by the inventor. There is no complete schematic; only the segment which is the 200KC final RC-coupled IF amplifier and limiter, and the actual pulse counting detector, a 6H6. It's mainly about the detector scheme, with a block diagram and a small description of the complete receiver.

It mentions that the inventor, who was W1JKC at the time of publication, worked for GE between 1935 and 1945, as a radio receiver engineer, doing "design work on the well-known JFM-90 FM translator", while during the war working on naval radar equipment. After the war was over he worked on TV receiver design.

I wonder how much this impacted on later designs. In the GE semiconductor manual from the early sixties, there is a simple FM broadcast receiver consisting of a tunnel diode mixer/oscillator stage, and a 200KHz RC-coupled transistor amplifier/limiter stage, followed by a pulse-counting detector. Then about 1976, I saw some simple FM broadcast receiver designs in a British magazine that directly dropped to such a low IF. There's nothing to stop someone coming up with such a scheme independently, but I'm always curious about whether something is being done because it's been done already.

Michael VE2BVW

4082. Re: Rock-Mite question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 04:18:02 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <XvCE9.858$pc.165315@news.iquest.net>
Source record: 39795

Your Rockmite should function on 9v.

Try two 9v batteries in parallel for a long lasting supply of electron flow.

"Joe S." <joe@schlatter.org> wrote in message
news:arud2t01qrp@enews1.newsguy.com...
> What do you Rock-Mite users out there use for batteries?
>
> I have built a 40-meter RM and will put it in a box tonight. I have an
> Altoids box drilled and ready to go but I also have two of the beautiful
> anodized boxes from American Morse -- don't know which box to use.
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> I want to keep the battery size as small as possible. It seems that the
> options are:
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> -- eight AAA batteries; 12VDC but how long would they last?
> -- eight AA batteries, 12VDC, bigger than AAA's, how long will these
> last?
> -- two 9-volt batteries in series with something to drop voltage to 12 -
14
> VDC; but how long would these last?
> -- I found a sealed gel-cell, 12VDC, 1.3 A-Hr battery - but - it's the
size
> of three Altoids boxes stacked; would probably last forever.
>
> Also, what do you RM users recommend -- alkalines? Ni-Cads? NiMH?
>
> Thanks for the assistance.
>
> --
>
> ------
> Regards,
> Joe S.
> W4HH
>
>
>
>
>

4083. Re: HF PA project wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 09:29:49 UTC
From: Bjorn Henrik Vangstein <vangstein@bluezone.no>
Message-ID: <1038302744.653130@a217-118-32-43.bluecom.no>
Source record: 39796

"Bob" <balbert@cnmnetwork.com> wrote in message
news:c_acnRRX9t7ZEX-gXTWc2Q@cnmnetwork.com...
> I have a project that needs completion. But I assume you are in Norway,
and
> I am in Los Angeles. It would be impractical to get it to you.
>
> 73, Bob K6DDX
>
>

Thanks for your replay. But do you have a description of it that can be
e-mailed I would be very happy.

73, Henrik LA5MDA

4084. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 12:38:16 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <arvpvp$m5p39$1@ID-61331.news.dfncis.de>
Source record: 39647

"Avery Fineman" <averyfineman@aol.com> wrote in message
news:20021125190254.25792.00001989@mb-fc.aol.com...
> In article <arsut8$lkglo$1@ID-61331.news.dfncis.de>, "Hans Summers"
> <Hans.Summers@Tudor.Com> writes:
>
>
> >On the subject of Tayloe detectors, correspondents might be interested in
my
> >experiences with my own receiver which uses a Tayloe detector with 4-path
> >audio polyphase network:
> >http://www.hanssummers.com/radio/polyphase/index.htm. Currently it is
only
> >for 80m but plans are afoot to make it multiband.
> >
>
> It's always interesting to hear results obtained from those who've
> tried something new!
>
> One of the points I wanted to highlight originally was the effect of
> strong near-frequency signals on direct-conversion receivers. As an
> example, let's assume a strong signal is received at a level of -70
> dbm (70.7 uV). An even stronger signal exists at -30 dbm just a
> few KHz away. It is at a level of 7.07 mV at the antenna.
>
> The NorCal 30 has an audio preamplifier stage with a voltage gain
> of 100 to 200 (depending on source resistance equivalent of the
> multiplexer-mixer). The example's strong signal winds up at 0.707
> to 1.414 V out of the preamp or 1.0 to 2.0 V peak. If that strong
> signal is frequency-separated by, say 4 KHz, it is within the
> response region of the preamp (as far as I can tell from the
> PacifiCon exhibit schematic). That's terribly close to the supply
> rail level of +3 VDC and is at or very near limiting/clipping.

That's interesting. I am using a 12V supply for my op-amps between the mixer
and the polyphase network. I used to use a voltage gain of 47 in these
opamps, but I recently reduced it to 15 because I was worried that strong
signals might cause clipping. But too low and the noise of the polyphase
network would become significant... perhaps 15 is too low, do you think?

>
> The examples I gave are not rare insofar as signal levels can go.
> I've had stronger interfering signals from a ham station a few
> blocks away. The example levels aren't within the IP3
> intermodulation conditions of the mixer at all but they can effect
> interference on a desired signal past the mixer. One saving

> grace is that on-off keying desired signals may be less affected
> by clipping/limiting at CW compared to SSB voice but they
> should definitely be noticed.
>
> One possible cure is passive lowpass filtering directly between
> the mixer and any audio amplifier, but that adds bulk. Another
> is increasing the supply rail voltage to increase the post-mixing
> audio dynamic range. Yet another possibility is combining the
> bandpass filtering as part of the preamplifier stage.

The trouble is also that anything between the mixer and the polyphase network must be precisely matched in 4 paths for both amplitude and amplitude response with frequency. But as Dan said, the Tayloe detector inherently has a filtering characteristic (that I measured and the results on my page).

>
> Out of curiosity, are you using a Gingell polyphase network or
> another type? The common Gingell circuits have an inherent
> bandpass characteristic in addition to relative quadrature phase
> shifting.

My network circuit is shown on my webpage http://www.hanssummers.com/radio/polyphase/index.htm, I read about the Gingell network but don't recall exactly if mine is similar. I designed mine using the Nov 1995 QEX article (also reproduced on my page): Polyphase Network Calculation using a Vector Analysis Method, by Tetsuo Yoshida JA1KO. In this design the resistance and capacitance change from column to column, rather than the usual designs which use either constant resistance or constant capacitance. The design ensures constant amplitude response over the whole audio range, i.e. the network is lossless. I also verified this by measurement, the results are on my page.

73

Hans G0UPL

--

Hans Summers
http://www.HansSummers.Com

4085. No more small parts at Radio Shack--Ain't So!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 14:23:50 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0211260623.6c0f665e@posting.google.com>
Source record: 39648

There was a thread here a while back talking about the demise of small parts at radio shack.

I was in our local one last night looking for some batteries. It was the first time that I had been there for several months.

As I was expecting, the stuff on the racks was rather limited. Then I turned around and noticed a brand new steel cabinet with 50 or so drawers. Each drawer had a dozen or so compartments full of small parts, all neatly sorted and labeled. My impression was that they had a better assorment than when they used wall racks.

By the way, any physically disabled read this group? If I were you I would be really ticked-off at Radio Shack. With all their Christmas junk piled up even I had trouble getting down the aisle. I can't imagine what problems a wheel chair would have!

Jim
N8EE

4086. Re: WTD:Motorola Software GM300

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 15:00:26 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.184d2c677433117b989a62@news.drizzle.com>
Source record: 39649
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

In article <ruqE9.170$yy.144854@newsread1.prod.itd.earthlink.net>,
okiemansc@yahoo.com says...

> I am in need of a hopefully ham version of Motorola GM 300 version 4 or
> version5 software for converting it to the 440 band for repeater use.

<snip>

Are you really sure you want to be asking about that sort of thing
in a publicly-readable newsgroup? You obviously haven't seen Motorola's
licensing agreement. Positively scary, and yes, they can and will
prosecute anyone who they think they need to make an example of for
copying or using unlicensed RSS.

If you need programming service, I can help you (yes, I'm
licensed). See http://www.bluefeathertech.com/rf.html

Keep the peace(es).

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

4087. Re: No more small parts at Radio Shack--Ain't So!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 16:16:48 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <f6udnd2f_engA36gXTWcoQ@comcast.com>
Source record: 39650

I am mentally disabled when I go into RatShack on a Sunday afternoon needing
a 7805 or something to find that they are all out of stock.

My nephew brought his son into radio shack to exchange a video tape player.
It seems that this 3 year old son had stuck a peanut butter sandwich in the
cassette drawer. They took it back, somewhat unhappily, but they still
took it back as it was still under warranty.

"JLB" <jim.bolinger@lintek.aeroflex.com> wrote in message
news:8d5ec8a2.0211260623.6c0f665e@posting.google.com...
> There was a thread here a while back talking about the demise of small
> parts at radio shack.
>
> I was in our local one last night looking for some batteries. It was
> the first time that I had been there for several months.
>
> As I was expecting, the stuff on the racks was rather limited. Then I
> turned around and noticed a brand new steel cabinet with 50 or so
> drawers. Each drawer had a dozen or so compartments full of small
> parts, all neatly sorted and labeled. My impression was that they had
> a better assorment than when they used wall racks.
>
> By the way, any physically disabled read this group? If I were you I
> would be really ticked-off at Radio Shack. With all their Christmas
> junk piled up even I had trouble getting down the aisle. I can't
> imagine what problems a wheel chair would have!
>
> Jim
> N8EE

4088. Re: No more small parts at Radio Shack--Ain't So!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 17:26:32 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <M1Sdnb8gveGKIH6gXTWcpQ@ctc.net>
Source record: 39651

> My nephew brought his son into radio shack to exchange a video tape
player.
> It seems that this 3 year old son had stuck a peanut butter sandwich in
the
> cassette drawer. They took it back, somewhat unhappily, but they still
> took it back as it was still under warranty.

They must have the same warrenty I read about from another company (might have been MFJ) that says even if a truck runs over it , it will still be covered for a period of time. I just don't see a company covering a product under ovious missuse.

4089. Vibroplex BUG

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 18:31:07 UTC
From: ku4qw@yahoo.com
Message-ID: <9b945243.0211261031.78ec2dd1@posting.google.com>
Source record: 39652
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.misc,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.swap

Vibroplex Bug
Users
Group

http://groups.yahoo.com/group/vibroplexbug/

Please Drop by and say hello, tell bug stories, swap bugs (buy&sell)
or anything vibroplex related...

73,
Jim - ku4qw

4090. sound Card info needed.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 18:41:22 UTC
From: Bruce Campbell <w8hw@adelphia.net>
Message-ID: <mfPE9.8621$kO5.1956677@news1.news.adelphia.net>
Source record: 39653

Hello Anyone,

Can anyone give me info on getting sound information form sound card? What I need to get from sound card is Frequency and amplitude of a tone(s), going into the Audio input to the sound card. How is this done with Visual basic 6. Feel free to email me direct. Thanks, Bruce

Bruce Campbell
bruce@blclinks.net
W8HW (ARS)
Scuba diver (Cave/MIx gas/More)
FCC First Class Radiotelephone
Sailing (ASA and USCG)

4091. Re: SMA connector adaptor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 19:18:37 UTC
From: jimnluna <jimnluna@intergate.com>
Message-ID: <vNPE9.8768$0n4.1716105@newsfeed.slurp.net>
Source record: 39654

tnx
good site...

"Avery Fineman" <averyfineman@aol.com> wrote in message
news:20021125194246.26543.00000617@mb-fr.aol.com...
> In article <ub7E9.4188$0n4.729961@newsfeed.slurp.net>, "jimnluna"
> <jimnlunax@intergate.com> writes:
>
> >Best place to get these new or used
> >tnx
> >N5BLQ
>
> This is a bit late to mention, but I'd suggest looking into
>
> www.k1cra.com aka "The Quilter's Husband."
>
> He has both connectors and between-series adapters at
> reasonable prices...a bit better than Pasternak Enterprises.
>
> Len Anderson
> retired (from regular hours) electronic engineer person

4092. Re: No more small parts at Radio Shack--Ain't So!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-26 20:35:41 UTC
From: Bill M <"exray\\@n-o- .caribe.net>">
Message-ID: <uu7moj6jod7b44@corp.supernews.com>
Source record: 39655

Ralph Mowery wrote:
>>My nephew brought his son into radio shack to exchange a video tape
>
> player.
>
>>It seems that this 3 year old son had stuck a peanut butter sandwich in
>
> the
>
>>cassette drawer. They took it back, somewhat unhappily, but they still
>>took it back as it was still under warranty.
>
>
> They must have the same warrenty I read about from another company (might
> have been MFJ) that says even if a truck runs over it , it will still be
> covered for a period of time. I just don't see a company covering a product
> under ovious missuse.
>
>

Its a comfort thing for the buyer and a good marketing tool. Nothing specific, just a warm fuzzy feeling that you won't be hassled over the return.
Of course the buyer pays for that protection and if the item selling price is jacked up 10% as a result, the vendor probably makes a killing since 90% of the buyers won't be returning the item. They know the actuarials of their equipment.
However, it sounds like an admission by the vendor that the unit is as likely to fail on its own as it is because of abuse. Having your kid shove a sandwich into the rig BEFORE it breaks down is no different than it breaking down and THEN shoving a sandwich into it.

-Bill M

4093. High Voltage Transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-27 00:02:46 UTC
From: George Clute <glcute@attbi.com>
Message-ID: <dXTE9.4672$GR5.83@rwcrnsc51.ops.asp.att.net>
Source record: 39656

I've carried this thing around for 30 years, and its time to find it a new home.
I ran a couple KW with this transformer and it is solid. Never got warm when running at full tilt. I'm sure the 2.1 KVA 220VAC input is a military spec. In amateur service it would be difficult to hurt this transformer.

George W7LFD

Here is the Ebay listing.
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1941505041

4094. Re: 900MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-27 00:27:51 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <3DE41187.500179BF@one.net>
Source record: 39657

Benjamin:

Go to the ARRL site (www.arrl.org) and look for the UHF/Microwave Projects Manual (two volumes) and the VHF Experimenter's Handbook. The experimenter's handbook probably fits your request best. The RSGB also has a 3-volume set with stuff on all the microwave bands, but it's kind of dated by now.

Also check out www.downeastmicrowave.com. They sell kits, boards, etc. and have some general information on interfacing equipment and other details on the site.

... Rich

"Benjamin, KB9LFZ" wrote:
>
> Howdy!
>
> Does anyone have any links what would lead me to some sites or have any
> good book titles that'll help instruct me on the fundamentals and how to
> build a 900MHz amateur transceiver?
>
> Thanks!
>
> 73 de KB9LFZ
> ~Benjamin

4095. Re: Using fundamental xtals for overtones

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-27 00:31:41 UTC
From: la8ak.xnd@online.no
Message-ID: <3de40ee6.18524380@news.online.no>
Source record: 39658

On 26 Nov 2002 02:07:09 GMT, fmmck@aol.com (Fred McKenzie) wrote:

><< I looking to build a reference oscillator, but it need
>only be within a Mhz or two of 135 MHz,

>The exact frequency may not be important, but what about stability?
>
>Another question, do you intend for your oscillator to operate at 135 MHz?
>Crystals oscillate in overtone mode at odd harmonics, but you'll seldom find
>one working any higher than the fifth harmonic, with third being more common.
>Further, higher frequency crystals (such as for a 27 MHz fundamental) are going
>to be extremely fragile and susceptable to being fractured by excessive drive.
>
>A more practical approach might be to have your crystal oscillate at a lower
>frequency such as 9 MHz fundamental mode or 27 MHz third overtone (from a CB
>Set?), and follow the oscillator by a 5X frequency multiplier stage (or two 3X
>stages?). Depending on output level requirements, additional gain stages may
>be needed.
>
>
>73, Fred, K4DII
>

I've seen applications where 27MHz xtals have been operated on 9th
overtone (81MHz) to be used for microwave ssb/cw transverters, so I
don't think stability is so bad problem. But, as you mentioned 27MHz,
it is fairly easy to operate the xtal on 45MHz using a Butler
oscillator, with the second tuned circuit to 135MHz.
I've tried it several years ago for a 2m NBFM receiver, but I won't
mention about signal purity. Two stages tuned circuits or more may be
needed on 135MHz to attenuate 45 and 90MHz products

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

4096. WTB: cartridge for Shure 444D mic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-27 00:51:30 UTC
From: k9sqg@aol.com
Message-ID: <20021126195130.28645.00000106@mb-bj.aol.com>
Source record: 39659

Would anybody have a new old stock cartridge for the Shure 444D microphone? If so, please let me know the shipped price.

Happy Thanksgiving.

73s,

Evan

4097. Re: Using fundamental xtals for overtones

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-27 01:29:24 UTC
From: gaschafer@attbi.com
Message-ID: <3de4203d.24093418@netnews.attbi.com>
Source record: 39660

Some fundamental cut crystals do not like to operate on an overtone.
They can sometimes be
quite unstable. It depends on how the particular crystal is cut.
A crystal that is intended to operate as an overtone crystal is cut
differently than a fundamental.
Also the overtone frequency is usually slightly different than the
multiple of the fundamental.

73
Gary K4FMX

On 23 Nov 2002 18:02:14 GMT, ae517@FreeNet.Carleton.CA (Russ Renaud)
wrote:

>If one were to use a fundamental xtal in an overtone
>oscillator circuit, other than the frequency being offset
>somewhat, would there be any difference in it's operation
>w.r.t. a true overtone xtal?
>
>I looking to build a reference oscillator, but it need
>only be within a Mhz or two of 135 MHz, so I'm wondering
>if I can use a cheap microprocessor xtal.
>
>tnx de va3rr
>--
>73 de va3rr/aa8lu
>http://www.qsl.net/va3rr

4098. Fahd bin Duran: next Al Queda attack on Buy Nothing Day

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-27 03:24:43 UTC
From: annihilator-0@erlenstar.demon.co.uk
Message-ID: <MPG.dd2a82e7ddde@news.bcn.ttd.net>
Source record: 39663
Body handling: 1 inline base64-encoded payload block was not displayed

http://adbusters.org/campaigns/bnd/toolbox/contacts.jhtml

Fahd bin Duran, allah be praised, here are your orders:

Version: 2.6.2i

[Inline base64-encoded payload not displayed]

=gUhh

Version: GnuPG v0.9.5 (FreeBSD)
Comment: For info see http://www.gnupg.org

=RZOM

http://adbusters.org/campaigns/bnd/toolbox/contacts.jhtml

4099. WW1 Trench radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-27 03:31:27 UTC
From: ranamacar@aol.com
Message-ID: <20021126223127.21307.00000425@mb-mc.aol.com>
Source record: 39661

I saw an episode of "Mail Call" the other night where they covered the radios used by the US military in the world wars fairly well, and R. Lee Ermey mentioned that the troops would build simple (crystal?) recievers out of scraps they found. Does anyone know of a source of plans/ideas for how they could make a reciever using bits of wire, a razor blade and a pencil ?
Thanks,
Ranamacar

What are you going to do when the lights go out?

4100. Re: WW1 Trench radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-27 03:37:59 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <r6XE9.1511$oa.187600@news1.east.cox.net>
Source record: 39662

Do a websearch for Foxhole Radio or Foxhole Crystal Set,
you should get several hits.

Peter

"Ranamacar" <ranamacar@aol.com> wrote in message
news:20021126223127.21307.00000425@mb-mc.aol.com...
> I saw an episode of "Mail Call" the other night where they covered the
radios
> used by the US military in the world wars fairly well, and R. Lee Ermey
> mentioned that the troops would build simple (crystal?) recievers out of
scraps
> they found. Does anyone know of a source of plans/ideas for how they could
make
> a reciever using bits of wire, a razor blade and a pencil ?
> Thanks,
> Ranamacar
>
>
>
> What are you going to do when the lights go out?
>

4101. Re: sound Card info needed.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-27 03:43:53 UTC
From: Woody <woody.white@DELETE_THISatt.net>
Message-ID: <3DE43F72.F9756C22@DELETE_THISatt.net>
Source record: 39664

Perhaps some Qbasic routines could shed some light...
http://www.phys.uu.nl/~bergmann/soundblaster.html
73, Woody

Bruce Campbell wrote:
>
> Hello Anyone,
>
> Can anyone give me info on getting sound information form sound card? What I
> need to get from sound card is Frequency and amplitude of a tone(s), going
> into the Audio input to the sound card. How is this done with Visual basic
> 6. Feel free to email me direct. Thanks, Bruce
>
> Bruce Campbell
> bruce@blclinks.net
> W8HW (ARS)
> Scuba diver (Cave/MIx gas/More)
> FCC First Class Radiotelephone
> Sailing (ASA and USCG)

--
My website: http://woody.white.home.att.net/
WB4QXE - Homebrew Ham/Electronics Projects &
eclectic Scanning Electron Microscope Images

4102. Re: No more small parts at Radio Shack--Ain't So!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-27 03:55:30 UTC
From: hexter@blazenet.net
Message-ID: <uu8ghi5p0u4u61@corp.supernews.com>
Source record: 39665

In article <f6udnd2f_engA36gXTWcoQ@comcast.com>, jdwalton@comcast.net says...
>
>I am mentally disabled when I go into RatShack on a Sunday afternoon needing
>a 7805 or something to find that they are all out of stock.
>
>My nephew brought his son into radio shack to exchange a video tape player.
>It seems that this 3 year old son had stuck a peanut butter sandwich in the
>cassette drawer. They took it back, somewhat unhappily, but they still
>took it back as it was still under warranty.
>
And where do you take a mentally defective parent for exchange? I should
hope my child 1. Knows that V.C.R's don't play sandwiches, and 2. Never
took a sandwich for a guided tour of my appliances, knowing the sandwich
is approved for use with kitchenware, and mouths only.

>"JLB" <jim.bolinger@lintek.aeroflex.com> wrote in message
>news:8d5ec8a2.0211260623.6c0f665e@posting.google.com...
>> There was a thread here a while back talking about the demise of small
>> parts at radio shack.
>>
>> I was in our local one last night looking for some batteries. It was
>> the first time that I had been there for several months.
>>
>> As I was expecting, the stuff on the racks was rather limited. Then I
>> turned around and noticed a brand new steel cabinet with 50 or so
>> drawers. Each drawer had a dozen or so compartments full of small
>> parts, all neatly sorted and labeled. My impression was that they had
>> a better assorment than when they used wall racks.
>>
>> By the way, any physically disabled read this group? If I were you I
>> would be really ticked-off at Radio Shack. With all their Christmas
>> junk piled up even I had trouble getting down the aisle. I can't
>> imagine what problems a wheel chair would have!
>>
>> Jim
>> N8EE
>
>

4103. Re: No more small parts at Radio Shack--Ain't So!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-27 13:41:54 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <oOmdnXhszP4zVnmgXTWcqw@comcast.com>
Source record: 39666

You obviously don't have children.

> >
> And where do you take a mentally defective parent for exchange? I should
> hope my child 1. Knows that V.C.R's don't play sandwiches, and 2. Never
> took a sandwich for a guided tour of my appliances, knowing the sandwich
> is approved for use with kitchenware, and mouths only.
>

4104. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-27 15:55:32 UTC
From: Dick Carroll <dixie@townsqr.com>
Message-ID: <3DE4F938.9DBB8B6@townsqr.com>
Source record: 39667

Frank Dinger wrote:

> > >Argonaut V is obviously meant to compete with the K2 and Orion is
> obviously
> > >meant to compete with the FT-1000. TT doesn't (now) make a moderately
> priced
> > >100-watt-class-HF rig.
> >
> > Jupiter?
> =========
> And what about the blind box working with a PC , the 'Pegasus' ? Adds for
> this unit disappeared in QST when the Jupiter was launched.
> Apparently ,similar to the now 'deceased' Kachina ham transceiver , radio
> amateurs don't want a box linked to their PC ,but a stand-alone unit.

I was interested in the Pegasus for use as a data radio but lost interest when I learned that it takes TWO computers, one to run the radio and the other to communicate. I had thought one might be able to multitask with one.

But you're right- there's something about radio that just doesn't come out right when the control panel is a computer screen and the only knob is a mouse!

Dick

4105. Modern Miracle Alchemy:

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-27 17:20:32 UTC
From: N G <vze26gh4@verizon.net>
Message-ID: <A97F9.46040$mL2.19683@nwrddc01.gnilink.net>
Source record: 39668

TURN $6 INTO $6,000? READING THIS COULD CHANGE YOUR LIFE!

TURN $6 INTO $6,000? READING THIS COULD CHANGE YOUR LIFE!

A friend of mine alerted me to this opportunity which he came across.
He explained that you send $1.00 to each of the 6 names and address
stated in the article. You then place your own name and address in the
bottom of the list at #6, and post the article in at least 200 newsgroups.
(There are thousands) No catch, that was it. So after thinking it over,
he tried it, figuring he had nothing to lose but 6 stamps and $6.00.

GUESS WHAT!!... Within 7 days, he started getting money in
the mail and the money just kept coming in.

In his first week, he made about $25.00. By the end of the
second week he had made a total of over $1,000.00! and after four weeks
a total of just over $42,000.00 and it's still coming in rapidly.

He hooked me and now I myself am at the 1500.00 level.

It's certainly worth $6.00, and 6 stamps, I have spent more than that on the
lottery!! Let me tell you how this works and most importantly, why it
works....Also, make sure you print a copy of this article NOW, so you can
get the information off of it as you need it. I promise you that if you
follow the directions exactly, that you will start making more money than
you thought possible by doing something so easy!

Suggestion: Read this entire message carefully! (Print it out or download
it.) Follow the simple directions and watch the money come in! It's easy.
It's legal. And, your investment is only $6.00 (Plus postage)

IMPORTANT: This is not a rip-off; it is not indecent; it is not illegal; and
it is virtually no risk - it really works!!!! If all of the following
instructions are adhered to, you will receive extraordinary dividends.

PLEASE NOTE: Please follow these directions EXACTLY, and $50,000 or more can
be yours in 20 to 60 days. This program remains successful because of the
honesty and integrity of the participants. Please continue its success by
carefully adhering to the instructions. You will now become part of the Mail
Order business. In this business your product is not solid and tangible,
it's a service. You are in the business of developing Mailing Lists.
Many large corporations are happy to pay big bucks for quality lists.
However, the money made from the mailing lists is secondary to the income
that is made from people like you and me asking to be included in that list.
Here are the 4 easy steps to success:

STEP 1: Get 6 separate pieces of paper and write the following on each piece of paper; PLEASE PUT ME ON YOUR MAILING LIST. Now get 6 US $1.00 bills and place ONE inside EACH of the 6 pieces of paper so the bill will not be seen through the envelope (to prevent thievery).

Next, place one paper in each of the 6 envelopes and seal them. You should now have 6 sealed envelopes, each with a piece of paper stating the above phrase, your name and address, and a $1.00 bill. What you are doing is creating a service. THIS IS ABSOLUTELY LEGAL! You are requesting a legitimate service and you are paying for it!

U.S. Post Office(1-800-725-2161) confirmed that it is indeed legal! Mail the 6
envelopes to the following addresses:

Mailing Addresses

(1) B. Evans

34580 Seminole way

Solon, OH 44139

(2) S. Paramadilok

3730 Wallen Ave.

Lincolnwood, IL 60712

(3) M. Roberts

1912 Flagler Ct.

Virginia Beach, Va 23464

(4) TJ Ross

305 Briarhill #9

London, ON n5y 4v7

(5) James HU

24 Shilton Road

Toronto, ON, M1S 2J6 Canada

(6) N T Greenidge

2710 Arlington Ave

Bronx NY 10463

STEP 2: Now take the #1 name off the list that you see above, move the other names up (6 becomes 5, 5 becomes 4, etc...) and add YOUR Name as number 6 on the list.

STEP 3: Change anything you need to, but try to keep this article as close to original as possible. Now, post your amended article to at least 200 newsgroups. (I think there are close to 24,000 groups) All you need is 200, but remember, the more you post, the more money you make! This is perfectly legal! If you have any doubts, refer to Title 18 Sec. 1302 & 1341 of the Postal lottery laws.

Keep a copy of these steps for yourself and, whenever you need money, you can use it again, and again.

PLEASE REMEMBER that this program remains successful because of the honesty and integrity of the participants and by their carefully adhering to the directions. Look at it this way. If you are of integrity, the program will continue and the money that so many others have received will come your way.

NOTE: You may want to retain every name and address sent to you, either on a computer or hard copy and keep the notes people send you. This VERIFIES that you are truly providing a service. (Also, it might be a good idea to wrap the $1 bill in dark paper to reduce the risk of mail theft.)

So, as each post is downloaded and the directions carefully followed, six members will be reimbursed for their participation as a List Developer with one dollar each. Your name will move up the list geometrically so that when your name reaches the #1 position you will be receiving thousands of dollars in CASH!!! What an opportunity for only $6.00 ($1.00 for each of the first six people listed above) Send it now, add your own name to the list and you're in business!

---DIRECTIONS ----- FOR HOW TO POST TO NEWSGROUPS----------

Step 1) You do not need to re-type this entire letter to do your own posting. Simply put your cursor at the beginning of this letter and drag your cursor to the bottom of this document, and select 'copy' from the edit menu. This will copy the entire letter into the computer's memory.

Step 2) Open a blank 'notepad' file and place your cursor at the top of the blank page. From the 'edit' menu select 'paste'. This will paste a copy of the letter into notepad so that you can add your name to the list.

Step 3) Save your new notepad file as a .txt file. If you want to do your postings in different settings, you'll always have this file to go back to.

Step 4) Use Netscape or Internet explorer and try searching for various newsgroups (on-line forums, message boards, chat sites, discussions.)

Step 5) Visit these message boards and post this article as a new message by highlighting the text of this letter and selecting paste from the edit menu.

Fill in the Subject, this will be the header that everyone sees as they scroll through the list of postings in a particular group, click the post message button. You're done with your first one! Congratulations...THAT'S IT! All you have to do is jump to different newsgroups and post away, after you get the hang of it, it will take about 30 seconds for each newsgroup!

**REMEMBER, THE MORE NEWSGROUPS YOU POST IN, THE MORE MONEY YOU WILL MAKE!!

BUT YOU HAVE TO POST A MINIMUM OF 200**

That's it! You will begin receiving money from around the world within days!

You may eventually want to rent a P.O. Box due to the large amount of mail you will receive. If you wish to stay anonymous, you can invent a name to use, as long as the postman will deliver it.

JUST MAKE SURE ALL THE ADDRESSES ARE CORRECT.

Now the WHY part: Out of 200 postings, say I receive only 5 replies (a very low example). So then I made $5.00 with my name at #6 on the letter. Now, each of the 5 persons who just sent me $1.00 make the MINIMUM 200 postings, each with my name at #5 and only 5 persons respond to each of the original 5, that is another $25.00 for me, now those 25 each make 200 MINIMUM posts with my name at #4 and only 5 replies each, I will bring in an additional $125.00! Now, those 125 persons turn around and post the MINIMUM 200 with my name at #3 and only receive 5 replies each, I will make an additional $626.00! OK, now here is the fun part, each of those 625 persons post a

MINIMUM 200 letters with my name at #2 and they each only receive 5 replies, that just made me $3,125.00!!! Those 3,125 persons will all deliver this message to 200 newsgroups with my name at #1 and if still 5 persons per 200 newsgroups react I will receive $15,625,00! With an original investment of only $6.00! AMAZING! When your name is no longer on the list, you just take the latest posting in the newsgroups, and send out another $6.00 to names on the list, putting your name at number 6 again. And start posting again. The thing to remember is: do you realize that thousands of people all over the world are joining the internet and reading these articles everyday?, JUST LIKE YOU are now!! So, can you afford $6.00 and see if it really works?? I think so... People have said, "what if the plan is played out and no one

sends you the money? So what! What are the chances of that happening when there are tons of new honest users and new honest people who are joining the Internet and newsgroups everyday and are willing to give it a try? Estimates are at 20,000 to 50,000 new users, every day, with thousands of those joining
the actual Internet.

IMPORTANT: When you send the six envelopes out, you create a service, a LEGAL SERVICE.

Remember: Play FAIRLY and HONESTLY and this will really work!!!

Happy Holidays and Good luck, Good health and wealth.

4106. Re: HF PA project wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-27 17:29:01 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <H8WcnZwa8NVBhHigXTWc2Q@cnmnetwork.com>
Source record: 39670

What I have is a commercial amplifier, Gonset GSB-101 that has been converted from four 811A tubes to four 572B tubes. The plate transformer has been replaced with a more suitable, larger one, and a few other changes made. There is no filter capacitor but I have all the parts, new ones, to build up a proper filter with a series string of electrolytic capacitors and equalizing resistors. This should end up as a full legal limit amplifier from 10-80 meters full coverage (yes it tunes the WARC bands).

I never finished the project because I got two other amplifiers. It's just sitting here taking up space and I'd like to sell or trade it for something I can use.

73, Bob K6DDX

4107. Re: Famous Patents

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-27 18:24:15 UTC
From: k7itm@aol.com
Message-ID: <3200347.0211271024.3c7f7ecb@posting.google.com>
Source record: 39669

I don't know about a list, but if someone wants to start one, I offer
US 2,695,988, "Mixer-Modulator," for consideration. It's a
double-balanced diode ring mixer, from 1954. It may be
the first patented use of the ring, rather than the diode bridge which
had been patented earlier.

(It was one of my uncle's many patents...I was sure impressed when I
saw it in his binder!)

Cheers,
Tom

durabolin3@aol.com (Brock) wrote in message news:<3dd732fc.18095491@news.pen.k12.va.us>...
> I was wondering if there is a list of famous radio patents, maybe on
> the Internet or in a ham rag?
>
> Brock, VA6BTS

4108. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-27 19:35:18 UTC
From: averyfineman@aol.com
Message-ID: <20021127143518.10280.00000159@mb-dd.aol.com>
Source record: 39671

In article <arvpvp$m5p39$1@ID-61331.news.dfncis.de>, "Hans Summers"
<Hans.Summers@Tudor.Com> writes:

>> One of the points I wanted to highlight originally was the effect of
>> strong near-frequency signals on direct-conversion receivers. As an
>> example, let's assume a strong signal is received at a level of -70
>> dbm (70.7 uV). An even stronger signal exists at -30 dbm just a
>> few KHz away. It is at a level of 7.07 mV at the antenna.
>>
>> The NorCal 30 has an audio preamplifier stage with a voltage gain
>> of 100 to 200 (depending on source resistance equivalent of the
>> multiplexer-mixer). The example's strong signal winds up at 0.707
>> to 1.414 V out of the preamp or 1.0 to 2.0 V peak. If that strong
>> signal is frequency-separated by, say 4 KHz, it is within the
>> response region of the preamp (as far as I can tell from the
>> PacifiCon exhibit schematic). That's terribly close to the supply
>> rail level of +3 VDC and is at or very near limiting/clipping.
>
>That's interesting. I am using a 12V supply for my op-amps between the mixer
>and the polyphase network. I used to use a voltage gain of 47 in these
>opamps, but I recently reduced it to 15 because I was worried that strong
>signals might cause clipping. But too low and the noise of the polyphase
>network would become significant... perhaps 15 is too low, do you think?

Apologies for not inspecting your website until today...Outstanding!
:-)
I didn't get a chance to check out the NE5534 op-amp specs for
noise, but since those are between multiplexer and the polyphase,
the would be suspect first. The passive polyphase network should
not introduce any noise so one has to look at the voltage-follower
OP27s for noise injection.

As to strong adjacent-frequency signals slamming in at 30 db or
better above desired signal, those can be approximated at each
listening location, measured approximately with a conventional
receiver, then relative strengths calculated as to possible
clipping/limiting effects. The higher the supply rail magnitude,
the wider the dynamic range before limiting occurs...that is a
trade-off thing when it comes to portable QRP rigs.

There's not yet any answer to limiting which will be optimum for
each and every situation.

>The trouble is also that anything between the mixer and the polyphase
>network must be precisely matched in 4 paths for both amplitude and
>amplitude response with frequency. But as Dan said, the Tayloe detector

>inherently has a filtering characteristic (that I measured and the results
>on my page).

Agreed, but the preamps (NE5534s in yours) can be gain-matched
within 1% without trimmers using +/- 1% fixed resistors. Any
differential phase shifts between the preamps should be nil at audio
frequencies on out to 20 KHz. That would leave only magnitude
unbalance as a possible problem for "USB/LSB" rejection. That's
a vector calculation problem to maintain both magnitude and phase
where they should be. That "upper/lower" rejection would be as
upset following the polyphase network as before it...adder and
subtracter arms following the polyphase have to be as balanced.

The FST3255 quad multiplexer is not supposed to introduce any
noise (quote-unquote). Worst-case differential resistance would
be about 10 Ohms? [maximum on or closed resistance spec
sheet value is 15 Ohms] There are probably some switching
transients due to capacitive coupling within the multiplexer and
with the possibility of some slight time skew of the two phases
(digital) out of the 74HCT163. Any time skew there would have
some effect (albeit very small) of possibly unbalancing the
quadrature-equivalent switching...and thus a slight phase un-
balance of the mixer output. That may not seem much af first
but 1 degree at 14 MHz is 198 picoSeconds (or 0.198 nanoSec
for those who don't live near Pico Boulevard...inside joke)...
0.794 nSec at 3.5 MHz.

The demodulator response of the Tayloe mixer is chiefly
governed by RF source resistance plus series resistance
to the multiplexer arm input and the capacitors at each
arm output (330 pFd?) in shunt with the series resistance
of each preamp input (1 K). That can be tailored to fit a
Tayloe... :-)

>My network circuit is shown on my webpage
>http://www.hanssummers.com/radio/polyphase/index.htm, I read about the
>Gingell network but don't recall exactly if mine is similar. I designed mine
>using the Nov 1995 QEX article (also reproduced on my page): Polyphase
>Network Calculation using a Vector Analysis Method, by Tetsuo Yoshida JA1KO.
>In this design the resistance and capacitance change from column to column,
>rather than the usual designs which use either constant resistance or
>constant capacitance. The design ensures constant amplitude response over
>the whole audio range, i.e. the network is lossless. I also verified this by
>measurement, the results are on my page.

I did a response analysis of your polyphase circuit using 10 Ohm
source resistance and 10 to 22 MegOhm output resistance (to
simulate the voltage-followers). My analysis program uses double
precision with phase read-out to 0.01 degree resolution, answer
rounded-off to nearest hundredth. There was NO ERROR of 90
degree differential shift found between 10 Hz to 100 KHz at any
of the outputs! Voltage amplitude is within +/- 1 db from 100 Hz

to 10 KHz! 3 db drop-offs occur at 25 Hz and 25 KHz. I was very much surprised, to say the least.

The Tayloe multiplexer-mixer ought to make one excellent SSB detector with the Yoshida-value polyphase network. With a locked-on-carrier-frequency switch frequency of the multiplexer it would be a good DSB AM detector. I can see all sorts of possibilities there as any AM or carrier detector.

The multiplexer switching input time skew is, by analysis, somewhat "smoothed out" by the Gingell-Yoshida polyphase network. In sweeping 100 Hz to 10 KHz with one source deliberately offset in phase by 1 degree, the four outputs have relative quadrature errors within a +/- 0.23 degree with only a few frequencies bumping to +/- 1.1 degree. The RF switching phase relationship is still a part of the overall error. The nicety of the polyphase network with four quadrature phase input (or even just two as in Peter Martinez' example in Radio Communication in Pat Hawker's column about 1974) is that input phase skew is less of a problem over the passband.

Len Anderson
retired (from regular hours) electronics engineer person

4109. Re: No more small parts at Radio Shack--Ain't So!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-27 23:00:47 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0211271500.3895b9e3@posting.google.com>
Source record: 39672

"john walton" <jdwalton@comcast.net> wrote in message
news:<oOmdnXhszP4zVnmgXTWcqw@comcast.com>...
> You obviously don't have children.
>
> > >
> > And where do you take a mentally defective parent for exchange? I should
> > hope my child 1. Knows that V.C.R's don't play sandwiches, and 2. Never
> > took a sandwich for a guided tour of my appliances, knowing the sandwich
> > is approved for use with kitchenware, and mouths only.
> >

So true, you are dealing with a different species in small children
and they do not respond at all to logic, consequences, instructions -
you just have to put up with this sort of stuff. My exception is my
workshop - I ALWAYS keep it locked, and they are under severe death
threats if they go in there unsupervised.

As a working service tech, if you see a harrassed young parent walking
up the path with a 3 yo in tow, and a VCR under her arm, its almost a
certainty that SOMETHING has been stuffed into the tape flap - the
other thing is kiddies tapes fouling the video heads - they get played
so many times they are very worn and shed oxide.

Just part of being a parent, there is no rational excuse or
justification for being one, its just the way it is.

Andrew

My spellings fine, my typing is crap!

4110. Re: sound Card info needed.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-28 00:01:28 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0211271601.63c66c77@posting.google.com>
Source record: 39673

Woody <woody.white@DELETE_THISatt.net> wrote in message
news:<3DE43F72.F9756C22@DELETE_THISatt.net>...
> Perhaps some Qbasic routines could shed some light...
> http://www.phys.uu.nl/~bergmann/soundblaster.html
> 73, Woody

Shudder. Direct hardware access is horse-and-buggy stuff.

Modern operating systems provide sane interfaces, and
don't restrict you to specific models of sound card.
Look in your manual under "sound card" or "multi media".

The poster's original question is actually quite a hard
problem (What if the input isn't a sine wave? What do
you do about noise?). Hence all the work on spectral
estimation and similar pastimes. There is a particularly
good discussion in Numerical Recipes in C.

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

4111. Re: No more small parts at Radio Shack--Ain't So!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-28 03:11:43 UTC
From: Bob McConnell <rmcconne.NOSPAM@lightlink.com>
Message-ID: <e02buusoqcn2fu28t8chh45nb848qpbtcc@4ax.com>
Source record: 39674

On 27 Nov 2002 15:00:47 -0800, ablight@alphalink.com.au (Andrew
VK3BFA) wrote:

>"john walton" <jdwalton@comcast.net> wrote in message
news:<oOmdnXhszP4zVnmgXTWcqw@comcast.com>...
>> You obviously don't have children.
>>
>> > >
>> > And where do you take a mentally defective parent for exchange? I should
>> > hope my child 1. Knows that V.C.R's don't play sandwiches, and 2. Never
>> > took a sandwich for a guided tour of my appliances, knowing the sandwich
>> > is approved for use with kitchenware, and mouths only.
>> >
>
>So true, you are dealing with a different species in small children
>and they do not respond at all to logic, consequences, instructions -
>you just have to put up with this sort of stuff. My exception is my
>workshop - I ALWAYS keep it locked, and they are under severe death
>threats if they go in there unsupervised.
>
>As a working service tech, if you see a harrassed young parent walking
>up the path with a 3 yo in tow, and a VCR under her arm, its almost a
>certainty that SOMETHING has been stuffed into the tape flap - the
>other thing is kiddies tapes fouling the video heads - they get played
>so many times they are very worn and shed oxide.
>
>Just part of being a parent, there is no rational excuse or
>justification for being one, its just the way it is.
>
>Andrew
>
>My spellings fine, my typing is crap!

Or maybe they just need to learn how to move fragile equipment up out
of the reach of their little terrors. Nothing that could harm small
children or be harmed by them should be left where they can reach it.
Safety locks on all of the cabinets with soap and bleach, and all
glass and electronics on the upper shelves. We learned that early with
our four children, and are trying to teach our grandchildren's parents
the same lessons without the same (expensive) consequences we dealt
with.

Bob McConnell
N2SPP

4112. Need help to replace J0 3901 UHF RF transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-28 04:05:00 UTC
From: Peter Lim <peterlm@pc.jaring.my>
Message-ID: <as4436$37d$1@news5.jaring.my>
Source record: 39675

Can anyone help me to get a direct replacement for th J0 3901 UHF RF transistor? Is the MRF641 or MRF644 a direct replacement?

Appreciate any help to peterlm@pc.jaring.my

Cheers.

4113. Re: Need help to replace J0 3901 UHF RF transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-28 06:40:35 UTC
From: "Mike G." <nospam@my.email.address>
Message-ID: <ifebuu8nm9l97p325o3nm0k7rhqs8riupq@4ax.com>
Source record: 39676

On Thu, 28 Nov 2002 12:05:00 +0800, "Peter Lim" <peterlm@pc.jaring.my>
wrote:

>Can anyone help me to get a direct replacement for th J0 3901 UHF RF
>transistor? Is the MRF641 or MRF644 a direct replacement?
>
>Appreciate any help to peterlm@pc.jaring.my
>
>Cheers.

After the Thanksgiving break, you might want to email the guys at
www.ghz.com. The J0 is a very old series of transistors. If anyone
would know of a replacement, these guys would.

Cheers,
Mike

4114. Toko s18 inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-28 07:01:49 UTC
From: ae517@FreeNet.Carleton.CA
Message-ID: <as4f0t$cu1$1@freenet9.carleton.ca>
Source record: 39677

I was thinking of building a project that called for
Toko S18 inductors, but judging from the Toko website,
this part is no longer made.

Can anyone point me to a suitable substitute?

Thanks
de Russ, va3rr

--
73 de va3rr/aa8lu
http://www.qsl.net/va3rr

4115. H/V Silver mica cap suppliers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-28 09:58:26 UTC
From: Dave Bullock <DaveB@ihr.mrc.ac.uk>
Message-ID: <3DE5E8C2.8080407@ihr.mrc.ac.uk>
Source record: 39679

Dear homebrewers.....

I need a couple of 10pF at 1500Vwkg Silver Mica Capacitors with axial leads.
Is there anyone who can still supply this sort of component in the UK?
Is there anyone who still makes such components...full stop?

Can anyone help please.

Thanks ...Dave
--
* * * * * * * * * * * * * * * * * * * *
* Dave Bullock *
* MRC Institute of Hearing Research *
* Nottingham University *
* Nottingham *
* NG7 2RD *
* *
* daveb@ihr.mrc.ac.uk *
* * * * * * * * * * * * * * * * * * * *

4116. Re: No more small parts at Radio Shack--Ain't So!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-28 10:09:09 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0211280209.6b853853@posting.google.com>
Source record: 39678

Bob McConnell <rmcconne.NOSPAM@lightlink.com> wrote in message
news:<e02buusoqcn2fu28t8chh45nb848qpbtcc@4ax.com>...
> On 27 Nov 2002 15:00:47 -0800, ablight@alphalink.com.au (Andrew
> VK3BFA) wrote:
>
> >"john walton" <jdwalton@comcast.net> wrote in message
news:<oOmdnXhszP4zVnmgXTWcqw@comcast.com>...
> >> You obviously don't have children.
> >>
> >> > >
> >> > And where do you take a mentally defective parent for exchange? I should
> >> > hope my child 1. Knows that V.C.R's don't play sandwiches, and 2. Never
> >> > took a sandwich for a guided tour of my appliances, knowing the sandwich
> >> > is approved for use with kitchenware, and mouths only.
> >> >
> > >
> > >So true, you are dealing with a different species in small children
> > >and they do not respond at all to logic, consequences, instructions -
> > >you just have to put up with this sort of stuff. My exception is my
> > >workshop - I ALWAYS keep it locked, and they are under severe death
> > >threats if they go in there unsupervised.
> > >
> > >As a working service tech, if you see a harrassed young parent walking
> > >up the path with a 3 yo in tow, and a VCR under her arm, its almost a
> > >certainty that SOMETHING has been stuffed into the tape flap - the
> > >other thing is kiddies tapes fouling the video heads - they get played
> > >so many times they are very worn and shed oxide.
> > >
> > >Just part of being a parent, there is no rational excuse or
> > >justification for being one, its just the way it is.
> > >
> > >Andrew
> > >
> > >My spellings fine, my typing is crap!
>
> Or maybe they just need to learn how to move fragile equipment up out
> of the reach of their little terrors. Nothing that could harm small
> children or be harmed by them should be left where they can reach it.
> Safety locks on all of the cabinets with soap and bleach, and all
> glass and electronics on the upper shelves. We learned that early with
> our four children, and are trying to teach our grandchildren's parents
> the same lessons without the same (expensive) consequences we dealt
> with.
>

> Bob McConnell
> N2SPP

Cant disagree with any of that Bob, BUT unless you practice 24hr vigilance the cunning little devils will find a way to get past your guard - and in spite of everything you do, it will happen!. My fantasy of the child proof home is tiled walls to adult head height, a stainless steel floor sloping to a central drain, and everything in the room automatically retracts into the ceiling when any animate object under 3ft high enters the area!

But seriously, you do all the kiddy safe things you can think of, but small (and hopefully not serious) accidents will happen.

PS - we are grandparents, so know most of the tricks, but even know still get caught - like, "wheres the remote control...."

Andrew VK3BFA

4117. Re: H/V Silver mica cap suppliers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-28 17:33:22 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <CrsF9.28940$vM1.2228288@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39680

The only place I know of is http://www.cornell-dubilier.com/

--
||||||||||||||||||||||||||||||||||||||||
Brian Griffey

View the SkyWave Amplifier brochure at:
http://home.att.net/~briangriffey/SkyWave2879AB.pdf
||||||||||||||||||||||||||||||||||||||||

"Dave Bullock" <DaveB@ihr.mrc.ac.uk> wrote in message
news:3DE5E8C2.8080407@ihr.mrc.ac.uk...
> Dear homebrewers.....
>
> I need a couple of 10pF at 1500Vwkg Silver Mica Capacitors with axial
leads.
> Is there anyone who can still supply this sort of component in the UK?
> Is there anyone who still makes such components...full stop?
>
> Can anyone help please.
>
> Thanks ...Dave
> --
> *
> * Dave Bullock *
> * MRC Institute of Hearing Research *
> * Nottingham University *
> * Nottingham *
> * NG7 2RD *
> * *
> * daveb@ihr.mrc.ac.uk *
> *
>

4118. Re: Toko s18 inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-28 18:47:36 UTC
From: Gary Morton <gary@alma.demon.co.uk>
Message-ID: <3DE66534.FF09747D@alma.demon.co.uk>
Source record: 39681

Russ Renaud wrote:
>
> I was thinking of building a project that called for
> Toko S18 inductors, but judging from the Toko website,
> this part is no longer made.
>
> Can anyone point me to a suitable substitute?
>
> Thanks
> de Russ, va3rr
>
> --
> 73 de va3rr/aa8lu
> http://www.qsl.net/va3rr

Try www.jabdog.com (an UK company).

Their web pages do however say "while stocks last".

regards...

--Gary

4119. Re: Using fundamental xtals for overtones

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-28 22:09:58 UTC
From: Rick Karlquist <richard@karlquist.remove.this.com>
Message-ID: <WuwF9.168035$QZ.27742@sccrnsc02>
Source record: 39682

My experience has been that most crystals will happily
work at various overtones (in the right circuit) even if
sold as "fundamental". In fact, accidental operation on
the 3rd overtone is a common problem in microprocessor
clock circuits using a compromise design. The main thing
you get when you buy an overtone crystal is that the frequency
calibration will be correct at the specified overtone. It
won't necessarily be exactly a multiple of the fundamental.
The main issue with overtone oscillation is getting the
right CIRCUIT design. Here's the 2 minute drill. First
build a non-crystal controlled Colpitts oscillator on the
frequency you want. Insert a 22 to 47 ohm resistor in
series with the emitter and if necessary readjust the oscillator
for proper operation. Now replace the resistor with the
crystal. That's it, I've designed 100's of them that way.

Rick N6RK

"Russ Renaud" <ae517@FreeNet.Carleton.CA> wrote in message
news:arofr6$462$1@freenet9.carleton.ca...
> If one were to use a fundamental xtal in an overtone
> oscillator circuit, other than the frequency being offset
> somewhat, would there be any difference in it's operation
> w.r.t. a true overtone xtal?
>
> I looking to build a reference oscillator, but it need
> only be within a Mhz or two of 135 MHz, so I'm wondering
> if I can use a cheap microprocessor xtal.
>
> tnx de va3rr
> --
> 73 de va3rr/aa8lu
> http://www.qsl.net/va3rr

4120. Amidon toroids ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-28 22:19:17 UTC
From: Olivier PASQUIER <opfd@free.fr>
Message-ID: <3DE69665.D33225E5@free.fr>
Source record: 39683

Hi,

Does anyboby could let me know where I could purchase Amidon toroids
possibly in France or in Europe ?
My French supplier does not have anymore the references I need.
Many thanks,
Olivier,
Paris, France

4121. Re: Thordarsen Meissner website?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-28 23:56:02 UTC
From: Greg Spiller <abstract@wworld.com>
Message-ID: <3DE6AD12.E4A27EBD@wworld.com>
Source record: 39684

Don't know about a website, but my local phone book shows this:

Thordarson Meissner
11969 Hwy 1
Mt. Carmel, IL 62863
Phone 618-262-5121

73
Greg W9XI

Philip de Cadenet wrote:

> Does anyone know if the above company are represented on the web?
>
> I was unable to find them using Google!
>
> Thanks
> --
> Philip de Cadenet G4ZOW
> Transmitters 'R' Us
> http://www.transmittersrus.com

4122. Re: No more small parts at Radio Shack--Ain't So!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-29 05:12:42 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3DE6F74A.347B38B3@mfi.net>
Source record: 39685

JLB wrote:
>
> By the way, any physically disabled read this group? If I were you I
> would be really ticked-off at Radio Shack. With all their Christmas
> junk piled up even I had trouble getting down the aisle. I can't
> imagine what problems a wheel chair would have!
>
> Jim
> N8EE

If it is that bad I would call their local fire department and
suggest a visit. It is probably in violation of local laws, and someone
could get hurt. Also if there was a fire, they couldn't get very far
inside to fight it with piles of burning paper and plastic so close
together.

--

Michael A. Terrell
Central Florida

4123. Re: Amidon toroids ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-29 05:31:00 UTC
From: averyfineman@aol.com
Message-ID: <20021129003100.12709.00000826@mb-fk.aol.com>
Source record: 39686

In article <3DE69665.D33225E5@free.fr>, Olivier PASQUIER <opfd@free.fr> writes:

>Does anyboby could let me know where I could purchase Amidon toroids
>possibly in France or in Europe ?
>My French supplier does not have anymore the references I need.
>Many thanks,
>Olivier,
>Paris, France

Amidon resells Micrometals powdered-iron toroids. Try checking
www.micrometals.com for their listing of European distributors.

Len Anderson
retired (from regular hours) electronic engineer person

4124. Doventron otion schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-29 06:52:06 UTC
From: LC8UBT <remove>
Message-ID: <3de70e11.1967073@news.online.no>
Source record: 39687

Can anyone help me with the schematic for the option KEYBOARD OPERATED SEND unit (KOS-100) for a Doventron MCP-1000C? I know that it is not possible to order that option from Doventron, because Hank Sharfe W6SKC vent silent key in april. The company Web page is altso gone. So if anyone can help me with a scematic so i can build that option, it will be wery nice. Similar circuits tha are easy to build and attach to my doventron will altso be great.

73 DE LC8UBT

LC8UBT(a)frisurf.no

4125. Re: Amidon toroids ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-29 07:05:58 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <uue4eh9kgs5rd6@corp.supernews.com>
Source record: 39688

The poster didn't say whether he's looking for powdered iron or ferrite.
Most of the Amidon ferrite cores come from Fair-Rite, which also has a
web site.

Roy Lewallen, W7EL

Avery Fineman wrote:
> In article <3DE69665.D33225E5@free.fr>, Olivier PASQUIER <opfd@free.fr> writes:
>
>
>>Does anyboby could let me know where I could purchase Amidon toroids
>>possibly in France or in Europe ?
>>My French supplier does not have anymore the references I need.
>>Many thanks,
>>Olivier,
>>Paris, France
>
>
> Amidon resells Micrometals powdered-iron toroids. Try checking
> www.micrometals.com for their listing of European distributors.
>
> Len Anderson
> retired (from regular hours) electronic engineer person

4126. Re: Amidon toroids ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-29 07:29:10 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0211282329.10cc70cb@posting.google.com>
Source record: 39689

Olivier PASQUIER <opfd@free.fr> wrote in message news:<3DE69665.D33225E5@free.fr>...
> Does anyboby could let me know where I could purchase Amidon toroids
> possibly in France or in Europe ?

Hi Olivier,
GES Electronics here in Czechia says: "GES-ELECTRONICS company
supplies complete range of ferrite cores, iron powder cores, chokes
and other products of AMIDON in original packing according to ISO
standards. Delivery terms, prices and other technical support please
contact us." The contact info is:

Shipping service for Czech Rep. and abroad, Electronic Components Div.
GES-ELECTRONICS
sady 5. kvetna 28
301 00 Plzen
Czech Republic

ges@ges.cz
http://www.ges.cz/english/index-a.htm

Tel.: +420 37 73 73 111
+420 602 73 73 11
+420 603 73 73 11
+420 608 73 73 11
Fax: +420 37 73 73 999

BR from Ivan

4127. Re: Amidon toroids ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-29 08:37:11 UTC
From: "Dr. P.Seifert" <pedro.seifert@tek.com>
Message-ID: <XGFF9.5$h03.1024@paloalto-snr1.gtei.net>
Source record: 39690

Hi Olivier,
here in Germany:

www.reichelt.de

73, Pedro, DF3YB

"Olivier PASQUIER" <opfd@free.fr> schrieb im Newsbeitrag
news:3DE69665.D33225E5@free.fr...
> Hi,
>
> Does anyboby could let me know where I could purchase Amidon toroids
> possibly in France or in Europe ?
> My French supplier does not have anymore the references I need.
> Many thanks,
> Olivier,
> Paris, France
>

4128. Mast Guying query

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-29 11:34:13 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3de747a0.5803980@news.freeserve.net>
Source record: 39691

Hi Folks, I think I've had a good idea to reduce the area needed to guy a mast and I'd like to run it past you lot, if you don't mind, as I'm certainly no structural engineer
(wuce I could'nt evan spell Ingineer, now I are wun ;-)).

Assume a mast 50 foot high with 4 guys at spaced around the mast at 90 degrees and dropping at 30 degrees to the mast.
This means a distance from the base of the mast to the guy anchors of about 30 foot.

Now. If cross braces are placed halfway up the main mast and the guys are now taken from the top of the mast to the end of the cross bracing and then back to the base of the mast, a bit like a standard kite shape. This reduces the mast base to guy anchor distance to nil and covers half the ground area previously covered, but at 25 feet up.

Am I missing something obvious here ?.

thanks Mike W

4129. Re: Toko s18 inductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-29 11:55:00 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <as8a92rmp1@news6.svr.pol.co.uk>
Source record: 39550

"Russ Renaud" <ae517@FreeNet.Carleton.CA> wrote in message
news:as4f0t$cu1$1@freenet9.carleton.ca...
> I was thinking of building a project that called for
> Toko S18 inductors, but judging from the Toko website,
> this part is no longer made.
>
> Can anyone point me to a suitable substitute?

BEC, the UK Toko distributor, will probably have them: www.bonex.co.uk (I think).

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

4130. Re: Mast Guying query

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-29 12:32:59 UTC
From: Bill M <"exray\\@n-o- .caribe.net>">
Message-ID: <uuenn564t68m7b@corp.supernews.com>
Source record: 39692

Mike W wrote:
> Hi Folks, I think I've had a good idea to reduce the area needed to
> guy a mast and I'd like to run it past you lot, if you don't mind, as
> I'm certainly no structural engineer
> (wuce I could'nt evan spell Ingineer, now I are wun ;-)).
>
> Assume a mast 50 foot high with 4 guys at spaced around the mast at 90
> degrees and dropping at 30 degrees to the mast.
> This means a distance from the base of the mast to the guy anchors of
> about 30 foot.
>
> Now. If cross braces are placed halfway up the main mast and the guys
> are now taken from the top of the mast to the end of the cross bracing
> and then back to the base of the mast, a bit like a standard kite
> shape. This reduces the mast base to guy anchor distance to nil and
> covers half the ground area previously covered, but at 25 feet up.
>
> Am I missing something obvious here ?.
>
> thanks Mike W

This will stiffen the mast to keep it from bending (somewhat) but does
nothing to keep it from falling over.
-BM

4131. Re: Mast Guying query

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-29 13:38:18 UTC
From: brokebob@aol.com
Message-ID: <20021129083818.27614.00003548@mb-mr.aol.com>
Source record: 39693

And three guys are just as effective as four (if one breaks, the thing comes down in either case).
brokebob@aol.com (broke=not working, retired=not working, retired=broke)

4132. Re: No more small parts at Radio Shack--Ain't So!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-29 14:21:39 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <s2PF9.92955$%j3.48260@news.bellsouth.net>
Source record: 39552

Wal-Mart in the main isles is just as bad.

--
73,
Chuck
KE4ETH
Remove the obvious from Email.

"Michael A. Terrell" <terrell@mfi.net> wrote in message
news:3DE6F74A.347B38B3@mfi.net...
> JLB wrote:
> >
> > By the way, any physically disabled read this group? If I were you I
> > would be really ticked-off at Radio Shack. With all their Christmas
> > junk piled up even I had trouble getting down the aisle. I can't
> > imagine what problems a wheel chair would have!
> >
> > Jim
> > N8EE
>
>
> If it is that bad I would call their local fire department and
> suggest a visit. It is probably in violation of local laws, and someone
> could get hurt. Also if there was a fire, they couldn't get very far
> inside to fight it with piles of burning paper and plastic so close
> together.
>
> --
>
>
> Michael A. Terrell
> Central Florida

4133. Re: Mast Guying query

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-29 14:30:48 UTC
From: "M.E." <bogus@nospam.com>
Message-ID: <uueua85gdre0d5@corp.supernews.com>
Source record: 39694

Should work, the military uses this approach on some tall vertials they use.
Bare in mind that the loading on the base and the mid-sections are very
large, if the material used in these areas is not strong enough a rapid
collapse can happen.
This system is known as a "pre-stressed truss" system. Turn-buckles are a a
must, to pre-load the truss wires equally.
The same principal as the "span" wire on a long boomed yagi, except that the
"top" wire is pre-stressed and counter-acted by gravity in that system. A
vertical requires equally spaced, equally loaded wires around it's vertical
axis.

--
Respond to my "real" e-mail;
kk5dr@ev1.net
"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3de747a0.5803980@news.freeserve.net...
> Hi Folks, I think I've had a good idea to reduce the area needed to
> guy a mast and I'd like to run it past you lot, if you don't mind, as
> I'm certainly no structural engineer
> (wuce I could'nt evan spell Ingineer, now I are wun ;-)).
>
> Assume a mast 50 foot high with 4 guys at spaced around the mast at 90
> degrees and dropping at 30 degrees to the mast.
> This means a distance from the base of the mast to the guy anchors of
> about 30 foot.
>
> Now. If cross braces are placed halfway up the main mast and the guys
> are now taken from the top of the mast to the end of the cross bracing
> and then back to the base of the mast, a bit like a standard kite
> shape. This reduces the mast base to guy anchor distance to nil and
> covers half the ground area previously covered, but at 25 feet up.
>
> Am I missing something obvious here ?.
>
> thanks Mike W

4134. Re: Doventron otion schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-29 14:33:05 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <diueuu4m2kcmq03ocs9ber5o9iuaep9h6c@4ax.com>
Source record: 39695

I have the schematic here and can mail you a copy. Please contact me
by e-mail with a mailing address.

Jack K8ZOA

On Fri, 29 Nov 2002 06:52:06 GMT, LC8UBT<remove>@frisurf.no wrote:

>Can anyone help me with the schematic for the option KEYBOARD OPERATED
>SEND unit (KOS-100) for a Doventron MCP-1000C? I know that it is not
>possible to order that option from Doventron, because Hank Sharfe
>W6SKC vent silent key in april. The company Web page is altso gone. So
>if anyone can help me with a scematic so i can build that option, it
>will be wery nice. Similar circuits tha are easy to build and attach
>to my doventron will altso be great.
>
>73 DE LC8UBT
>
>LC8UBT(a)frisurf.no

4135. Re: Mast Guying query

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-29 14:53:26 UTC
From: Bill & Suzie Whatley <spud286@attbi.com>
Message-ID: <BbLF9.155898$%m4.67074@rwcrnsc52.ops.asp.att.net>
Source record: 39696

Don't quit your regular job to go into engineering... :)

If you need a visual aid to see the result of this, just use a six foot wooden dowel
for the mast, several small wood sticks for the cross braces and some scrap wire
for guys.

WA5VRL
Willis

4136. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-29 15:02:08 UTC
From: Hans Summers <Hans.Summers@Tudor.Com>
Message-ID: <as7vhh$osbsv$1@ID-61331.news.dfncis.de>
Source record: 39547

Hi Les, thanks for the interesting reply. Particularly interesting for me since I am very non-expert on many design topics. More below...

"Avery Fineman" <averyfineman@aol.com> wrote in message news:20021127143518.10280.00000159@mb-dd.aol.com...
> In article <arvpvp$m5p39$1@ID-61331.news.dfncis.de>, "Hans Summers"
> <Hans.Summers@Tudor.Com> writes:
>
> >> One of the points I wanted to highlight originally was the effect of
> >> strong near-frequency signals on direct-conversion receivers. As an
> >> example, let's assume a strong signal is received at a level of -70
> >> dbm (70.7 uV). An even stronger signal exists at -30 dbm just a
> >> few KHz away. It is at a level of 7.07 mV at the antenna.
> >>
> >> The NorCal 30 has an audio preamplifier stage with a voltage gain
> >> of 100 to 200 (depending on source resistance equivalent of the
> >> multiplexer-mixer). The example's strong signal winds up at 0.707
> >> to 1.414 V out of the preamp or 1.0 to 2.0 V peak. If that strong
> >> signal is frequency-separated by, say 4 KHz, it is within the
> >> response region of the preamp (as far as I can tell from the
> >> PacifiCon exhibit schematic). That's terribly close to the supply
> >> rail level of +3 VDC and is at or very near limiting/clipping.
> >
> >That's interesting. I am using a 12V supply for my op-amps between the mixer
> >and the polyphase network. I used to use a voltage gain of 47 in these
> >opamps, but I recently reduced it to 15 because I was worried that strong
> >signals might cause clipping. But too low and the noise of the polyphase
> >network would become significant... perhaps 15 is too low, do you think?
>
> Apologies for not inspecting your website until today...Outstanding!
> :-)
> I didn't get a chance to check out the NE5534 op-amp specs for
> noise, but since those are between multiplexer and the polyphase,
> the would be suspect first. The passive polyphase network should
> not introduce any noise so one has to look at the voltage-follower
> OP27s for noise injection.

Glad you liked the page. The top part of it had been corrupted but I've now fixed the file. I chose both the NE5534 and the OP27 for the combination of low noise whilst still not horrendously expensive. The NE5534 is 4nV (per sqrt Hz), and the OP27 3nV. The OP27 is more expensive than the NE5534, but it has an FET input with resistance of 3G as opposed to the NE5534 bipolar input at 100K. This is important for the signals coming out of the polyphase network, since the last column of the network has resistor values of 562K. I

thought the polyphase network would generate thermal noise? How do you calculate how much?

> As to strong adjacent-frequency signals slamming in at 30 db or
> better above desired signal, those can be approximated at each
> listening location, measured approximately with a conventional
> receiver, then relative strengths calculated as to possible
> clipping/limiting effects. The higher the supply rail magnitude,
> the wider the dynamic range before limiting occurs...that is a
> trade-off thing when it comes to portable QRP rigs.
>
> There's not yet any answer to limiting which will be optimum for
> each and every situation.

There are no conventional receivers at G0UPL, it's all homebrew ;-)

> >The trouble is also that anything between the mixer and the polyphase
> >network must be precisely matched in 4 paths for both amplitude and
> >amplitude response with frequency. But as Dan said, the Tayloe detector
> >inherently has a filtering characteristic (that I measured and the results
> >on my page).
>
> Agreed, but the preamps (NE5534s in yours) can be gain-matched
> within 1% without trimmers using +/- 1% fixed resistors. Any
> differential phase shifts between the preamps should be nil at audio
> frequencies on out to 20 KHz. That would leave only magnitude
> unbalance as a possible problem for "USB/LSB" rejection. That's
> a vector calculation problem to maintain both magnitude and phase
> where they should be. That "upper/lower" rejection would be as
> upset following the polyphase network as before it...adder and
> subtracter arms following the polyphase have to be as balanced.

In the polyphase network I have NO addition or subtraction after the network (see circuit diagram at http://www.hanssummers.com/radio/polyphase/index.htm). In the polyphase design it isn't necessary, you can just take the output from one row. The opposite sideband cancellation occurs within the passive network not in summer/subtracters after the network. The outputs are 0, 0, 180 and 180. Therefore I *could* use them all but I am unsure whether doing so would increase or decrease noise and imbalance, so currently I am just taking one output and it works fine. This is another advantage of 4-phase passive networks vs the I-Q active opamp phase shifting.

Another factor affecting balance is the capacitors in the detector themselves. It is often overlooked but I believe these should also be as closely matched as possible. This is because they have a capacitance dependent amplitude response vs frequency, so even if adjustment pots are used to match the amplitude at one frequency, an inbalance would occur at

other frequencies. So far I haven't tried to match mine yet, but the opposite sideband is still very invisible.

>
> The FST3255 quad multiplexer is not supposed to introduce any
> noise (quote-unquote). Worst-case differential resistance would
> be about 10 Ohms? [maximum on or closed resistance spec
> sheet value is 15 Ohms] There are probably some switching
> transients due to capacitive coupling within the multiplexer and
> with the possibility of some slight time skew of the two phases
> (digital) out of the 74HCT163. Any time skew there would have
> some effect (albeit very small) of possibly unbalancing the
> quadrature-equivalent switching...and thus a slight phase un-
> balance of the mixer output. That may not seem much af first
> but 1 degree at 14 MHz is 198 picoSeconds (or 0.198 nanoSec
> for those who don't live near Pico Boulevard...inside joke)...
> 0.794 nSec at 3.5 MHz.

Last weekend I rebuilt the detector section of my receiver in a PCB-material soldered together box. There are separate screened compartments for the polyphase network, '163 divider, 3253 multiplexer and switching sections. There will be 5 miniature relays in the "switching section" one of which selects USB/LSB, the other 4 reverse the signal direction turning the detector into an SSB modulator. See this rx will become a tcvr one day.

In the rebuild I used both sections of the 3253 dual 4:1 multiplexer in parallel, to halve the ON resistance. I also used a 74ACT163 instead of the 73HCT163, the ACT is faster. The wires are all very short. I'll take a photo in the next week or so, you'll like it. I used nice decoupling of +5V supply with chokes and capacitors in each compartment, and the +5V regulator in the shielded box too. Connections to the box are via feedthrough capacitors for the DC, and F-type satellite coax connectors for the RF, VFO and AF.

>
> The demodulator response of the Tayloe mixer is chiefly
> governed by RF source resistance plus series resistance
> to the multiplexer arm input and the capacitors at each
> arm output (330 pFd?) in shunt with the series resistance
> of each preamp input (1 K). That can be tailored to fit a
> Tayloe... :-)
>

Agreed. That's why I am thinking the capacitors should be carefully matched. This time, I also matched the 1K resistors to within 0.1% by putting them in an RC oscillator circuit and adding parallel resistance until the frequencies were the same. What I ended up with was 1K, 1K // 68K // 330K, 1K // 120K // 620K, 1K // 82K // 470K. Next time I will just by the expensive 0.1% resistors rather than this hassle.

>
> >My network circuit is shown on my webpage
> >http://www.hanssummers.com/radio/polyphase/index.htm, I read about the

> >Gingell network but don't recall exactly if mine is similar. I designed
mine
> >using the Nov 1995 QEX article (also reproduced on my page): Polyphase
> >Network Calculation using a Vector Analysis Method, by Tetsuo Yoshida
JA1KO.
> >In this design the resistance and capacitance change from column to
column,
> >rather than the usual designs which use either constant resistance or
> >constant capacitance. The design ensures constant amplitude response over
> >the whole audio range, i.e. the network is lossless. I also verified this
by
> >measurement, the results are on my page.
>
> I did a response analysis of your polyphase circuit using 10 Ohm
> source resistance and 10 to 22 MegOhm output resistance (to
> simulate the voltage-followers). My analysis program uses double
> precision with phase read-out to 0.01 degree resolution, answer
> rounded-off to nearest hundredth. There was NO ERROR of 90
> degree differential shift found between 10 Hz to 100 KHz at any
> of the outputs! Voltage amplitude is within +/- 1 db from 100 Hz
> to 10 KHz! 3 db drop-offs occur at 25 Hz and 25 KHz. I was
> very much surprised, to say the least.

That's very interesting. What analysis program are you using? Is it
something I can download from somewhere and try out?

>
> The Tayloe multiplexer-mixer ought to make one excellent SSB
> detector with the Yoshida-value polyphase network. With a
> locked-on-carrier-frequency switch frequency of the multiplexer
> it would be a good DSB AM detector. I can see all sorts of
> possibilities there as any AM or carrier detector.
>
> The multiplexer switching input time skew is, by analysis,
> somewhat "smoothed out" by the Gingell-Yoshida polyphase
> network. In sweeping 100 Hz to 10 KHz with one source
> deliberately offset in phase by 1 degree, the four outputs have
> relative quadrature errors within a +/- 0.23 degree with only a
> few frequencies bumping to +/- 1.1 degree. The RF switching
> phase relationship is still a part of the overall error. The nicety
> of the polyphase network with four quadrature phase input (or
> even just two as in Peter Martinez' example in Radio
> Communication in Pat Hawker's column about 1974) is that
> input phase skew is less of a problem over the passband.

That's very interesting. The 4-path polyphase network is also (I have read)
somewhat more tolerant of component tolerances than 2-path IQ active opamp
phase shifting. The improvement in sideband suppression for comparable
networks is said to be something like 20dB. But, the polyphase network is
lossy, leading to more amplification requirement and thereby noise - until,
that is, Yoshida's version which is loss free over the audio band. In my

opinion this is an excellent receiver configuration.

73

Hans G0UPL

Hans Summers
http://www.HansSummers.Com

4137. Re: Need help to replace J0 3901 UHF RF transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-29 15:34:56 UTC
From: Peter Lim <peterlm@pc.jaring.my>
Message-ID: <as80sm$4qc$1@news6.jaring.my>
Source record: 39548

Many thanks for your assistance heer, Mike. I certainly will give this a try.

Cheers,

Peter Lim

"Mike G." <nospam@my.email.address> wrote in message news:ifebuu8nm9l97p325o3nm0k7rhqs8riupq@4ax.com...
> On Thu, 28 Nov 2002 12:05:00 +0800, "Peter Lim" <peterlm@pc.jaring.my>
> wrote:
>
> >Can anyone help me to get a direct replacement for th J0 3901 UHF RF
> >transistor? Is the MRF641 or MRF644 a direct replacement?
> >
> >Appreciate any help to peterlm@pc.jaring.my
> >
> >Cheers.
>
> After the Thanksgiving break, you might want to email the guys at
> www.ghz.com. The J0 is a very old series of transistors. If anyone
> would know of a replacement, these guys would.
>
> Cheers,
> Mike

4138. Wanted: schematic for 430 MHz PA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-29 16:20:51 UTC
From: Truckdrivingman <truckdrivingman@hotmail.com>
Message-ID: <as8459$olf1t$1@ID-137411.news.dfncis.de>
Source record: 39549

Hi all
I'm looking for a schematic of a 70cm transistor PA.Does anybody knows some interesting links ?

73
Tom

4139. HV Caps - Data Please?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-29 18:30:51 UTC
From: GeeOne <robert@g1zjp.freeserve.co.uk>
Message-ID: <as8bo4ssv1@news6.svr.pol.co.uk>
Source record: 39551

I have just been given a small quantity of Pye Capacitors. The following
appears on them
RED 220uf
350VDC WKG
Plain Con Neg
EP-203-S
Feb-75-3
Has anybody any data on them, please which might give the ripple current??
Thanks.

4140. Re: No more small parts at Radio Shack--Ain't So!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-29 23:11:43 UTC
From: Bob McConnell <rmcconne.NOSPAM@lightlink.com>
Message-ID: <6erfuu4pvt78qin7nm95s9tbqdl73rsrbd@4ax.com>
Source record: 39553

On 28 Nov 2002 02:09:09 -0800, ablight@alphalink.com.au (Andrew
VK3BFA) wrote:

>Bob McConnell <rmcconne.NOSPAM@lightlink.com> wrote in message
news:<e02buusoqcn2fu28t8chh45nb848qpbtcc@4ax.com>...
>> On 27 Nov 2002 15:00:47 -0800, ablight@alphalink.com.au (Andrew
>> VK3BFA) wrote:
>>
>> >"john walton" <jdwalton@comcast.net> wrote in message
news:<oOmdnXhszP4zVnmgXTWcqw@comcast.com>...
>> >> You obviously don't have children.
>> >>
>> >> > >
>> >> > And where do you take a mentally defective parent for exchange? I should
>> >> > hope my child 1. Knows that V.C.R's don't play sandwiches, and 2. Never
>> >> > took a sandwich for a guided tour of my appliances, knowing the sandwich
>> >> > is approved for use with kitchenware, and mouths only.
>> >> >
>> >
>> >So true, you are dealing with a different species in small children
>> >and they do not respond at all to logic, consequences, instructions -
>> >you just have to put up with this sort of stuff. My exception is my
>> >workshop - I ALWAYS keep it locked, and they are under severe death
>> >threats if they go in there unsupervised.
>> >
>> >As a working service tech, if you see a harrassed young parent walking
>> >up the path with a 3 yo in tow, and a VCR under her arm, its almost a
>> >certainty that SOMETHING has been stuffed into the tape flap - the
>> >other thing is kiddies tapes fouling the video heads - they get played
>> >so many times they are very worn and shed oxide.
>> >
>> >Just part of being a parent, there is no rational excuse or
>> >justification for being one, its just the way it is.
>> >
>> >Andrew
>> >
>> >My spellings fine, my typing is crap!
>>
>> Or maybe they just need to learn how to move fragile equipment up out
>> of the reach of their little terrors. Nothing that could harm small
>> children or be harmed by them should be left where they can reach it.
>> Safety locks on all of the cabinets with soap and bleach, and all
>> glass and electronics on the upper shelves. We learned that early with
>> our four children, and are trying to teach our grandchildren's parents

>> the same lessons without the same (expensive) consequences we dealt
>> with.
>>
>> Bob McConnell
>> N2SPP
>
>Cant disagree with any of that Bob, BUT unless you practice 24hr
>vigilance the cunning little devils will find a way to get past your
>guard - and in spite of everything you do, it will happen!. My fantasy
>of the child proof home is tiled walls to adult head height, a
>stainless steel floor sloping to a central drain, and everything in
>the room automatically retracts into the ceiling when any animate
>object under 3ft high enters the area!
>
>But seriously, you do all the kiddy safe things you can think of, but
>small (and hopefully not serious) accidents will happen.
>
>PS - we are grandparents, so know most of the tricks, but even know
>still get caught - like, "wheres the remote control...."
>
>Andrew VK3BFA

Hi Andrew,

I would not classify the sandwich in the VCR as an accident, but negligence. Even the most basic child proofing measures would have prevented it. Think about it: the kid knows that when mom or dad puts something in that slot the TV shows a lot of pretty pictures. He just wants to see what pictures come out of his sandwich. It's all very logical and very predictible. The mandatory Parenting 101 course should teach them to move the VCR (dvd, computer, etc.) out of his reach before he tries that experiment.

Once the basic preventive measures have been taken, the parents should be able to relax their vigilance just a little bit while at home. But if they don't take those first steps, they will spend all of their time chasing the kid and they'll never have enough energy to get through a day.

We now have a nice finished wood box for the remotes that sits right next to the TV. We use it even when the grandkids aren't here, just so we can find all five of them when we want them. It gets moved to a higher shelf when the young 'uns visit.

73's,

Bob McConnell
N2SPP

4141. Re: Amidon toroids ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-29 23:42:36 UTC
From: la8ak.xnd@online.no
Message-ID: <3de7eaec.8831094@news.online.no>
Source record: 39554

On 29. november 2002 11:29T, G0MRF@aol.com wrote:

>A short note for any home constructors.
>
>Micrometals, producers of the popular T-200-2 and other toroids,
>have introduced a new series called the 200C series.
>
> As the name suggests, these cores can operate at very high flux
> densities and can run up to 200 degrees.
>
> The first two materials are the -60 and -70 with permeabilities
> of 55 and 100 respectively.
>These are described as "magnetic alloys" with properties similar to Iron powder.
>
> Toroids between 0.16 inch and 4 inches are being produced
> in addition to E cores and other formats. Other materials in the series
> are planned and these will have permeabilities >100 and <55.
>
> So if you're planning a winter dx-pedition and you fancy a cup of tea,
> just remember to bring a kettle and make sure your 200C
> cores are near the top of the transmitter.

> 73

> David G0MRF
--
remove ,xnd to reply

4142. Re: Mast Guying query

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 00:45:23 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <DSTF9.20125$oa.921644@news1.east.cox.net>
Source record: 39555

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3de747a0.5803980@news.freeserve.net...
> Hi

I'd worry about several things. Most of the guy stress will attempt
to pull upwards on the anchors vs. trying to pull the anchors sideways
through the soil... You'll need a deeper and wider guy anchor base.
Most tower manufacturers show the guys out quite a distance from
the tower to minimize the upward pulling.

I'd also worry that a lot of the wind loading will try and twist the
mast and crossbraces so that the whole structure might tend
to corkscrew and collapse.

I'm not a structural engineer either, but I'd seek the advice of one
before trying something like this.

Pete

4143. PK-Basic keyer question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 01:49:20 UTC
From: "Joe S." <joe@schlatter.org>
Message-ID: <as95mf029s@enews1.newsguy.com>
Source record: 39558
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I just purchased a couple of the PK-Basic keyer kits from Jackson Harbor. Very small; I plan to mount one in a mini-Altoids box -- smaller than the common Altoids box. Here are a few questions for anyone out there who has experience with this keyer:

1. Keyer needs 3 to 5 volts. How about running it off two or three watch batteries?
2. Keyer needs a piezo transducer (basically a very high impedance speaker) so you can hear the sidetone. Can't I just use an RC circuit and use common ear bud earphones -- the kind you can pick up at Radio Shack or any other place that fine electronic equipment is sold?

Thanks.

--

Regards,
Joe S.

4144. Re: Mast Guying query

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 01:53:46 UTC
From: "Joe S." <joe@schlatter.org>
Message-ID: <as95mg129s@enews1.newsguy.com>
Source record: 39557

Don't screw with Mother Nature. Guy wires are run out from the tower to
distant points for a reason: Because that's what works and all else fails.
Believe it or not, the folks who manufacture and sell towers know what they
are talking about.

--

Regards,
Joe S.
W4HH

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3de747a0.5803980@news.freeserve.net...
> Hi Folks, I think I've had a good idea to reduce the area needed to
> guy a mast and I'd like to run it past you lot, if you don't mind, as
> I'm certainly no structural engineer
> (wuce I could'nt evan spell Ingineer, now I are wun ;-)).
>
> Assume a mast 50 foot high with 4 guys at spaced around the mast at 90
> degrees and dropping at 30 degrees to the mast.
> This means a distance from the base of the mast to the guy anchors of
> about 30 foot.
>
> Now. If cross braces are placed halfway up the main mast and the guys
> are now taken from the top of the mast to the end of the cross bracing
> and then back to the base of the mast, a bit like a standard kite
> shape. This reduces the mast base to guy anchor distance to nil and
> covers half the ground area previously covered, but at 25 feet up.
>
> Am I missing something obvious here ?.
>
> thanks Mike W

4145. Re: No more small parts at Radio Shack--Ain't So!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 02:09:29 UTC
From: Idontwantspam@net
Message-ID: <3de81d2b.46546079@news.bellatlantic.net>
Source record: 39556

On Fri, 29 Nov 2002 08:21:39 -0600, "Chuck/KE4ETH"
<chuck_hawks@hotmailNOSPAMORAMA.com> wrote:

>Wal-Mart in the main isles is just as bad.
>
Many retailers "bend" the fire rules a bit during the holiday shopping
frenzy.

Take a count of how many fire exits are blocked by merchandise this
time of year. And you'd be amazed at how many sets of little light
bulbs you can plug into one flimsy extension cord.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4146. Re: Mast Guying query

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 03:05:54 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <uugaohj7nlkk82@corp.supernews.com>
Source record: 39559

It would work *if* the guy wire, support brace, and mast can handle the stresses, the mast can handle the twist put on it by the guy wires & braces & any antennas during high winds and the base is large enough to support the free-standing assembly. It would be similar to a free-standing tower.

In the typical guyed tower installation, the guy wires translate side pressure on the tower into downward pressure as well as preventing the tower from twisting. The base of a guyed tower can be rather small because it primarily needs to support the downward pressure. The base of a free-standing tower needs to be much larger because it needs to keep the tower from toppling over and from twisting.

4147. Re: No more small parts at Radio Shack--Ain't So!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 04:02:56 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3DE83870.15E9837A@mfi.net>
Source record: 39560

"Gary S." wrote:
>
> On Fri, 29 Nov 2002 08:21:39 -0600, "Chuck/KE4ETH"
> <chuck_hawks@hotmailNOSPAMORAMA.com> wrote:
>
> >Wal-Mart in the main isles is just as bad.
> >
> Many retailers "bend" the fire rules a bit during the holiday shopping
> frenzy.
>
> Take a count of how many fire exits are blocked by merchandise this
> time of year. And you'd be amazed at how many sets of little light
> bulbs you can plug into one flimsy extension cord.
>
> Happy trails,
> Gary (net.yogi.bear)
> --
> at the 51st percentile of ursine intelligence
>
> Gary D. Schwartz, Needham, MA, USA
> Please reply to: garyDOTschwartzATpoboxDOTcom

Some stores ignore safety issues yea round. You go into some places that use the high shelving like in a supermarket, but eight to ten feet tall. One side is loaded with lightweight items, and the other has heavy appliances and the top is six inches out of line. They are exceeding the design strength of the shelves, and one day, they will tip over, or a couple welds will shear off, and the thing will fall. Probably when someone is trying to lift a heavy box off a shelf, and it will all come down on them. Some places refuse to listen, and the local morons don't see the danger, so i do not shop in those stores. I guess someone will have to die before they pay attention to the danger.

As far as too many lights, the electric bill is too high because of electric heat, so I don't bother with a tree or lights. There is no one in the house under 50 so Christmas is in the heart, not the house. I might put a string of ten miniature bulbs up around the glass in the front door, but not if I have to dig very far to find them. I have trouble enough walking, and even standing some days to worry about something so frivolous.
--

Michael A. Terrell
Central Florida

4148. Heathkit SG-8

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 04:36:28 UTC
From: Edward Lewis <kq6dx@pacbell.net>
Message-ID: <p6fguugmfreapu4nbkir5qobh9684maa8s@4ax.com>
Source record: 39561

I am rebuilding a Heathkit SG-8 signal generator as described in November Popular Communications. the article says to replace the selenium rectifier with a 1N4007 silicon diode and a 100 ohm resistor in series. Does it make any difference what order the diode and resistor are in. would I install the resistor between the power transformer and the diode or does the diode come first. Also I used 450 volt 22uf filter caps instead of 160 volt 22uf that were called for. I think capacitors can be replaced with higher voltage caps am I correct. 73 Ed
Edward Lewis KQ6DX
kq6dx@pacbell.net

4149. Re: Heathkit SG-8

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 05:18:15 UTC
From: Bill M <"exray\\@n-o- .caribe.net>">
Message-ID: <uugigmoekmo66c@corp.supernews.com>
Source record: 39562

Edward Lewis wrote:
> I am rebuilding a Heathkit SG-8 signal generator as described in
> November Popular Communications. the article says to replace the
> selenium rectifier with a 1N4007 silicon diode and a 100 ohm resistor
> in series. Does it make any difference what order the diode and
> resistor are in. would I install the resistor between the power
> transformer and the diode or does the diode come first. Also I used
> 450 volt 22uf filter caps instead of 160 volt 22uf that were called
> for. I think capacitors can be replaced with higher voltage caps am I
> correct. 73 Ed
> Edward Lewis KQ6DX
> kq6dx@pacbell.net

You might gain a bit of surge protection for the diode with the 100 ohm resistor on the xfmr side but this is normally not an issue with an xfmr operated set. Voltage wise it won't make any difference.
The 450 volt caps will be fine. The only caveat here is that since they are working way undervoltage they may 'form' to that voltage and never be good at their full 450v rating in the future. Not really an issue unless you plan pulling them out to use elsewhere.
Actually, thats a piece of "TV Shop Lore" that was true with older caps but I really don't know if its the case with modern units. I have heard that it was no longer valid but others insist its still true.

-Bill

4150. Third party CTCSS Sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 08:11:44 UTC
From: Norman Franklin <normanf@pacbell.net>
Message-ID: <3DE87363.CC12C0F6@pacbell.net>
Source record: 39563
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Hi,
This question may have already been asked but I could not find it on
a
search of Google.
How easy or hard is it to install a CTCSS encoder from one of the
third
party vendors in a rig? In my case I have an older Kenwood 2 meter unit

that I would like to add an encoder to. The TU-3 that is the Kenwood
module is no longer available. I've seen adds for other encoders but am

not sure this is a good idea.
Any input on this topic would be greatly appreciated. Thanks in
advance

Norman KG6NMT

4151. Re: Third party CTCSS Sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 12:13:15 UTC
From: Kevin <kberlen@ticz.com>
Message-ID: <asaa0u01j93@enews1.newsguy.com>
Source record: 39564
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

try here:
http://www.com-spec.com

73, Kevin, K9HX

"Norman Franklin" <normanf@pacbell.net> wrote in message
news:3DE87363.CC12C0F6@pacbell.net...
> Hi,
> This question may have already been asked but I could not find it on
> a
> search of Google.
> How easy or hard is it to install a CTCSS encoder from one of the
> third
> party vendors in a rig? In my case I have an older Kenwood 2 meter unit
>
> that I would like to add an encoder to. The TU-3 that is the Kenwood
> module is no longer available. I've seen adds for other encoders but am
>
> not sure this is a good idea.
> Any input on this topic would be greatly appreciated. Thanks in
> advance
>
> Norman KG6NMT
>

4152. WTD: Metrotek CB radios

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 13:42:03 UTC
From: KC0EH <okiemansc@yahoo.com>
Message-ID: <Le3G9.7312$yy.975334@newsread1.prod.itd.earthlink.net>
Source record: 39565
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb

Hi,
I am interested in finding the following Metrotek radios all with the
cream/tan color scheme. Need not be working.Please include price and
condition.
Mustang II
Pacer II
Colt 23
THANKS,
...Charlie...KC0EH...

4153. Re: No more small parts at Radio Shack--Ain't So!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 14:31:54 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <aN5G9.43302$sT3.32816@news.bellsouth.net>
Source record: 39572

Well, main isles at the holiday season.

But, in the clothing sections, mainly the womens. It's hard to get a cart through at any time of year. And even harder to push someone in a wheelchair.

--
73,
Chuck
KE4ETH
Remove the obvious from Email.

"Gary S." <Idontwantspam@net> wrote in message news:3de81d2b.46546079@news.bellatlantic.net...
> On Fri, 29 Nov 2002 08:21:39 -0600, "Chuck/KE4ETH"
> <chuck_hawks@hotmailNOSPAMORAMA.com> wrote:
>
> >Wal-Mart in the main isles is just as bad.
> >
> Many retailers "bend" the fire rules a bit during the holiday shopping
> frenzy.
>
> Take a count of how many fire exits are blocked by merchandise this
> time of year. And you'd be amazed at how many sets of little light
> bulbs you can plug into one flimsy extension cord.
>
> Happy trails,
> Gary (net.yogi.bear)
> --
> at the 51st percentile of ursine intelligence
>
> Gary D. Schwartz, Needham, MA, USA
> Please reply to: garyDOTschwartzATpoboxDOTcom

4154. Re: WTD: Metrotek CB radios

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 14:53:00 UTC
From: Gary Tait <taitg@hurontel.on.ca>
Message-ID: <c3khuuc0qfmnhstjtaoivd4m4bdcibmejd@4ax.com>
Source record: 39566
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb

On Sat, 30 Nov 2002 13:42:03 GMT, "KC0EH" <okiemansc@yahoo.com> wrote:

>Hi,
>I am interested in finding the following Metrotek radios all with the
>cream/tan color scheme. Need not be working.Please include price and
>condition.
>Mustang II
>Pacer II
>Colt 23
>THANKS,
>...Charlie...KC0EH...
>
Are these the ones with a Motorola 145106 based PLL synthesizer on
it's own board? I have a couple of them (not that I want to get rid of
them). What are your plans for them?

4155. MAX712 NiMh Charger Design Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 15:19:37 UTC
From: jordan@accesscable.net
Message-ID: <2a4ddbec.0211300719.6d117836@posting.google.com>
Source record: 39567

Hello, I'm trying to get a MAX712 based charger working for a 14 cell AA pack. I'm trying to follow the datasheets "Typical Operating Circuit" design and I'm running into trouble with the high DC IN voltage that I will have to use.

In fig 5,pg 9 & fig 15,pg 15 of the datasheet it shows how to deal with high DC IN but in the evaluation kit it has not used these at all. Since the evaluation kit says it's possible to charge up to 16 series cells it leaves me with a few questions:

1) Do I need to use both of these voltage limiting circuits or can I just use one? If so which one?

2) If I do use both what happens to the 500 ohm resistor attached to the gate of Q1 and the DRV pin,(fig 15) when the 2N3904 is placed at the DRV pin,(fig 5)? Do I get rid of the resistor or do I attach it to the drain of the 2N3904 and the gate of Q1?

Thanks for your help
Jordan

Here are the two datasheets for the circuits:
http://pdfserv.maxim-ic.com/arpdf/MAX712-MAX713.pdf
http://pdfserv.maxim-ic.com/arpdf/MAX712EVKIT.pdf

4156. Re: Heathkit SG-8

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 16:32:00 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <4K5G9.23941$oa.1051217@news1.east.cox.net>
Source record: 39568

Ed

You can substitute 450 volt caps without problem.

The order of the resistor and diode are not critical. Just
make sure the diode is orientated with the Cathode band
towards the positive end of the first electrolytic. As Bill M.
noted, you can probably delete the resistor; it's not a big
issue in that circuit.

If you have anymore queries regarding the SG-8, you can
contact me direct at RadioConnection@juno.com

Peter B,. Pop'Comm

"Edward Lewis" <kq6dx@pacbell.net> wrote in message
news:p6fguugmfreapu4nbkir5qobh9684maa8s@4ax.com...
> I am rebuilding a Heathkit SG-8 signal generator as described in
> November Popular Communications. the article says to replace the
> selenium rectifier with a 1N4007 silicon diode and a 100 ohm resistor
> in series. Does it make any difference what order the diode and
> resistor are in. would I install the resistor between the power
> transformer and the diode or does the diode come first. Also I used
> 450 volt 22uf filter caps instead of 160 volt 22uf that were called
> for. I think capacitors can be replaced with higher voltage caps am I
> correct. 73 Ed
> Edward Lewis KQ6DX
> kq6dx@pacbell.net

4157. Re: Third party CTCSS Sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 16:40:07 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <asapla$4jt$1@slb4.atl.mindspring.net>
Source record: 39569
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Generally, adding a third party CTCSS board is not difficult. They usually have enough drive so you can use a fairly high value resistor and connect it to the microphone input.

There are a couple of problems....

One problem is, it is not easy to change the PL frequency when you install the CTCSS board inside the radio. You may want to mount it in an external box with a couple of connectors so you can connect the microphone to the box and then a second cable from the box to the 2 meter rig. This way, you have the CTCSS board where you can get to it to chenge the PL frequency. Maybe even set up a selector switch of some sort for the PL frequencies you want.

The other possible problem is a possibility that the very low frequency PL tone might disturb the radio. A unit I modified once injected the audio into the phase lock loop and that was how they FM'd the signal. Trouble was, the PL tone was in the phase lock loop bandwidth. Well..... That's a problem.

Anyway, a CTCSS board is fairly cheap, and it will most likely work for you but be prepared for the possibility. It depends on how the radio was designed.

Jim Pennell
N6BIU

4158. FS: Hallicrafters type knobs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 16:42:30 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <WT5G9.37513$hK4.3300457@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39570

2 1/4" dia, three spoked, open between spokes-similar to Hallicrafters or
may be the same.
on ebay under 'doughnut knobs' or seller 'heytubeguy'

73

4159. FS:HV DIODES 1.2KV

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 16:49:06 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <6_5G9.37522$hK4.3302307@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39571

1200V AT 1.5a=$0.10 EA
AT 3.0a=$0.20 EA-VERY LIMITED NUMBER
AT 6.0a=$0.50 EA-VERY LIMITED NUMBER

ALL + shipping, heytubeguy

4160. Re: Third party CTCSS Sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 17:22:33 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <tt6G9.24442$oa.1060319@news1.east.cox.net>
Source record: 39573
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

"Norman Franklin" <normanf@pacbell.net> wrote in message
news:3DE87363.CC12C0F6@pacbell.net...
> Hi,
> This question may have already been asked but I could not find it on
> a
> search of Google.
> How easy or hard is it to install a CTCSS encoder from one of the
> third
> party vendors in a rig? In my case I have an older Kenwood 2 meter unit
>
> that I would like to add an encoder to. The TU-3 that is the Kenwood
> module is no longer available. I've seen adds for other encoders but am
>
> not sure this is a good idea.
> Any input on this topic would be greatly appreciated. Thanks in
> advance
>
> Norman KG6NMT

Absolutely no problem, since the radio is designed for a PL board.

Do not feed the PL into the mic input, most FM rigs tailor the audio
response, the PL should be feed as close to the modulator as possible.
You'll need to determine which pin for the TU3 is the PL tone input.

The biggest problem you will have is setting the PL deviation to
600 or 700 Hz. If you don't have access to a service monitor, the
easiest way is to use a setting just above the minimum setting that
will reliably key the repeater.

Peter
>

4161. Re: Brainstorming Designs for new 40 meter txcvr..

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 19:48:58 UTC
From: averyfineman@aol.com
Message-ID: <20021130144858.10597.00002511@mb-mq.aol.com>
Source record: 39574

In article <as7vhh$osbsv$1@ID-61331.news.dfncis.de>, "Hans Summers"
<Hans.Summers@Tudor.Com> writes:

>> Apologies for not inspecting your website until today...Outstanding!
>> :-)
>> I didn't get a chance to check out the NE5534 op-amp specs for
>> noise, but since those are between multiplexer and the polyphase,
>> the would be suspect first. The passive polyphase network should
>> not introduce any noise so one has to look at the voltage-follower
>> OP27s for noise injection.
>
>Glad you liked the page. The top part of it had been corrupted but I've now
>fixed the file. I chose both the NE5534 and the OP27 for the combination of
>low noise whilst still not horrendously expensive. The NE5534 is 4nV (per
>sqrt Hz), and the OP27 3nV. The OP27 is more expensive than the NE5534, but
>it has an FET input with resistance of 3G as opposed to the NE5534 bipolar
>input at 100K. This is important for the signals coming out of the polyphase
>network, since the last column of the network has resistor values of 562K. I
>thought the polyphase network would generate thermal noise? How do you
>calculate how much?

Heh, heh, caught me there! The formula for an equivalent RMS
value of voltage from a resistor is e = SQRT(4*k*T*B*R) where
k=1.38*10^(-23) [Boltzman Constant], T=temperature in degrees
Kelvin (conventional standard is 290 K but I like to use 300 to
310 K for reality warmth in enclosures), B=bandwidth in Hz,
R=resistance in Ohms.

At 300 Kelvin and 3 KHz bandwidth, a 562K resistor would
generate 5.28 uV. "Noisy" if used in a direct-conversion
receiver! :-) :-(Fortunately, there is voltage preamplification
ahead of the network. On the other hand, random noise adds
in power so that the total from four network arms results in
total noise about twice that of the single resistor (very rought
approximation). Random noise won't be "cancelled" by any
audio differencing by op-amps following the network.

>> Agreed, but the preamps (NE5534s in yours) can be gain-matched
>> within 1% without trimmers using +/- 1% fixed resistors. Any
>> differential phase shifts between the preamps should be nil at audio
>> frequencies on out to 20 KHz. That would leave only magnitude
>> unbalance as a possible problem for "USB/LSB" rejection. That's
>> a vector calculation problem to maintain both magnitude and phase
>> where they should be. That "upper/lower" rejection would be as
>> upset following the polyphase network as before it...adder and

>> subtracter arms following the polyphase have to be as balanced.
>
>In the polyphase network I have NO addition or subtraction after the network
>(see circuit diagram at
>http://www.hanssummers.com/radio/polyphase/index.htm). In the polyphase
>design it isn't necessary, you can just take the output from one row. The
>opposite sideband cancellation occurs within the passive network not in
>summer/subtracters after the network. The outputs are 0, 0, 180 and 180.
>Therefore I *could* use them all but I am unsure whether doing so would
>increase or decrease noise and imbalance, so currently I am just taking one
>output and it works fine. This is another advantage of 4-phase passive
>networks vs the I-Q active opamp phase shifting.

We have a slight disagreement there. If there are four switched phases resulting from the multiplexer-switch control lines input from the dual FF, then there will be four phases of switched RF out of the multiplexer-switch...which reduce, in a rather horrendous equation to the "baseband" (audio, the CW beat or sidebands of an AM signal) and "pulsed" RF from the antenna on through the switch. The 47 Ohm resistor in series with MUX input and the capacitors in shunt with each MUX output form an R-C lowpass so that the "baseband" or audio predominates into the polyphase network input.

With only on-off keyed CW or pure SSB no-carrier there isn't a real need for any polyphase network for just hearing beeps or the pure SSB voice. Any convenient audio filtering can be done. But, with the polyphase network and summing-differencing of audio from the output, one can create a sort of "stereo" effect based on the spectral content on either side of the local oscillator. The left ear could listen only to the low-frequency side of the LO while the right ear could listen only to the high-frequency side. Several examples of such "stereo" audio from HF receivers have been done with articles in the Antennex site to at least one in QST. I kludged up such a detector in the late 1970s for a Heathkit receiver. It has a very interesting effect of letting binaural hearing "filter" QRM to one "side" (ear). When tuning with high gain, the effect is most unusual of background noise seeming to move right to left. Has to be heard to be appreciated... :-)

>Another factor affecting balance is the capacitors in the detector
>themselves. It is often overlooked but I believe these should also be as
>closely matched as possible. This is because they have a capacitance
>dependent amplitude response vs frequency, so even if adjustment pots are
>used to match the amplitude at one frequency, an inbalance would occur at
>other frequencies. So far I haven't tried to match mine yet, but the
>opposite sideband is still very invisible.

To get nit-picky, the On resistance of the MUX has to be determined as well as the tolerances of the capacitors (on-resistance in series

with the single 47 Ohm resistor at MUX input). At 300 Hz there
won't be any pronounced unbalance from 5 or even 10% tolerance
caps. Might be more at 3 KHz. Should be an easy thing to
calculate...but note that it also affects relative phase as well as
amplitude. Off-hand I don't think it is of great concern.

>> I did a response analysis of your polyphase circuit using 10 Ohm
>> source resistance and 10 to 22 MegOhm output resistance (to
>> simulate the voltage-followers). My analysis program uses double
>> precision with phase read-out to 0.01 degree resolution, answer
>> rounded-off to nearest hundredth. There was NO ERROR of 90
>> degree differential shift found between 10 Hz to 100 KHz at any
>> of the outputs! Voltage amplitude is within +/- 1 db from 100 Hz
>> to 10 KHz! 3 db drop-offs occur at 25 Hz and 25 KHz. I was
>> very much surprised, to say the least.
>
>That's very interesting. What analysis program are you using? Is it
>something I can download from somewhere and try out?

Some SPICE programs will handle this network...free demo
versions can't do it because of restricted node and branch
limits (roughly 140 branches and 36 nodes). I use my own
shareware program LINEA which was released in 1993. DOS
level only, frequency-domain analysis only, it isn't attractive
to the eye but very accurate (double-precision every calculation)
and proven. I'll attach a 306K package in private e-mail to you..

>That's very interesting. The 4-path polyphase network is also (I have read)
>somewhat more tolerant of component tolerances than 2-path IQ active opamp
>phase shifting. The improvement in sideband suppression for comparable
>networks is said to be something like 20dB. But, the polyphase network is
>lossy, leading to more amplification requirement and thereby noise - until,
>that is, Yoshida's version which is loss free over the audio band. In my
>opinion this is an excellent receiver configuration.

I get a slight voltage gain of the Yoshida version of the Gingell
polyphase, about 1.6 X at mid-band. The analysis model assumes
a low source impedance (10 Ohms) and 22 MegOhms termination
resistors (rough estimate of some FET op-amps I've used). On a
quick check there didn't seem to much effect (less than 0.1 degree
and 0.2 db) of changing either source impedance (to 50 Ohms) or
dropping termination resistors to 10 MegOhms.

In the Technical Topics column of Radio Communication of 1973,
the "standard" Gingell network had only 0 and 180 degree input
phases but the output phase response over 300 Hz to 3 KHz was
quite adequate for conventional 40 db rejection SSB demodulation.
The Yoshida version with the four-phase Tayloe Mixer input is
MUCH better in response and together could make a "high fidelity"
AM receiver if so desired.

Keep on slinging that solder and keeping the website up to date!

Len Anderson
retired (from regular hours) electronic engineer person

4162. Drain Modulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 22:52:11 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <5OD9yhDbEU69Ewb6@fslife.co.uk>
Source record: 39575

I'm looking for any articles on the web dealing with Drain Modulation or any other transformerless solid state AM modulator designs.

Any references appreciated.

I'm aware of Steve Cloutier's PWM/class-E site but can find little else.

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

4163. FA: Electronics, Physics, UNIX Books

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 23:27:54 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <_PbG9.25353$oa.1129152@news1.east.cox.net>
Source record: 39576
Cross-posted to:
alt.ham-radio.marketplace,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment

Practical Digital Design Using ICs 1973509731
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=29375&item=1973509731

Circuits, Electronics, and Signal Analysis 1973510462

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=29375&item=1973510462

Network Design Essentials 1973511397
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1114&item=1973511397

Experimental Stress Analysis 1973511931
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=1112&item=1973511931

UNIX System V Print Service Administration 1973512608
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=378&item=1973512608

thanks for looking!

4164. FA: More Panel Meters!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-11-30 23:38:00 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <sZbG9.25380$oa.1130741@news1.east.cox.net>
Source record: 39577
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment

0-1.2 Kiloamp DC Panel Meter 1922332186
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4660&item=1922332186

0-500 AC Amps Panel Meter 1922332561
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4660&item=1922332561

0-400 AC Amps Panel Meter 1922332863
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4660&item=1922332863

Thanks for looking..

4165. Re: VFO Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-01 00:57:12 UTC
From: Bill M <"exray\\@n-o- .caribe.net>">
Message-ID: <uuinidfqjunj0f@corp.supernews.com>
Source record: 39578
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

KU4YP wrote:
> hello all,
>
> have a question. i am putting together a novice AM/CW station here
> (knightkit t-60/r-55a) just for straight key nights and wanting to play am
> radio (plus, i have not even begun to gather parts for my 813's driving
> 813's tx, but that is another story.). anyway, question is, i have a
> siltronix model 90 vfo that i have had for some time and do not use. i was
> looking for a vfo for the t-60 and thought, why can't i mod the siltronix
> vfo for the ham bands. i have a few 243 crystals around, but would like vfo
> coverage. wanted 5 band coverage 80-10, no warc.
>
> has anyone ever done this? or am i venturing into stupid here?
>
> thanks in advance.
>
>
> --
> 73 de KU4YP "There is no spoon....."
> Michael Prevatt
> Willow Oak, Florida
> Homepage: http://home.earthlink.net/~ku4yp
>

Hi Michael,
As mentioned before I have been toying with a similar idea.
Tonight I pulled out my old Galaxy V 5.0-5.5 Mc VFO and decided to do
some tweaking to see just how low it might go.
By adjusting the coil slug only I was able to move down about 275 kc.
So I started adding more capacitance across the tuning cap. At around
270pf I got it down to 3500, with a tuning range of almost exactly 3500
to 3600.
If you know the Galaxy VFO, it has a very silky tuning and the dial tics
are in linear 5 kc steps. I think with a bit of tweaking I can get them
to be exactly 1kc tics and relatively linear across the dial. Boy, the
feel of the tuning is great in this range.
Moving this particular VFO up to 7 Mcs would result in touchier tuning
than the original 5kc tics but I wouldn't suspect it would be so touchy
as to be prohibitive. If I can unstick the coil slug :-(I might give
it a try just to see.
There is also a bandpass xfmr in the circuit. It still peaks well at
this frequency range without modification. Actually the VFO has more
output than at the original frequency, 5.5v p-p vs. 3.5v p-p according

to my crude measurements.
My intended use is with a Harvey Wells Bandmaster which prefers a 3.5 fundamental right thru 15 meters and of course my main interest is the CW frequencies. I suppose if I wanted to try 80 AM I could switch in a different cap or something.
So, the idea of modifying yours might have similar merit. This mod should work out great in my situation.

-Bill WX4A

4166. Re: Drain Modulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-01 02:26:46 UTC
From: lc <larryc@northwest.com>
Message-ID: <3DE97366.AC2D7F3B@northwest.com>
Source record: 39579

The 4th Edition VHF manual (by Jessop), pages 5.23 and 5.24, has a reference schematic and basic ckt description of what you seek. Add'l reference in the Jessop book is "Electronic Engineering, June 1978"

LarryC
==========
Philip de Cadenet wrote:

> I'm looking for any articles on the web dealing with Drain Modulation or
> any other transformerless solid state AM modulator designs.
>
> Any references appreciated.
>
> I'm aware of Steve Cloutier's PWM/class-E site but can find little else.
>
> (((73)))
> --
> Philip de Cadenet G4ZOW
> Transmitters 'R' Us
> http://www.transmittersrus.com

4167. Re: Mast Guying query

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-01 05:17:44 UTC
From: Doug Faunt N6TQS +1-510-655-8604 <faunt@panix.com>
Message-ID: <mfrr8d248sn.fsf@panix2.panix.com>
Source record: 39580

"Joe S." <joe@schlatter.org> writes:

> Don't screw with Mother Nature. Guy wires are run out from the tower to
> distant points for a reason: Because that's what works and all else fails.
> Believe it or not, the folks who manufacture and sell towers know what they
> are talking about.
>
> "Mike W" <mike@corn2.freeserve.co.uk> wrote in message
> news:3de747a0.5803980@news.freeserve.net...
> > Hi Folks, I think I've had a good idea to reduce the area needed to
> > guy a mast and I'd like to run it past you lot, if you don't mind, as
> > I'm certainly no structural engineer
> > (wuce I could'nt evan spell Ingineer, now I are wun ;-)).
> >
> > Assume a mast 50 foot high with 4 guys at spaced around the mast at 90
> > degrees and dropping at 30 degrees to the mast.
> > This means a distance from the base of the mast to the guy anchors of
> > about 30 foot.
> >
> > Now. If cross braces are placed halfway up the main mast and the guys
> > are now taken from the top of the mast to the end of the cross bracing
> > and then back to the base of the mast, a bit like a standard kite
> > shape. This reduces the mast base to guy anchor distance to nil and
> > covers half the ground area previously covered, but at 25 feet up.
> >

Many of the old LF masts from the early days were guyed like this,
which is why tall jib-headed sailboat rigs were called Marconi rigs.
Take a look at how sailboat masts are rigged to get some ideas.

If you took the next step, and put guys from the spreader points to
the ground, you'd have a steady mast, with the guys in a smaller area,
but you have to take into account the compression load on the mast, and
the upward loads on the guying points. Most materials are strong in
compression, and bend more easily, especially tubing, so you can trade
the one for the other. I use some of this myself, to counteract
horizontal loads using a lightweight mast, such as using light tubing
as an end support for a horizontal wire, very nearly on the lot line of
my property.

73, doug

4168. Parts for Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-01 17:52:41 UTC
From: Scrounger <brian@iquest.net>
Message-ID: <uVrG9.1107$pc.197144@news.iquest.net>
Source record: 39581
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap,rec.radio.shortwave

```
Junkbox Surplus Parts for Sale as of 12/01/2002
===============================================

NEW ITEMS

50K Pots - Linear taper, 1 turn, panel mount, 1/4 shaft
5 for $4.00

285pf Green Square Plastic Cap, PC Board Insertion 10%
100 for $4.00

Odd Items
============
9.8304 Mhz Crystals, 1/4 in tall - 20 for $5.00
27mH inductors with radial leads - 25 for $3.50

Caps - All new, old stock. No pulls.
====================================
All caps now 50/$3 or 100/$5 - No Mixing
====================================
8pf NPO Ceramic - Loose
11pf NPO Ceramic - Loose
12pf NPO ceramics on tape
22pf Kemet Ceramic Caps, 200v, 10%
150pf ceramics, 100v, 10%
470pf Ceramics on paper tape, rated 5% (NPO)
560pf Kemet Ceramic Caps, 200v, 10%
1000pf blue mono caps, 10% 100v
3300pf Kemet Ceramic Caps, 100v, 10%
.01 uF ceramic caps, 10% 100v brand new by Kyocera
and
.01 uF ceramic caps, 20% 50v, new old stock, not used
50/2.50 100/$4

Voltage Regulators
==================
L7805ACV voltage regulators TO220 case. 10/$5 or 15/$7 100/$30
LM7812 voltage regulators. TO220 case. 5/$4
LM317T Adjust. Positive Voltage Regulator TO220. 10/$5.00 or 15/$7.00
100/$30
LM78L62ACZ Volt(6.2)regulators, TO92 format 5/$3.00

Transistors - New Parts - No Pulls
==========
TP2222 plastic TO92 NPN (House brand 2N2222)50/$4 100/$7
```

2N3906's plastic TO92. PNP - 50/$4
2N3904's plastic TO92. NPN - 50/$4 100/$7
2N3704's plastic TO92, NPN - 50/$4
MRF517 - Motorola Part - Metal Can - 5 for $5

Op AMPS, Comparators
==========
LM386N-1 - Audio Amps 5 for $2.50
LM741CN - Single Op Amp, 8 Pin Dip, 6 for $2.00

Diodes
======
1N4148 - You always need these. 100 for $2.50 These are NEW.
50 FREE with any order over $20.00

Let me know if you're interested. All prices are post paid to the USA, unless otherwise noted. I will ship to non USA addresses but we need to discuss the shipping charges first.

4169. Hitachi V-212 schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-01 21:05:00 UTC
From: "Ed W." <edek@mail.gcnet.net>
Message-ID: <0QuG9.23487$%r6.17238@nwrddc02.gnilink.net>
Source record: 39582

Low HV, trace blooms, replacement diode runs hot, need schematic.
Ed W., K3FDY

4170. Re: Third party CTCSS Sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-01 21:45:41 UTC
From: Kevin <kberlen@ticz.com>
Message-ID: <asdvu701m44@enews2.newsguy.com>
Source record: 39583
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

DO NOT attempt to insert the tone at the mic audio input. If the radio is properly engineered, there will be a high pass filter in the mic circuit that will roll off freq's below 300 Hz. You might be able to get enough tone thru the mic input to bring up the repeater, but you will have a number of problems if you go this route. Comm Spec has application notes on their site for most of the popular radios. Download the one you need and follow their instructions. Good luck, and 73

Kevin, K9HX
"Jim Pennell" <NoSpam@killspam.com> wrote in message
news:asapla$4jt$1@slb4.atl.mindspring.net...
> Generally, adding a third party CTCSS board is not difficult. They
> usually have enough drive so you can use a fairly high value resistor and
> connect it to the microphone input.
>
> There are a couple of problems....
>
> One problem is, it is not easy to change the PL frequency when you
> install the CTCSS board inside the radio. You may want to mount it in an
> external box with a couple of connectors so you can connect the microphone
> to the box and then a second cable from the box to the 2 meter rig.
This
> way, you have the CTCSS board where you can get to it to chenge the PL
> frequency. Maybe even set up a selector switch of some sort for the PL
> frequencies you want.
>
> The other possible problem is a possibility that the very low frequency
> PL tone might disturb the radio. A unit I modified once injected the
> audio into the phase lock loop and that was how they FM'd the signal.
> Trouble was, the PL tone was in the phase lock loop bandwidth. Well.....
> That's a problem.
>
> Anyway, a CTCSS board is fairly cheap, and it will most likely work for
> you but be prepared for the possibility. It depends on how the radio was
> designed.
>
>
> Jim Pennell
> N6BIU
>
>

4171. Re: Drain Modulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-01 22:10:55 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <XwuWtGLvjo69Ew82@fslife.co.uk>
Source record: 39584

Hi Larry,

>The 4th Edition VHF manual (by Jessop), pages 5.23 and 5.24, has a reference
>schematic and basic ckt description of what you seek. Add'l reference in the
>Jessop book is "Electronic Engineering, June 1978"
I forgot to mention in my first post that it was in fact Jessop's
mention of drain mod that got me a searching only to come up with zilch.

Maybe the quality wasn't 'all there'.

However, thanks for the feedback.

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

4172. Re: Using a 5 Mc VFO with BAs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-01 22:24:58 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <__vG9.29790$oa.1360150@news1.east.cox.net>
Source record: 39585
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"Bill M" <""exray\"@n-o- .caribe.net> wrote in message
news:uukqg4t591027c@corp.supernews.com...
> (see the "VFO Question" thread for previous details)
> I did some more experimenting with the Galaxy VFO to see about moving it
> up to 7 MHz. Without hacking up the coil it simply will not move that
> far just with alignment. Seems like it would be easy enough to do...the
> coil is easily accessible.
> Now here's something strange. Last night I was using ceramic discs to
> get an idea of the appropriate value to move it down to 3.5. I found
> that somewhere around 270-300 pf gave me the desired tuning range. So
> today I figured it was time to install a good silver mica cap, button it
> all up and see how it tweaked out.
> It goes nuts with garbage all across the band when a silver mica is
> used! I went back and forth and tried various combinations but the only
> time I get a clean signal is with a ceramic disc cap. The existing
> circuit uses a 50pf air variable as the main tuning + 120pf SM padder +
> 15pf air trimmer + 20pf TC cap and a 3pf air trimmer for the front panel
> Cal Adjust. My 270pf is of course in parallel with all of this. Can
> someone explain why it behaves this way?
> Maybe an option is to use an NP0 ceramic but I'll have to order some to
try.
>
> -Bill WX4A
> exray at caribe.net
>

I'd suspect the oscillator is breaking into parasitic oscillations, short
of
having a spectrum analyzer, a good wideband scope should give some
indication of what is going on. The difference between multiple caps
and a single component is the overall change in lead inductances, it's
not necessarily bad to use to multiple caps in parallel to reach the
needed capacitance. You might find a single NPO ceramic disc
exhibits the same problems in that circuit. One trick you could try is
a 68 to 120 ohm resistor in series with the control grid or plate, that
should help with the parasitics if they are the cause of the problem.

Also, a disc cap with a slight negative co-efficient might lead to better
frequency stability with warmup. Something else you need to play with.

Pete

4173. Re: Using a 5 Mc VFO with BAs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-01 22:26:07 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <30wG9.29795$oa.1360803@news1.east.cox.net>
Source record: 39586
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

" Uncle Peter" <radioconnectionNO@cox.netSPAM> wrote in message
news:__vG9.29790$oa.1360150@news1.east.cox.net...
>

Bill, something else, look up SQEGGING in an early ARRL handbook..

Pete

4174. Re: Using a 5 Mc VFO with BAs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-01 22:59:51 UTC
From: Bill M <"exray\\@n-o- .caribe.net>">
Message-ID: <uul52dk0rc4149@corp.supernews.com>
Source record: 39587
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Uncle Peter wrote:

> I'd suspect the oscillator is breaking into parasitic oscillations, short
> of
> having a spectrum analyzer, a good wideband scope should give some
> indication of what is going on.

Yes, it definitely shows on the scope. That confirms what I hear on the
receiver :-)

The difference between multiple caps
> and a single component is the overall change in lead inductances, it's
> not necessarily bad to use to multiple caps in parallel to reach the
> needed capacitance.

Thats not the problem in this case. My 'working' combo is a 270 pf disc
in parallel with a 22pf SM. 270pf or 300pf SM give the nutty operation
as do any combo of SMs.

> One trick you could try is
> a 68 to 120 ohm resistor in series with the control grid or plate, that
> should help with the parasitics if they are the cause of the problem.

Ok, I'll try that and see if I can also find a ferrite bead later this
evening.

BTW, here's the schematic....
http://www.sparkbench.com/v.gif

Thanks,
Bill

4175. Re: K2 Owners

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-01 23:33:14 UTC
From: la8ak.xnd@online.no
Message-ID: <3dea95d4.90562433@news.online.no>
Source record: 39588

On Sat, 9 Nov 2002 21:28:47 GMT, ehramm@dk3uz.ampr.org (Edmund H.
Ramm) wrote:

****
** THIS IS A WARNING MESSAGE ONLY **
** YOU DO NOT NEED TO RESEND YOUR MESSAGE **
****

The original message was received at Sat, 30 Nov 2002 12:56:56 +0100
(MET)
from ti131310a062-0293.dialup.online.no [130.67.125.39]

----- The following addresses had transient non-fatal errors -----
<ehramm@dk3uz.ampr.org>

Edmund, why is all emails bouncing?

73 LA8AK (DS80b)
--
remove ,xnd to reply

4176. Re: Third party CTCSS Sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 00:14:13 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <ase8kn$204$1@slb6.atl.mindspring.net>
Source record: 39589
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

----- Original Message -----
"Kevin" <kberlen@ticz.com> Wrote:

> DO NOT attempt to insert the tone at the mic audio input.
> If the radio is properly engineered, there will be a high
> pass filter in the mic circuit that will roll off freq's
> below 300 Hz. You might be able to get enough tone
> thru the mic input to bring up the repeater, but you will
> have a number of problems if you go this route. Comm Spec
> has application notes on their site for most of the popular
> radios. Download the one you need and follow their
> instructions. Good luck, and 73
>
> Kevin, K9HX

Actually, Kevin is right. I had a schematic for the rig I was fooling with and I knew that it did NOT have much audio shaping but most radios do and that has to be allowed for when hooking up a CTCSS board.

I tend to turn my brain off on weekends... Ah well, at least there are people here to catch my errors.

Jim Pennell
N6BIU

4177. Re: Third party CTCSS Sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 00:38:27 UTC
From: budgie@nowhere.cantech.net.au
Message-ID: <3deaaa44.1561559@news.cantech.net.au>
Source record: 39590
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

On Sun, 1 Dec 2002 16:45:41 -0500, "Kevin" <kberlen@ticz.com> wrote:

>DO NOT attempt to insert the tone at the mic audio input. If the radio is
>properly engineered, there will be a high pass filter in the mic circuit
>that will roll off freq's below 300 Hz. You might be able to get enough tone
>thru the mic input to bring up the repeater, but you will have a number of
>problems if you go this route.

Absolutely correct advice. Two problems in particular become evident
feeding CTCSS in thru the mic processing chain:
(a) dev limiting will strip the CTCSS off completely, so you will
experience serious "talk-off" problems originating in your Tx.
(If you don't believe me, try it and watch it on a comms monitor).
(b) the dev you get (below limiting) will be a function of frequency,
as a result of the rolloff slope of the high-pass or band-pass filter
in the mic amp.

MOST transceivers have a proper CTCSS insertion point, which is
generally evident from examining the cct diagram. Note also that
tone-sequential calling tones ("Selcall") should be inserted through a
different point to CTCSS, and if there isn't a dedicated point for
this you will need to feed these down the mic chain.

>Comm Spec has application notes on their site
>for most of the popular radios. Download the one you need and follow their
>instructions. Good luck, and 73
>
>Kevin, K9HX
>"Jim Pennell" <NoSpam@killspam.com> wrote in message
>news:asapla$4jt$1@slb4.atl.mindspring.net...
>> Generally, adding a third party CTCSS board is not difficult. They
>> usually have enough drive so you can use a fairly high value resistor and
>> connect it to the microphone input.
>>
>> There are a couple of problems....
>>
>> One problem is, it is not easy to change the PL frequency when you
>> install the CTCSS board inside the radio. You may want to mount it in an
>> external box with a couple of connectors so you can connect the microphone
>> to the box and then a second cable from the box to the 2 meter rig.
>This
>> way, you have the CTCSS board where you can get to it to chenge the PL
>> frequency. Maybe even set up a selector switch of some sort for the PL
>> frequencies you want.

>>
>> The other possible problem is a possibility that the very low frequency
>> PL tone might disturb the radio. A unit I modified once injected the
>> audio into the phase lock loop and that was how they FM'd the signal.
>> Trouble was, the PL tone was in the phase lock loop bandwidth. Well.....
>> That's a problem.
>>
>> Anyway, a CTCSS board is fairly cheap, and it will most likely work for
>> you but be prepared for the possibility. It depends on how the radio was
>> designed.
>>
>>
>> Jim Pennell
>> N6BIU
>>
>>
>
>

4178. Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 02:20:14 UTC
From: morphiend <morphiend-n0-spam@fuse.net>
Message-ID: <pdgluu4lbp6b1ue3rpdnb73eqj3mmgec8d@4ax.com>
Source record: 39591
Cross-posted to: rec.radio,sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

I am working on a project for a class I am currently enrolled in and need to construct a zero-crossing detector FM demodulation circuit.

I know the specifications of the incoming FM'd signal:
fc = 122kHz.
fm = 5kHz.
deviation/modulation of 5.

I was wondering if anyone had any circuit diagrams that contained such a device and the constraints for tuning it to recieve the aforementioned signal.

Thanks.

Mike Koss

4179. Re: Drain Modulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 02:35:45 UTC
From: lc <larryc@northwest.com>
Message-ID: <3DEAC700.3C7F07EE@northwest.com>
Source record: 39592

Hi, Philip.

The magazine (Electronic Engineering) is available in well-referenced technical libraries. I had a copy of the article I but purged my files of it some years back... (drat!)

I could undertake to obtain a copy, then scan/snailmail it to you.

Let me know...

LarryC
=======

Philip de Cadenet wrote:

> Hi Larry,
>
> >The 4th Edition VHF manual (by Jessop), pages 5.23 and 5.24, has a reference
> >schematic and basic ckt description of what you seek. Add'l reference in the
> >Jessop book is "Electronic Engineering, June 1978"
> I forgot to mention in my first post that it was in fact Jessop's
> mention of drain mod that got me a searching only to come up with zilch.
>
> Maybe the quality wasn't 'all there'.
>
> However, thanks for the feedback.
>
> (((73)))
> --
> Philip de Cadenet G4ZOW
> Transmitters 'R' Us
> http://www.transmittersrus.com

4180. Re: Using a 5 Mc VFO with BAs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 03:58:18 UTC
From: Bill M <"exray\\@n-o- .caribe.net>">
Message-ID: <uulmhvp29m7cf5@corp.supernews.com>
Source record: 39593
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Bill M wrote:

> BTW, here's the schematic....
> http://www.sparkbench.com/v.gif
>
> Thanks,
> Bill
>
>
Ok, here's my fix. There was no easy way to fit in a resistor or bead
because the grid pin of the tube socket is the tie point for a wad of
components and its vey inaccessible. It was a series-tuned Colpitts
(Clapp?) circuit and I switched it around to be parallel tuned. Voila.
Clean as a whistle. A little less tuning range - about 65 kc which is
fine for me. However that shoots the nice dial calibration idea I had.
With the parallel scheme I can't stretch 100 kc out of it however I'm
thinking of going back in and see if I can squeeze it down to 50kc.
That would make the existing dial markings line up.
Next problem...I calibrated the scope and darnit the main output I was
getting was showing up at 5250 and not 3500. Further checking reveals
1750 was there also. I wonder if the original 5 MHz circuit was
actually running at 2.5 and doubling? No GDO to check with.
Anyway, not to worry. I put 220 pf across each side of the bandpass
xfmr and it now picks out the 3.5 signal quite cleanly.
Final test will be to see if the 2.5 v RF that I have left will be
enough to drive the old Harvey Wells.
Drift? Solid as a rock.

-BM

4181. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 04:31:44 UTC
From: cirip <cirip@yahoo.com>
Message-ID: <QmBG9.202811$YSz1.122688@news01.bloor.is.net.cable.rogers.com>
Source record: 39594
Cross-posted to: rec.radio,sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

Hi Mike,

The easiest way to demodulate an FM signal based on the zero crossings is to feed it into a monostable circuit input. I assume the 122KHz signal is a rectangular pulse. If not, it is relatively easy to make it.

The period of the monostable should be slightly lower than the minimum signal period. I assume that the monostable is triggered by say the rising edge only.

Let's see what the monostable period would be...
Firstly, the max frequency would be 122+5*5=172KHz
The period of the 172KHz signal is 1/172KHz=5.81us
I guess a 5us monostable would do the trick. Take a look at the 74121 monostable.

Now, in order to get the demodulated signal, just filter the monostable output with a simple low pass filter which cutoff frequency is significantly lower than 122-5*5=97KHz, but higher than the highest freq in your modulation spectrum. The filter could be a simple RC or something more elaborated, depending on what you want.

The main disadvantage of the zero crossing FM detector is that the gain and S/N ratio are very low. But they are realy easy to implement.

Sorry no schematic, but if you find the above difficult to follow, I can give you more details. I need more details too :-)

Good luck,
Cirip

"morphiend" <morphiend-n0-spam@fuse.net> wrote in message news:pdgluu4lbp6b1ue3rpdnb73eqj3mmgec8d@4ax.com...
> I am working on a project for a class I am currently enrolled in and
> need to construct a zero-crossing detector FM demodulation circuit.
>
> I know the specifications of the incoming FM'd signal:
> fc = 122kHz.
> fm = 5kHz.
> deviation/modulation of 5.
>
> I was wondering if anyone had any circuit diagrams that contained such
> a device and the constraints for tuning it to recieve the
> aforementioned signal.
>
>

> Thanks.
>
> Mike Koss

4182. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 05:58:57 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <uultl4rkoa7m6d@corp.supernews.com>
Source record: 39595
Cross-posted to: rec.radio,sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

cirip wrote:
> . . .
> The main disadvantage of the zero crossing FM detector is that the gain and
> S/N ratio are very low. But they are realy easy to implement.
>. . .

The advantages, on the other hand, are low cost, easy adjustment, and excellent linearity. I first encountered this method around 1970, in an SCA receiver used for receiving Musak-type broadcasts. Since it was intended for use in urban areas, sensitivity wasn't an issue, but low cost and linearity were. I adapted the receiver for use in demodulating slow scan video using a technique that required response down to DC. The video was being sent on a subcarrier to provide pictures to go with lectures being transmitted on a college FM station to its extension campuses. Worked fine.

Roy Lewallen, W7EL

4183. pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 07:23:35 UTC
From: DL <please@no.emails>
Message-ID: <3DEB0A77.5050606@no.emails>
Source record: 39596

does anyone know of good software that will create pcb foil patterns
from a schematic that can automatically route the tracks?

4184. Re: pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 09:01:06 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3deb2072.1307225@news.freeserve.net>
Source record: 39597

On Mon, 02 Dec 2002 20:23:35 +1300, DL <please@no.emails> wrote:

>does anyone know of good software that will create pcb foil patterns
>from a schematic that can automatically route the tracks?
>
Eagle educational version is Free and available from www.cadsoft.de.
fully functional, but limited to a fairly small pcb iirc 100mm x 75mm
Its a little poor on documentation but its the best for the price

4185. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 09:01:41 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <CwSVaHA1Fy69Ewfj@jmwa.demon.co.uk>
Source record: 39600
Cross-posted to: rec.radio,sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

I read in sci.electronics.design that cirip <cirip@yahoo.com> wrote (in
<QmBG9.202811$YSz1.122688@news01.bloor.is.net.cable.rogers.com>) about
'Zero Crossing Detectors, FM Demodulation', on Mon, 2 Dec 2002:

>The main disadvantage of the zero crossing FM detector is that the gain and
>S/N ratio are very low. But they are realy easy to implement.

Gain doesn't matter, in itself, but why is the S/N low? That DOES
matter, and makes the low gain important.
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

4186. Re: Drain Modulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 09:21:29 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <KLzhzdNZYy69Ew8b@fslife.co.uk>
Source record: 39598

>The magazine (Electronic Engineering) is available in well-referenced technical
>libraries. I had a copy of the article I but purged my files of it some years
>back... (drat!)
>
>I could undertake to obtain a copy, then scan/snailmail it to you.
I should very much appreciate a copy if it is not to much trouble. My
library has a reference section but is limited to books.

Thank you.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

4187. Re: Amidon toroids ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 09:44:40 UTC
From: Henk <shortw@pandora.be>
Message-ID: <cYFG9.30908$Ti2.5447@afrodite.telenet-ops.be>
Source record: 39599

Hi Olivier

BFi OPTiLAS B.V.
P.O. Box 222
2400 AE Alphen aan den Rijn
The Netherlands
Tel. (31) 0172-44 60 60
Fax (31) 0172-44 34 14
www.bfioptilas.avnet.com

distributor for Micrometals I ordered there , and very cheap ,min order 100?
http://www.rf.bfioptilas.avnet.com/php_files/ie_slide/800x600/products.php?v
iew=suppliers&group=5&target=76&line=387
succes Henk on4ahf

"Olivier PASQUIER" <opfd@free.fr> schreef in bericht
news:3DE69665.D33225E5@free.fr...
> Hi,
>
> Does anyboby could let me know where I could purchase Amidon toroids
> possibly in France or in Europe ?
> My French supplier does not have anymore the references I need.
> Many thanks,
> Olivier,
> Paris, France
>

4188. Racal RA1772 xtal filters (1.4MHz)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 10:53:58 UTC
From: la8ak.xnd@online.no
Message-ID: <3deab7b0.99231188@news.online.no>
Source record: 39601

Based on info from the handbook this list is written

my RA1772 receiver has the following 1.4MHz xtal filters:

BD45249 3kHz symmetrical
BD45249 (5) (3kHz BW LSB)
BD45250 (2) (1kHz BW) symmetrical
BD45251 (6) (300Hz BW) Carrier, symmetrical
BD45253 ISB Carrier (300hZ BW?)
BD45274 3kHz USB/ISB (alt. for BD45858)
BD45275 3kHz LSB/ISB (alt. for BD45859)
BD45694 6kHz LSB
BD45695 6kHz USB
BD45806 13kHz BW symmetrical AM
BD45858 3kHz USB
BD45859 3kHz LSB
BD46975 (3) (600Hz BW)
BD46976 (4) (300Hz BW)
BD602856 (1) (2.7kHz BW USB)

(*) indicates position on IF filter board in my receiver

The filters seems to have 1k5 impedance with 68pF on input and 33pF on
the output (probably stray capacitance add to this)

It seems that other receivers uses 1.4MHz xtal filters, do you know
which filters have been used for other receiver which might work for
RA-1771 and RA-1772 ?

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

4189. FS: Sinclair P-201g 4 cavity Duplexer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 11:06:50 UTC
From: N5ASA <n5asa@colla.com>
Message-ID: <asfeoj019om@enews2.newsguy.com>
Source record: 39602

Hi,
hr is (1) Set of Sinclair P-201g 4 cavity Duplexer w/ Cabinet That I am selling. 24" tall cans X 6 3/4" Dia. with all the Cabes ready to go...just tune to your Freq. Pics of F-201G Sinclair Duplexers.....All Aphenol Connectors & Good RG214 Cable.

P-201 GR

The P-201G bandpass duplexer combines Sinclair's high Q bandpass cavities into a unit of superior performance in the 132-174 MHz range.
These Duplexers are easily field-tunable and feature rotatable lops for selectivity settings other than the performance detailed below for 0.5 dB per-cavity loss. In addition, vernier tuning is provided for fine frequency adjustments. Because of carefully designed temperature compensation, frequency drift over the operating temperature ranges extremely small, typically 0.5 ppm/�C.
These duplexers are available in rack-mounted or cabinet configurations.

For Specifications go to this site.

<http://www.wiscointl.com/sinclair/BaseStation/p201gr.htm>

$550 w\Cabinet
$500 wo\ Cabinet

Will Meet with buyer 1/2 way from Baskin, La.71219
upto 150 miles.

73 Larry
N5ASA

Questions: & more Pics

n5asa@arrl.net

4190. Re: H/V Silver mica cap suppliers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 13:28:49 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0212020528.7f6879bd@posting.google.com>
Source record: 39603

Hi Dave,
silver mica caps are really hard to get. I found some from old
supplies at http://www.mybox.cz/compo/slidy.html .They are rated for
500 volts, but if you connected e.g. 3 pcs 33 pF in series, you should
get where you need. They are axial types in plastic (epoxy ?) coating.
The contact to the supplier is compo@atlas.cz

BR from Ivan

4191. Re: pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 13:37:44 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3deb61ff@news.netacc.net>
Source record: 39604

"DL" <please@no.emails> wrote in message news:3DEB0A77.5050606@no.emails...
> does anyone know of good software that will create pcb foil patterns
> from a schematic that can automatically route the tracks?
>

Yep. PADS and ORCAD

4192. Re: Drain Modulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 14:20:20 UTC
From: jim.bolinger@lintek.aeroflex.com
Message-ID: <8d5ec8a2.0212020620.26ee19b2@posting.google.com>
Source record: 39605

Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk> wrote in message news:<5OD9yhDbEU69Ewb6@fslife.co.uk>...
> I'm looking for any articles on the web dealing with Drain Modulation or
> any other transformerless solid state AM modulator designs.
>
> Any references appreciated.
>
> I'm aware of Steve Cloutier's PWM/class-E site but can find little else.
>
> (((73)))

Look up 'cathode modulation'. Not exaclty what you are looking for, but it should give you some basic principles.

This method was used with low power tube (valve) transmitters. A typical technique that I have seen was to use a carbon microphone as part or all of the cathode resistance in the amplifier. It was possible to build an AM transmitter with only two (or one?) tube (no audio amplifier). One problem, however, was that you could not get very deep modulation, usually no more than 50 to 60% if I recall.

Jim
N8EE

4193. Re: WTD: Metrotek CB radios

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 15:33:18 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <23LG9.35210$vM1.2689895@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39606
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb

I remember that Colt23; that one had a tunable dual-conversion receiver. It was a good one.

4194. Re: pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 18:21:20 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <asgcoeobg1@newsg3.svr.pol.co.uk>
Source record: 39607

"DL" <please@no.emails> wrote in message news:3DEB0A77.5050606@no.emails...
> does anyone know of good software that will create pcb foil patterns
> from a schematic that can automatically route the tracks?
>

I use Pulsonix:

http://www.pulsonix.com

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

4195. Re: No more small parts at Radio Shack--Ain't So!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 20:52:55 UTC
From: Sylvan Butler <Znospam+noZs_0212@hpb13799Z.Zboi.hpZ.com.invalid>
Message-ID: <slrnauni17.cui.Znospam+noZs_0212@hpb13799Z.Zboi.hpZ.com.invalid>
Source record: 39610

On Fri, 29 Nov 2002 23:02:56 -0500, Michael A. Terrell <terrell@mfi.net> wrote:
> As far as too many lights, the electric bill is too high because of
> electric heat, so I don't bother with a tree or lights. There is no one

The indoor christmas lights will reduce your electric heat bill by
the exact same amount of electricity used in the lights.

> trouble enough walking, and even standing some days to worry about
> something so frivolous.

That's an entirely different issue. :(

Best wishes,

sdb

--
| Sylvan Butler | Not speaking for Hewlett-Packard | sbutler-boi.hp.com |
| Watch out for my e-mail address. Thank UCE. >>>> change ^ to @ <<<< |
They that can give up essential liberty to obtain a little temporary
safety deserve neither liberty nor safety. --Benjamin Franklin, 1759
Stop Senator Fritz Hollings-S2048, Palladium, and TCPA, NOW!
http://www.freedom-to-tinker.com/archives/cat_fritzs_hit_list.html
Or else like Fritz, fight piracy -- regulate potty chairs!

4196. Re: pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 21:27:58 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <yfQG9.34829$oa.1625094@news1.east.cox.net>
Source record: 39608

WinDraft and WinBoard, carried by NTE Electronics as well.

Pete

"DL" <please@no.emails> wrote in message news:3DEB0A77.5050606@no.emails...
> does anyone know of good software that will create pcb foil patterns
> from a schematic that can automatically route the tracks?
>

4197. Re: Drain Modulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 21:34:43 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <in5rYDCzH969Ewrj@fslife.co.uk>
Source record: 39609

Hi Jim,

>> I'm looking for any articles on the web dealing with Drain Modulation or
>> any other transformerless solid state AM modulator designs.
>>
>> Any references appreciated.
>>
>> I'm aware of Steve Cloutier's PWM/class-E site but can find little else.
>>
>> (((73)))
>
>Look up 'cathode modulation'. Not exaclty what you are looking for,
>but it should give you some basic principles.
>
>This method was used with low power tube (valve) transmitters. A
>typical technique that I have seen was to use a carbon microphone as
>part or all of the cathode resistance in the amplifier. It was
>possible to build an AM transmitter with only two (or one?) tube (no
>audio amplifier). One problem, however, was that you could not get
>very deep modulation, usually no more than 50 to 60% if I recall.
I'm trying to stick with transistors.

Not sure I can find a cathode on my 2SC1971:-)

(((73)))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

4198. FA: 1965 Radio Shack INDUSTRIAL Catalog

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-02 22:22:23 UTC
From: Ron N8LMT <n8lmt@arrl.net>
Message-ID: <G2RG9.19$5P3.9145@newsfeed.slurp.net>
Source record: 39611
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

This catalog is from the Radio Shack Industrial Division.
these old catalogs are not only a blast from the past but a
great reference as well. 176 pages, This is Catalog #145.
click here to see it !........
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1941115915

4199. Re: Drain Modulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 00:23:03 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <asgth7ebn1@helle.btinternet.com>
Source record: 39612

Drain, collector, anode, amplitude modulation are all dead simple.

Just drive the carrier input (gate, base, grid) very hard to ensure saturation and audio modulate the DC supply volts between zero and twice the mean DC supply volts.

Most simple modulating devices are source-follower, emitter follower, cathode follower.

Brute-force and ignorance but it works every time! What's the problem? Havn't you done it yet? You have passed the RAE havn't you?

It's the Devil wot makes me do it.

Reg.

4200. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 01:51:36 UTC
From: bjorn890@aol.com57304573
Message-ID: <20021202205136.25094.00008765@mb-mp.aol.com>
Source record: 39613

>Gain doesn't matter, in itself, but why is the S/N low? That DOES
>matter, and makes the low gain important.

I doubt the S/N would be low.

There is plenty of DOS left in Windows, just make a boot disk!
Bjorn890

4201. need help finding a book.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 01:57:42 UTC
From: ulpilotsc@aol.com
Message-ID: <20021202205742.21486.00000115@mb-cl.aol.com>
Source record: 39614

I had a copy of a book called "engineer's trade secrets of radio", many years ago. I think it was by R.T. Cunningham, but am not sure. It was about 200 pages, and had many schematics for constructing tube-based a.m. transmitters. I have moved twice and cannot find it anywhere. It was blue and white about 5 by 6 inches, with some poor photographs of coils and transmitters, but had some good information.

I have searched the net and amazon with no results. can anyone help me? I have most of a transmitter built to his specs, but never finished it. I need the book to help me out! The author was a radio engineer, and sold plans and complete transmitters.

e-mail me if you can help, or have a copy I could purchase.

4202. Re: Drain Modulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 02:19:20 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <ot4ouuo8berdcf8c0huveasns2h6322ba2@4ax.com>
Source record: 39615

On Tue, 3 Dec 2002 00:23:03 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>Drain, collector, anode, amplitude modulation are all dead simple.
>
>Just drive the carrier input (gate, base, grid) very hard to ensure
>saturation and audio modulate the DC supply volts between zero and twice the
>mean DC supply volts.
>
>Most simple modulating devices are source-follower, emitter follower,
>cathode follower.
>
>Brute-force and ignorance but it works every time! What's the problem?
>Havn't you done it yet? You have passed the RAE havn't you?
>
>It's the Devil wot makes me do it.
>---
>Reg.

It isn't quite so easy to get clean modulation by varying the
collector supply. You wind up with combined AM and PM and a distorted
modulation envelope. This is particularly a problem as you get towards
100% modulation and with modulating frequencies > 1 KHz.

If you only are concerned with 30% modulation depth, then I agree it
isn't difficult.

Jack K8ZOA
>

4203. Re: need help finding a book.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 02:27:47 UTC
From: "John D. Farr" <jfarr62@comcast.net>
Message-ID: <n9qcnRdRxuVyinGgXTWc3w@comcast.com>
Source record: 39616

Check http://www.abebooks.com/ . good luck, John
"ULpilotSC" <ulpilotsc@aol.com> wrote in message
news:20021202205742.21486.00000115@mb-cl.aol.com...
> I had a copy of a book called "engineer's trade secrets of radio", many
years
> ago. I think it was by R.T. Cunningham, but am not sure. It was about 200
> pages, and had many schematics for constructing tube-based a.m.
transmitters. I
> have moved twice and cannot find it anywhere. It was blue and white about
5 by
> 6 inches, with some poor photographs of coils and transmitters, but had
some
> good information.
>
> I have searched the net and amazon with no results. can anyone help me? I
have
> most of a transmitter built to his specs, but never finished it. I need
the
> book to help me out! The author was a radio engineer, and sold plans and
> complete transmitters.
>
> e-mail me if you can help, or have a copy I could purchase.

4204. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 05:04:25 UTC
From: Rick Karlquist <richard@karlquist.remove.this.com>
Message-ID: <tXWG9.208881$NH2.14367@sccrnsc01>
Source record: 39618
Cross-posted to: rec.radio,sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

See this URL:

http://www.analog.com/library/applicationNotes/dataConverters/PDF/AN-279.pdf

Rick N6RK

"morphiend" <morphiend-n0-spam@fuse.net> wrote in message
news:pdgluu4lbp6b1ue3rpdnb73eqj3mmgec8d@4ax.com...
> I am working on a project for a class I am currently enrolled in and
> need to construct a zero-crossing detector FM demodulation circuit.
>
> I know the specifications of the incoming FM'd signal:
> fc = 122kHz.
> fm = 5kHz.
> deviation/modulation of 5.
>
> I was wondering if anyone had any circuit diagrams that contained such
> a device and the constraints for tuning it to recieve the
> aforementioned signal.
>
>
> Thanks.
>
> Mike Koss

4205. Homebrew Sat. Transceiver???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 06:27:03 UTC
From: gfdsg <tresb1977@netzero.com>
Message-ID: <a1XXyvnmCHA.313@newsgroup.korea.com>
Source record: 39617

I'm looking for | any | information relating to completely functional homebrew transceivers. Specifically transceivers capable of the proper uplink and downlink frequencies for Oscar Sat's. Thanks for the support!

4206. FT101 6JS6C to 6146 conversion advice please

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 07:45:52 UTC
From: Dave Bullock <DaveB@ihr.mrc.ac.uk>
Message-ID: <3DEC6130.2030300@ihr.mrc.ac.uk>
Source record: 39619

I have recently aquired an FT101 less output finals, and I am
considering converting it to 6146's.
I have the ZS1J (QST) article on how to do this but am a little
concerned about the voltages vs valve ratings.
Also which suffix of the 6146 to go for.(straight 6146, or A,B or W).

I have 6146W's readily available in matched pairs so was considering these.
FT101 seems to have around 700Vdc plate voltage and 160V screen supply.
(I haven't meaured what it 'droops' to, on load)
Also the ZS1J article recommends that the screen connection be removed
from the 160v point and be connected to the 300V driver stage supply.

The data (for all 6146 suffixes, A,B&W) states that for ICAS use, the
maxumum plate voltage is 750V at a screen voltage of 160V! So why does
ZS1J connect it to 300v? The datasheets also state that the screen
should be fed through a resistor of between 40-56K ohms, the FT101 seems
to only have 100 Ohms!

Has anyone carried out this modification successfully, or have any
technical insight that would be useful? I would appreciate your comments.

Thanks in anticipation.....Dave
--
* * * * * * * * * * * * * * * * * * * *
* Dave Bullock *
* MRC Institute of Hearing Research *
* Nottingham University *
* Nottingham *
* NG7 2RD *
* *
* daveb@ihr.mrc.ac.uk *
* * * * * * * * * * * * * * * * * * * *

4207. NE555 VCO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 10:04:33 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3dec7f70.3467302@news.freeserve.net>
Source record: 39620
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

In Phillips Application note AN170 there is a VCO design (fig 25)
that I would like to view, but all the PDF reproductions I can find on
the web are so low on resolution that the diagram is unreadable.

So, has anyone got a 'paper' version of Phillips AN170 that they could
scan Fig 25 for me ?.

Otherwise, I'm looking for an audio VCO with a fairly linear output
for an input of 0-5v, preferably using the 555 or similar common
device.

any offers?.

many thanks Mike W, G8NXD
--

4208. Re: NE555 VCO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 10:45:15 UTC
From: Kijoma <news@kiSPjoAMma.com>
Message-ID: <asi1vs$465$1@news7.svr.pol.co.uk>
Source record: 39621
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3dec7f70.3467302@news.freeserve.net...
> In Phillips Application note AN170 there is a VCO design (fig 25)
> that I would like to view, but all the PDF reproductions I can find on
> the web are so low on resolution that the diagram is unreadable.
>
> So, has anyone got a 'paper' version of Phillips AN170 that they could
> scan Fig 25 for me ?.
>
> Otherwise, I'm looking for an audio VCO with a fairly linear output
> for an input of 0-5v, preferably using the 555 or similar common
> device.
>
> any offers?.
>
> many thanks Mike W, G8NXD
> --
>
hi,

can you still get those function generator chips? (max038 or similar
name??). would be better as a VCO than a 555.

555's and 741's are for college projects imo :)

Bill

4209. Re: NE555 VCO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 11:22:29 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <asib0r$a71$2@news7.svr.pol.co.uk>
Source record: 39626
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3dec7f70.3467302@news.freeserve.net...
> In Phillips Application note AN170 there is a VCO design (fig 25)
> that I would like to view, but all the PDF reproductions I can find on
> the web are so low on resolution that the diagram is unreadable.
>
> So, has anyone got a 'paper' version of Phillips AN170 that they could
> scan Fig 25 for me ?.
>
> Otherwise, I'm looking for an audio VCO with a fairly linear output
> for an input of 0-5v, preferably using the 555 or similar common
> device.

Try the VCO in a 74HC4046 PLL chip. Simpler circuit than the 555 and much
less power.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

4210. Re: FT101 6JS6C to 6146 conversion advice please

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 11:58:23 UTC
From: "mkelly@powerup.com.au" <mkelly@powerup.com.au>
Message-ID: <3DEC9C5F.D9FFC107@powerup.com.au>
Source record: 39622

The 'W' is a stronger envelope only - the 'B' has more dissipation.
I used 300 on the screens at abt. 900v on the plate.
The Radio Inspector put it on his analyser and pronouced it
'fine'. It was emitting 180W PEP.

It had the 'B' tubes.

Cheers.
Murray

Dave Bullock wrote:
>
> I have recently aquired an FT101 less output finals, and I am
> considering converting it to 6146's.
> I have the ZS1J (QST) article on how to do this but am a little
> concerned about the voltages vs valve ratings.
> Also which suffix of the 6146 to go for.(straight 6146, or A,B or W).
>
> I have 6146W's readily available in matched pairs so was considering these.
> FT101 seems to have around 700Vdc plate voltage and 160V screen supply.
> (I haven't meaured what it 'droops' to, on load)
> Also the ZS1J article recommends that the screen connection be removed
> from the 160v point and be connected to the 300V driver stage supply.
>
> The data (for all 6146 suffixes, A,B&W) states that for ICAS use, the
> maxumum plate voltage is 750V at a screen voltage of 160V! So why does
> ZS1J connect it to 300v? The datasheets also state that the screen
> should be fed through a resistor of between 40-56K ohms, the FT101 seems
> to only have 100 Ohms!
>
> Has anyone carried out this modification successfully, or have any
> technical insight that would be useful? I would appreciate your comments.
>
> Thanks in anticipation.....Dave
> --
> *
> * Dave Bullock *
> * MRC Institute of Hearing Research *
> * Nottingham University *
> * Nottingham *
> * NG7 2RD *
> * *
> * daveb@ihr.mrc.ac.uk *
> *

--
****
* Murray Kelly vk4aok mailto://mkelly@powerup.com.au *
****

4211. Re: NE555 VCO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 12:03:33 UTC
From: "mkelly@powerup.com.au" <mkelly@powerup.com.au>
Message-ID: <3DEC9D95.F743702E@powerup.com.au>
Source record: 39624
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

There was once in Electronics Australia an article abt.
using a 555 as an audio amplifier. I wish I could point
you the right way to find it but can't.

They said at the time it was a 'fun' thing to use the
'ol 55 for something new and different! :-)

Could it have been a supra audio oscillator with the audio
fed into the control voltage port?

I do remember they said the speaker would reject the
hi freq and pass onlt the audio.

Dunno.

Cheers.
Murray
Kijoma wrote:
>
> "Mike W" <mike@corn2.freeserve.co.uk> wrote in message
> news:3dec7f70.3467302@news.freeserve.net...
> > In Phillips Application note AN170 there is a VCO design (fig 25)
> > that I would like to view, but all the PDF reproductions I can find on
> > the web are so low on resolution that the diagram is unreadable.
> >
> > So, has anyone got a 'paper' version of Phillips AN170 that they could
> > scan Fig 25 for me ?.
> >
> > Otherwise, I'm looking for an audio VCO with a fairly linear output
> > for an input of 0-5v, preferably using the 555 or similar common
> > device.
> >
> > any offers?.
> >
> > many thanks Mike W, G8NXD
> > --
> >
****
* Murray Kelly vk4aok mailto://mkelly@powerup.com.au *
****

4212. Re: NE555 VCO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 12:13:39 UTC
From: Uwe Zimmermann <uwezi@kth.se>
Message-ID: <3DEC9FF3.37EF375B@kth.se>
Source record: 39623
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike W wrote:
>
> In Phillips Application note AN170 there is a VCO design (fig 25)
> that I would like to view, but all the PDF reproductions I can find on
> the web are so low on resolution that the diagram is unreadable.
>
> So, has anyone got a 'paper' version of Phillips AN170 that they could
> scan Fig 25 for me ?.
>
> Otherwise, I'm looking for an audio VCO with a fairly linear output
> for an input of 0-5v, preferably using the 555 or similar common
> device.
>
> any offers?.
>
> many thanks Mike W, G8NXD
> --

The output of the 555 VCO wouldn't be a sine wave, so it does not appear
to be too useful for audio....
MAX038 has already been suggested, XR2206 or ICL8038 are two other
alternatives.
You might also want to have a look at these pages:
http://www.epanorama.net/links/oscillator.html
http://cansat5.freeservers.com/custom2.html

Uwe

4213. Re: need help finding a book.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 13:19:41 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <f9bpuu05gn1p7jj3j7f5qnjsa7tq24s7hd@4ax.com>
Source record: 39625

On 03 Dec 2002 01:57:42 GMT, ulpilotsc@aol.com (ULpilotSC) wrote:

>I had a copy of a book called "engineer's trade secrets of radio", many years
>ago. I think it was by R.T. Cunningham, but am not sure. It was about 200
>pages, and had many schematics for constructing tube-based a.m. transmitters. I
>have moved twice and cannot find it anywhere. It was blue and white about 5 by
>6 inches, with some poor photographs of coils and transmitters, but had some
>good information.
>
>I have searched the net and amazon with no results. can anyone help me? I have
>most of a transmitter built to his specs, but never finished it. I need the
>book to help me out! The author was a radio engineer, and sold plans and
>complete transmitters.
>
>e-mail me if you can help, or have a copy I could purchase.

I couldn't find anything in the Library of Congress catalog.

http://catalog.loc.gov/

Also couldn't find it in the British Library

http://blpc.bl.uk/

Jack

4214. FA: Panel Meters for big amps!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 14:13:24 UTC
From: ga_boneyard <ga_boneyard@hotmail.com>
Message-ID: <8_2H9.66605$wc2.3082303@news2.east.cox.net>
Source record: 39627
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment

0-1.2 Kiloamp DC Panel Meter 1922332186
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4660&item=1922332186

0-500 AC Amps Panel Meter 1922332561
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4660&item=1922332561

0-400 AC Amps Panel Meter 1922332863
http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&category=4660&item=1922332863

Thanks for looking..

4215. Re: Drain Modulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 14:50:11 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <$Ws8EiCjSM79EwTB@fslife.co.uk>
Source record: 39628

Reg,

>Drain, collector, anode, amplitude modulation are all dead simple.
>
>Just drive the carrier input (gate, base, grid) very hard to ensure
>saturation and audio modulate the DC supply volts between zero and twice the
>mean DC supply volts.
>
>Most simple modulating devices are source-follower, emitter follower,
>cathode follower.
>
>Brute-force and ignorance but it works every time! What's the problem?
>Havn't you done it yet? You have passed the RAE havn't you?
I passed the exam in 78. Dropped out of component level work soon after.

Since then I've become brain dead.

It's all a new experience for me as I'm re-kindling my interest in
finding out what makes things tick.

It's nearly 25 years since I applied volts to the top of an 807:-)
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

4216. Re: Racal RA1772 xtal filters (1.4MHz)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 15:58:26 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3DECD4A2.D41B9541@ix.netcom.com>
Source record: 39629

J M Noeding wrote:

>
> my RA1772 receiver has the following 1.4MHz xtal filters:
>

> BD45249 (5) (3kHz BW LSB)
> BD45250 (2) (1kHz BW) symmetrical
> BD45251 (6) (300Hz BW) Carrier, symmetrical
>
> BD46975 (3) (600Hz BW)
> BD46976 (4) (300Hz BW)
> BD602856 (1) (2.7kHz BW USB)
>

Jan-Martin, This is not the standard list for this Radio. I note the apparent lack of an AM filter, usually 6,7 or 8 KHz wide.

Also BD 45249 is a 3 KHz symmetrical filter, not LSB.

The carrier filter (BD45253) for those radios fitted with the AFC option is 100 Hz wide, and can be linked to be used for CW, the wiring is fitted to the filter switch, you just need to move the switch stop.

45250 and 45251 are the ones usually fitted for CW use.

A lot of the radios on the UK surplus market and thus ebay have been fitted with offset data filters for use with data on one sideband and voice on the other. You may have one of these. I don't recognise your number 3 and 4. The 4697* numbers are not in my book.

These filters are spec'ed for 1 K with 75 pF in parallel, so that is what you need to look for. A lot of the filters offered on ebay as being suitable for the 1772 and so on are 50 Ohm, so watch it! You can probably find the 2.7 matching LSB filter on ebay as well.

Remember the radio inverts, the actual USB filter is for listening to LSB signals, and vice-versa.

73 Dan ac6ao g3ncr

4217. Re: Homebrew Sat. Transceiver???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 15:58:54 UTC
From: Stevo <mrstevo99@hotmail.com>
Message-ID: <FkjH9.200992$f9.41074@FE06>
Source record: 39644

gfdsg wrote:

> I'm looking for | any | information relating to completely functional
> homebrew transceivers. Specifically transceivers capable of the proper
> uplink and downlink frequencies for Oscar Sat's. Thanks for the support!

You might do both a google web and google newsgroup search. They will
probably turn up all sorts of stuff on this.

Stevo

4218. remotely measure inductance/capacitance

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 17:03:59 UTC
From: "Larry D. Clark" <buddycl@swbell.net>
Message-ID: <3u5H9.180$_%3.165023771@newssvr30.news.prodigy.com>
Source record: 39630

i'd like to remotely measure inductance/capacitance
in an remotely controlled 'L' network i am contructing.
anyone have a favorite url on the network that has a
schematic and maybe some discussion about how to do it?

larry
kd5foy

4219. Re: Racal RA1772 xtal filters (1.4MHz)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 18:32:26 UTC
From: N2EY@AOL.COM
Message-ID: <c2356669.0212031032.1c173fa2@posting.google.com>
Source record: 39631

la8ak.xnd@online.no (J M Noeding) wrote in message
news:<3deab7b0.99231188@news.online.no>...
>
> It seems that other receivers uses 1.4MHz xtal filters, do you know
> which filters have been used for other receiver which might work for
> RA-1771 and RA-1772 ?

I don't know much about RACAL receivers, but about twelve years ago I
obtained four crystal filters at a hamfest. They are marked:

"Alpha Components Inc.
Model 20509 P/N CO6986
C.F. 1.4 MHz BW-500 Hz"

I built an 80/40/20 CW transceiver around two of these filters,
keeping the other two as spares. The guy selling them had a whole box
full but I didn't know anything about them so I only bought four.
(Yeah, I KNOW!!!). Input-output Z appears to be 1000 ohms resistive.
You don't want to know what I paid for them.

There's one just like my four on eBay at present, if anyone wants to
see a picture. I don't know the seller.

Anyone have more info?

73 de Jim, N2EY

4220. Re: remotely measure inductance/capacitance

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 19:58:56 UTC
From: jgboyles@aol.com
Message-ID: <20021203145856.24638.00000405@mb-ch.aol.com>
Source record: 39632

>i'd like to remotely measure inductance/capacitance
>in an remotely controlled 'L' network i am contructing.

Hi Larry, Making some assumptions-you would like to know when your "L" network has transformed the input impedance of the antenna to 50 ohms to match the coax going back to the shack. A 50 ohm swr bridge, bi-directional wattmeter, or an antenna analyzer will tell you that back in the comfort of your shack.
Not sure why you need to know the inductance and capacitance values in the L net. If you have the capability of remote L and C readings, you would also need to know the antenna impedance at the frequency of interest. Then you could use a Smith Chart or other such tool to get the L and C values for a match, but this seems like a lot of trouble.
Gary N4AST
73 Gary N4AST

4221. Re: pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 20:19:01 UTC
From: deWA7ZPU@aztec.asu.edu
Message-ID: <90a0ea69.0212031219.7a328ca7@posting.google.com>
Source record: 39633

Or use one of the services that wants to build your prototype board.
Two that have free software for pcb layouts are:

http://www.expresspcb.com
http://www.pcb123.com

Mike WA7ZPU

4222. Re: NE555 VCO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 20:33:39 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uuq59rnhfutm2f@corp.supernews.com>
Source record: 39634
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

This page:

http://www.williamson-labs.com/555_apps.htm

has a scan of the datasheet where the schematic is almost readable.
Similarly (same site, apparently different scan, still not great though):

http://www.williamson-labs.com/555-AN170.htm

This page shows a much simpler 555 VCO:

http://www.elektronika.cg.yu/projekti/t555/Aplikacije/AplikacijeI.htm

I sort of like Leon's idea of the 4046, tho.

..

"Mike W" <mike@corn2.freeserve.co.uk> wrote in message
news:3dec7f70.3467302@news.freeserve.net...
> In Phillips Application note AN170 there is a VCO design (fig 25)
> that I would like to view, but all the PDF reproductions I can find on
> the web are so low on resolution that the diagram is unreadable.
>
> So, has anyone got a 'paper' version of Phillips AN170 that they could
> scan Fig 25 for me ?.
>
> Otherwise, I'm looking for an audio VCO with a fairly linear output
> for an input of 0-5v, preferably using the 555 or similar common
> device.
>
> any offers?.
>
> many thanks Mike W, G8NXD
> --
>

4223. Re: NE555 VCO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 21:00:12 UTC
From: Kevin McMurtrie <mcmurtri@sonic.net>
Message-ID: <mcmurtri-ADC3EC.13001003122002@typhoon.sonic.net>
Source record: 39635
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

The 555 chip can be used as a really bad class D amp. Set it up for
high frequency square wave operation then apply audio current to pins
2/6.

In article <3DEC9D95.F743702E@powerup.com.au>,
"mkelly@powerup.com.au" <mkelly@powerup.com.au> wrote:

>There was once in Electronics Australia an article abt.
>using a 555 as an audio amplifier. I wish I could point
>you the right way to find it but can't.
>
>They said at the time it was a 'fun' thing to use the
>'ol 55 for something new and different! :-)
>
>Could it have been a supra audio oscillator with the audio
>fed into the control voltage port?
>
>I do remember they said the speaker would reject the
>hi freq and pass onlt the audio.
>
>Dunno.
>
>Cheers.
>Murray
>Kijoma wrote:
>>
>> "Mike W" <mike@corn2.freeserve.co.uk> wrote in message
>> news:3dec7f70.3467302@news.freeserve.net...
>> > In Phillips Application note AN170 there is a VCO design (fig 25)
>> > that I would like to view, but all the PDF reproductions I can find on
>> > the web are so low on resolution that the diagram is unreadable.
>> >
>> > So, has anyone got a 'paper' version of Phillips AN170 that they could
>> > scan Fig 25 for me ?.
>> >
>> > Otherwise, I'm looking for an audio VCO with a fairly linear output
>> > for an input of 0-5v, preferably using the 555 or similar common
>> > device.
>> >
>> > any offers?.
>> >
>> > many thanks Mike W, G8NXD
>> > --
>> >

>**
>* Murray Kelly vk4aok mailto://mkelly@powerup.com.au *
>**

4224. Re: Amidon toroids ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 22:39:47 UTC
From: Olivier PASQUIER <opfd@free.fr>
Message-ID: <3DED32B2.9B586D40@free.fr>
Source record: 39636

Many thanks for all these answers. I will try some of them since I'm looking for T50, T68, T80 and T130 red and yellow so it should be fine.
Thanks again
73s
Olivier, F5RDS

4225. Re: NE555 VCO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-03 23:26:36 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <suCcnSTjZNUvoHCgXTWcow@comcast.com>
Source record: 39637
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Good luck finding the MAX038 -- they are backordered until the second coming.

The Nat Semi LM2907 is a good voltage to frequency converter (can also be used as a F to V), and the linearity is very good.

"Kijoma" <news@kiSPjoAMma.com> wrote in message news:asi1vs$465$1@news7.svr.pol.co.uk...
> "Mike W" <mike@corn2.freeserve.co.uk> wrote in message
> news:3dec7f70.3467302@news.freeserve.net...
> > In Phillips Application note AN170 there is a VCO design (fig 25)
> > that I would like to view, but all the PDF reproductions I can find on
> > the web are so low on resolution that the diagram is unreadable.
> >
> > So, has anyone got a 'paper' version of Phillips AN170 that they could
> > scan Fig 25 for me ?.
> >
> > Otherwise, I'm looking for an audio VCO with a fairly linear output
> > for an input of 0-5v, preferably using the 555 or similar common
> > device.
> >
> > any offers?.
> >
> > many thanks Mike W, G8NXD
> > --
> >
> hi,
>
> can you still get those function generator chips? (max038 or similar
> name??). would be better as a VCO than a 555.
>
> 555's and 741's are for college projects imo :)
>
> Bill
>
>

4226. Re: remotely measure inductance/capacitance

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-04 00:34:21 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3DED4D8D.592F3328@ieee.org>
Source record: 39638

JGBOYLES wrote:

> >i'd like to remotely measure inductance/capacitance
> >in an remotely controlled 'L' network i am contructing.
>
> Hi Larry, Making some assumptions-you would like to know when your "L" network
> has transformed the input impedance of the antenna to 50 ohms to match the coax
> going back to the shack. A 50 ohm swr bridge, bi-directional wattmeter, or an
> antenna analyzer will tell you that back in the comfort of your shack.
> Not sure why you need to know the inductance and capacitance values in the L
> net. If you have the capability of remote L and C readings, you would also
> need to know the antenna impedance at the frequency of interest. Then you
> could use a Smith Chart or other such tool to get the L and C values for a
> match, but this seems like a lot of trouble.
> Gary N4AST
> 73 Gary N4AST

You can measure the impedance at the end of the coax by using a slotted line in the shack. You put a short at the far end of the coax and find the maximum and minimum voltage on the slotted line. The connect the load and do that again.

From those measurements you can calculate the Inductance / capacitance of the load.

There are other ways easier but they take more hardware.

Bill K7NOM

4227. surface mount tools?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-04 01:33:36 UTC
From: Paul Zerkel <pzerkel@insightbb.com>
Message-ID: <QXcH9.229716$WL3.77690@rwcrnsc54>
Source record: 39639

What tools would you recommend for someone who wants to start out in the homebrew hobby and who simply accepts surface mount devices as a fact of life? Let's say I have a budget of about $500. I assume at a minimum I need some type of hot air rework station and some software that will let me lay out printed circuit boards with surface mounted components. Is anything available in that price range, and what other items should I be looking for to equip a workbench?
I have decided that I would like to take up the homebrewing hobby. After having found a scematic and trying to scrounge up the parts needed for even a simple receiver, I have decided that the logical thing to do is learn to deal with surface mounted components. Most of the IC's I wanted are available in SOIC package but finding DIP packages was a challenge. After trying to find certain ICs it seems money would be better invested in some type of rework station than a drill press.

SMD do not really scare me, I have been able to solder SOIC onto an adapter board using a very fine tip and a temp. controlled soldering iron. But that was difficult and I cannot imagine working with anything smaller than SOIC with a soldering iron. I realize that any job is made much easier with the proper tools.

I have seen some rework station go on ebay for around $200-$300 but I really don't know what kind of features I should be looking for, or if there are new otions available at reasonable prices.

4228. Re: surface mount tools?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-04 04:27:06 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3ded83eb@news.netacc.net>
Source record: 39640

"Paul Zerkel" <pzerkel@insightbb.com> wrote in message
news:QXcH9.229716$WL3.77690@rwcrnsc54...
> What tools would you recommend for someone who wants to start out in the
> homebrew hobby and who simply accepts surface mount devices as a fact of
> life? Let's say I have a budget of about $500. I assume at a minimum I
need

Well, a vacuum parts holder/placer is handy, along with a good illuminated magnifier lamp. My Soldering station is an old Pace unit I purchased on E-Bay for $200. I spent another hundred on all the various tips specially designed for SM devices. My soldering station not only sucks, but it blows. This is a good thing :-) A small stream of heated air flows solder nicely around contacts.

The vacuum parts holder/placer I built myself. It has two handwheels for XY axis movement of the part and a foot switch for Z axis clamping onto the board. It makes setting the part onto the board much easier and eliminates movement of the part when soldering with direct heat or hot air. At first I used the vacuum pump in the Pace but later added another stand alone pump with a two position foot swich. One click forward for vacuum on, two clicks forward to clamp the part onto the board.

See other threads in this group for the PCB software. I use PADS but there are lots of fairly good free packages on the net.

Steve

4229. Re: remotely measure inductance/capacitance

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-04 04:32:30 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3DED855E.F8697645@nettally.com>
Source record: 39641

You might check out Almost All Digital Electronics's (WWW.AADE.COM) L/C Meter II/B kit. It is a nifty microprocessor controlled L/C meter that could be adapted for remote use. I just got through using mine for dozens of measurements this evening.

"Larry D. Clark" wrote:

> i'd like to remotely measure inductance/capacitance
> in an remotely controlled 'L' network i am contructing.
> anyone have a favorite url on the network that has a
> schematic and maybe some discussion about how to do it?
>
> larry
> kd5foy

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

4230. Re: remotely measure inductance/capacitance

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-04 05:59:49 UTC
From: Rick Karlquist <richard@karlquist.remove.this.com>
Message-ID: <lRgH9.229994$1O2.15001@sccrnsc04>
Source record: 39642

About 15 years ago I built a remote controlled RX
noise bridge to measure the impedance of my end
fed zepp at the top of a 55 foot tower (it turned
out to be 2500 ohms). The bridge was nulled
with varactors controlled from the ground. Worked
great.

Rick N6RK

"Larry D. Clark" <buddycl@swbell.net> wrote in message
news:3u5H9.180$_%3.165023771@newssvr30.news.prodigy.com...
> i'd like to remotely measure inductance/capacitance
> in an remotely controlled 'L' network i am contructing.
> anyone have a favorite url on the network that has a
> schematic and maybe some discussion about how to do it?
>
> larry
> kd5foy
>
>

4231. Re: NE555 VCO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-04 07:59:32 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0212032359.351926b@posting.google.com>
Source record: 39643
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

mike@corn2.freeserve.co.uk (Mike W) wrote in message
news:<3dec7f70.3467302@news.freeserve.net>...
> Otherwise, I'm looking for an audio VCO with a fairly linear output
> for an input of 0-5v, preferably using the 555 or similar common
> device.

Hi Mike,
I have a measurement protocol of a 555 VCO sample at hand. It is a
common astable multivibrator:
Vcc = 9 V
pins 4 and 8 to Vcc
pin 1 to GND
D.C. modulation Vmod to pin 5 (decoupled by a 6800 pF capacitor to
GND)
output from pin 3
1000 ohm resistor between Vcc and pin 7
560 ohm resistor between pin 7 and pins 2,6 (connected together)
0,15 uF capacitor between pins 2,6 and GND

The VCO works only when 2,7 V <= Vmod <= 9 V

Vmod [V] f out [kHz]
2,7 15,6
3,0 12,7
4,0 7,2
5,0 5,8
6,0 4,6
7,0 3,4
8,0 2,6
9,0 1,6

I hope this will help you.

BR from Ivan

4232. Re: surface mount tools?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-04 11:11:12 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <askr13$6bt$1@newsg1.svr.pol.co.uk>
Source record: 39645

"Paul Zerkel" <pzerkel@insightbb.com> wrote in message
news:QXcH9.229716$WL3.77690@rwcrnsc54...
> What tools would you recommend for someone who wants to start out in the
> homebrew hobby and who simply accepts surface mount devices as a fact of
> life? Let's say I have a budget of about $500. I assume at a minimum I
need
> some type of hot air rework station and some software that will let me lay
> out printed circuit boards with surface mounted components. Is anything
> available in that price range, and what other items should I be looking
for
> to equip a workbench?

[deleted]

If you are only going to assemble the occasional PCB, like most of us, you don't really need anything other than a good soldering station, tweezers, magnifier and some narrow desolder braid. Don't go smaller than 0805 for Rs and Cs, and you shouldn't have too many problems.

>
> SMD do not really scare me, I have been able to solder SOIC onto an
adapter
> board using a very fine tip and a temp. controlled soldering iron. But
that
> was difficult and I cannot imagine working with anything smaller than SOIC
> with a soldering iron. I realize that any job is made much easier with the
> proper tools.

The best technique for fine pitch devices is to flux the pads, tack down two leads at opposite corners ensuring all the leads are aligned correctly, then 'flood' the leads and pads with solder, using a largish tip. Remove all the excess with desolder braid, remake any suspect joints (finest tip), and that's it. Metcal, who make the best soldering equipment, recommend this method for hand assembly, and even sell a bit specially made for the purpose.

If you are designing your own PCBs, it's a good idea to make the pads longer. The standard footprints are intended for solder paste, not hand soldering.

A gas iron like the Weller Pyropen with a hot air nozzle is useful for removing chips.

73, Leon
--
Leon Heller, G1HSM

leon_heller@hotmail.com
http://www.geocities.com/leon_heller

4233. Re: surface mount tools?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-04 13:08:47 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <u9qdnQ7pc_D4Y3CgXTWcoA@comcast.com>
Source record: 39646

Reminds me of a line in the first Austin Powers movie. I couldn't stop
laughing after I read the following statement in your post:

>My soldering station not only sucks, but it blows.
> This is a good thing :-) A small stream of heated air flows solder nicely
> around contacts.
>

4234. Re: need help finding a book.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-04 13:43:41 UTC
From: brokebob@aol.com
Message-ID: <20021204084341.27518.00004340@mb-mr.aol.com>
Source record: 39447

try Alibris - Books.....They have found books by the dozen that I thought were extinct!
brokebob@aol.com (broke=not working, retired=not working, retired=broke)

4235. Ham radio and CB mods

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-04 14:40:44 UTC
From: Daniel Hicks <w8mmq-NOSPAM@email.com>
Message-ID: <3dee13b2$0$1452$272ea4a1@news.execpc.com>
Source record: 39448

Check out W8MMQ Ham radio and CB mods:
http://www.w8mmq.com/mods/
Over 1,200 radio mods, and updated regularly.

And the W8MMQ Amateur Radio Page:
http://www.w8mmq.com/

4236. Re: remotely measure inductance/capacitance

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-04 15:03:30 UTC
From: jgboyles@aol.com
Message-ID: <20021204100330.01500.00007649@mb-mu.aol.com>
Source record: 39449

>You can measure the impedance at the end of the coax by using a slotted
>line in the shack. You put a short at the far end of the coax and find the
>maximum and minimum voltage on the slotted line.

Or you could use Lecher Wires. Neither are practical at HF frequencies. I
used Lecher wires about 30 years ago to determine the frequency my 1 tube 6cw4
70cm transceiver was tuned. Worked great.
I thought with the abundance of antenna analyzers and impedance bridges
nowdays that slotted lines and Lecher wires were confined to college microwave
labs. They are a great way to visualize what's happening on a transmission
line.
73 Gary N4AST

4237. XpressPCB 3.1.0

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-04 21:16:22 UTC
From: Andreu <afreixas@terra.es>
Message-ID: <GguH9.1430897$nc1.4515714@telenews.teleline.es>
Source record: 39450

For those of you that can be interested, XpressPCB 3.1.0 also contains a new tool
to draw schematic diagrams named XpressSCH. I think no autoroute is included, but seems to be an effective tool ...an free ...

Andrew.

4238. FT-243XTLS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-04 22:43:10 UTC
From: Sparks W4EAS <sparksw4eas@mindspring.com>
Message-ID: <3DEE84FE.74AE@mindspring.com>
Source record: 39451

Need several FT-242 xtls All in Kcs 3880, 3885, 7280, 7285 TNX Sparks
W4EAS

4239. Re: pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-04 23:01:21 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <5PvH9.43370$hK4.3838342@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39452

How much do you want to spend?

--
|||||||||||||||||||||||||||||||||||||||
Brian Griffey
http://home.att.net/~briangriffey/Index.htm
|||||||||||||||||||||||||||||||||||||||

"DL" <please@no.emails> wrote in message news:3DEB0A77.5050606@no.emails...
> does anyone know of good software that will create pcb foil patterns
> from a schematic that can automatically route the tracks?
>

4240. Re: H/V Silver mica cap suppliers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-04 23:03:10 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <OQvH9.43374$hK4.3839066@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39453

www.rfparts.com
www.communication-concepts.com

--
||||||||||||||||||||||||||||||||||||||||
Brian Griffey
http://home.att.net/~briangriffey/Index.htm
||||||||||||||||||||||||||||||||||||||||

"OK1SIP" <remove_ok1sip@atlas.cz> wrote in message
news:5f5159fa.0212020528.7f6879bd@posting.google.com...
> Hi Dave,
> silver mica caps are really hard to get. I found some from old
> supplies at http://www.mybox.cz/compo/slidy.html .They are rated for
> 500 volts, but if you connected e.g. 3 pcs 33 pF in series, you should
> get where you need. They are axial types in plastic (epoxy ?) coating.
> The contact to the supplier is compo@atlas.cz
>
> BR from Ivan

4241. Re: NE555 VCO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-04 23:07:23 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <LUvH9.43377$hK4.3839338@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39454
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Maxim is terrible... they have a lot of cools chips... but just try and get
one!

--
||||||||||||||||||||||||||||||||||||||||
Brian Griffey
http://home.att.net/~briangriffey/Index.htm
||||||||||||||||||||||||||||||||||||||||

"john walton" <jdwalton@comcast.net> wrote in message
news:suCcnSTjZNUvoHCgXTWcow@comcast.com...
> Good luck finding the MAX038 -- they are backordered until the second
> coming.

4242. Re: NE555 VCO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-04 23:17:44 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <Za8W$yCY0o79EwXY@jmwa.demon.co.uk>
Source record: 39458
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

I read in sci.electronics.design that Brian Griffey <briangriffey@worldn
et.att.net> wrote (in <LUvH9.43377$hK4.3839338@bgtnsc05-news.ops.worldne
t.att.net>) about 'NE555 VCO', on Wed, 4 Dec 2002:
>Maxim is terrible... they have a lot of cools chips... but just try and get
>one!

Getting one is often no problem - and it will be free. Getting 1000 is a
different ball game, similar to underwater basketball.
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

4243. 220 Homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-05 00:41:22 UTC
From: "Kevin Harding - TriCity-Web.com" <kevin@tricity-web.com>
Message-ID: <SgxH9.161307$ka.3584225@news1.calgary.shaw.ca>
Source record: 39455

Hi all,

I'm new to the group (and kinda new to ham radio) and I was hoping if anyone can give me some really basic information for making a 220MHz portable transceiver for use up here in Canada. ANY information would be greatly appreciated, whether it be basic or more complex.

Thanks greatly in advance,

VA7KBH

4244. Re: Homebrew tubes (was: Building a variable condenser?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-05 02:10:47 UTC
From: janaeanddoug@netzero.net
Message-ID: <360a820d.0212041810.9aad71f@posting.google.com>
Source record: 39456

"Frank Dinger" <gm0csz.kn6wh@ntlworld.com> wrote in message
news:<QD6D9.1609$yY2.112206@newsfep1-win.server.ntli.net>...
> > A simple capacitor to build would be a neutralizing type condenser.
> > Build a u shaped platform, hang one large square or circle of metal in
> > a stationary position on one "leg" of the U and then attach another
> > piece of metal to a section of allthread that screws thru a bolt
> > mounted on the other "leg" of the U, I have not tried this yet but
> > have seen a few neutralizing capacitors and they look fairly easy to
> > homebrew. You could probably rig up a nice looking slide type dial
> > using this method too, well nice, probably not nice looking, lol.
> >
> > I built a vernier drive a couple of years back using a very large
> > plastic wheel mounted on my capacitor shaft and then used a u shaped
> > metal holder to mount a knob and a shaft. I used a large rubber band
> > between the shaft and the wheel, I forget the ratio but it was very
> > high. nasty looking and probably not the quality you guys who are
> > really into radio require but for I was quite proud of it.
> =====
> To add to the above : If a variable capacitor is involving a screw type
> mechanism ,a suitable 'dial' can be made of a 10 or 14 turns potmeter knob
> (for example those made by Beckman)
> Depending on the number of turns the screw has to make to cause the required
> change of capacitance (which largely depends on the screw's thread pitch) a
> 'reversed' co-axial reducer can be applied in series with the 10 or 14 turn
> dial knob.
> These rotary reducers normally have a 3:1 or 6:1 ratio. Using for example
> the latter in reversed mode e.g. 1: 6 , a ten-turn knob would be able to
> rotate the screw type mechanism 10 * 6 = 60 times,providing a resolution of
> 1 in 10*100= 1000 since the dial knob can be set to any of 100 positions for
> any rotation. In this way
> the variable capacitor (for example used for tuning) can be set accurately
> with a high resolution.
>
> Frank gm0csz.kn6wh@ntlworld.com
Check out this site for homemade tubes and transistors. 73, doug
http://home.earthlink.net/~lenyr/index.html

4245. Re: 220 Homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-05 04:47:51 UTC
From: john graesser <graesser@tca.net>
Message-ID: <uutmhbd6f74g90@corp.supernews.com>
Source record: 39457

"Kevin Harding - TriCity-Web.com" <kevin@tricity-web.com> wrote in message
news:SgxH9.161307$ka.3584225@news1.calgary.shaw.ca...
> Hi all,
>
> I'm new to the group (and kinda new to ham radio) and I was hoping if
> anyone can give me some really basic information for making a 220MHz
> portable transceiver for use up here in Canada. ANY information would be
> greatly appreciated, whether it be basic or more complex.
>
> Thanks greatly in advance,
>
> VA7KBH

I think TenTec used to sell the manuals for their kits seperately. If you
can either get one from them or from someone who has built the 220 kit, that
should give you an idea of how to put one together.

I built their 6m kit and am very happy with it.
thanks, John.
KC5DWD

4246. portable speaker advise needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-05 05:03:55 UTC
From: elfa <elfa_member@newsguy.com>
Message-ID: <asmmnr01btt@drn.newsguy.com>
Source record: 39459

I'm looking for a set of portable battery powered speakers
that turn on when the radio is turned on.

I already have a set of Sony APM-090's that fill the bill
but Sony doesn't make them anymore. I just want to turn the
radios ON/OFF without have to do the same with the speakers.

Anyone know of anything?

elfa

4247. Re: pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-05 06:00:53 UTC
From: DL <please@no.emails>
Message-ID: <3DEEEB95.3050905@no.emails>
Source record: 39460

Brian Griffey wrote:
> How much do you want to spend?
>
> --
> |||||||||||||||||||||||||||||||||||||||
> Brian Griffey
> http://home.att.net/~briangriffey/Index.htm
> |||||||||||||||||||||||||||||||||||||||
>
>
> "DL" <please@no.emails> wrote in message news:3DEB0A77.5050606@no.emails...
>
>>does anyone know of good software that will create pcb foil patterns
>>from a schematic that can automatically route the tracks?
>>
>
>
> preferably as little as possible
but it's all right now -- eagle does everything i want to do reasonably

4248. SuperSCAF ICs

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-05 07:42:00 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0212042341.393704a3@posting.google.com>
Source record: 39461

Hi all,
does anybody have the datasheet or pinout for the American
Microsystems S3528/29 filters ? They were used in the SuperSCAF audio
filter in late 80's, so its schematics would help me, too.

BR from Ivan

4249. Re: NE555 VCO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-05 10:26:26 UTC
From: fred bartoli <toto@hotmail.toto>
Message-ID: <3def2919$0$11834$626a54ce@news.free.fr>
Source record: 39462
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

John Woodgate <jmw@jmwa.demon.contraspam.yuk> a crit dans le message :
Za8W$yCY0o79EwXY@jmwa.demon.co.uk...
> I read in sci.electronics.design that Brian Griffey <briangriffey@worldn
> et.att.net> wrote (in <LUvH9.43377$hK4.3839338@bgtnsc05-news.ops.worldne
> t.att.net>) about 'NE555 VCO', on Wed, 4 Dec 2002:
> >Maxim is terrible... they have a lot of cools chips... but just try and
get
> >one!
>
> Getting one is often no problem - and it will be free. Getting 1000 is a
> different ball game, similar to underwater basketball.
> --

So we can say that Maxim is the first firm to have centered its job around
providing free samples.

Fred.

> Regards, John Woodgate, OOO - Own Opinions Only.
http://www.jmwa.demon.co.uk
> Interested in professional sound reinforcement and distribution? Then go
to
> http://www.isce.org.uk
> PLEASE do NOT copy news posts to me by E-MAIL!

4250. Re: NE555 VCO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-05 10:33:54 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3def2b63.418194@news.freeserve.net>
Source record: 39463
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Thanks for all the input Folks, It looks like I'm going to be using
the 4046 .. and to hell with the 555
atb Mike W
--
On Thu, 5 Dec 2002 11:26:26 +0100, "fred bartoli" <toto@hotmail.toto>
wrote:

>
>John Woodgate <jmw@jmwa.demon.contraspam.yuk> a crit dans le message :
>Za8W$yCY0o79EwXY@jmwa.demon.co.uk...
>> I read in sci.electronics.design that Brian Griffey <briangriffey@worldn
>> et.att.net> wrote (in <LUvH9.43377$hK4.3839338@bgtnsc05-news.ops.worldne
>> t.att.net>) about 'NE555 VCO', on Wed, 4 Dec 2002:
>> >Maxim is terrible... they have a lot of cools chips... but just try and
>get
>> >one!
>>
>> Getting one is often no problem - and it will be free. Getting 1000 is a
>> different ball game, similar to underwater basketball.
>> --
>
>So we can say that Maxim is the first firm to have centered its job around
>providing free samples.
>
>Fred.
>
>
>> Regards, John Woodgate, OOO - Own Opinions Only.
>http://www.jmwa.demon.co.uk
>> Interested in professional sound reinforcement and distribution? Then go
>to
>> http://www.isce.org.uk
>> PLEASE do NOT copy news posts to me by E-MAIL!
>
>

4251. Re: NE555 VCO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-05 11:50:10 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <asnehi0i6q@drn.newsguy.com>
Source record: 39464
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Mike W wrote...
>
> Thanks for all the input Folks, It looks like I'm going
> to be using the 4046 .. and to hell with the 555

Out of one frying pan into another. :>)

Thanks,
- Win

4252. Re: NE555 VCO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-05 13:26:59 UTC
From: chrisdot muriel <muriel@analogdot.com>
Message-ID: <d6kuuu46cq0b9f124blsjn6r64i3o9govj@4ax.com>
Source record: 39465

On 5 Dec 2002 03:50:10 -0800, Winfield Hill <whill@picovolt.com>
wrote:

>Mike W wrote...
>>
>> Thanks for all the input Folks, It looks like I'm going
>> to be using the 4046 .. and to hell with the 555
>
> Out of one frying pan into another. :>)
>
> Thanks,
> - Win

Be aware that the VCO in the 4046 isn't particularly good - although I would say, in the interests of simplicity/KISS design, try it first.
I once needed to regenerate TV line pulses at 15625 Hz (PAL frame rate x full line rate) & ended up using the phase comparator of the 4046 with an AD654 (Analog Devices) V to F converter. I had initially tried using both VCO & phase comparator of the AD4046. The difference in the stability (lack of line jitter) was immediately evident both on a scope & on the received picture (this was a satellite signal descrambler from the days when it was all analogue).
You can get up to 2 free samples of most Analog Devices parts via their website.
I actually work for them - but that is not the point.
Chris Muriel (G3ZDM)

4253. Re: 220 Homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-05 16:57:37 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0212050857.11a58cf4@posting.google.com>
Source record: 39466

"Kevin Harding - TriCity-Web.com" <kevin@tricity-web.com> wrote in message news:<SgxH9.161307$ka.3584225@news1.calgary.shaw.ca>...
> Hi all,
>
> I'm new to the group (and kinda new to ham radio) and I was hoping if
> anyone can give me some really basic information for making a 220MHz
> portable transceiver for use up here in Canada. ANY information would be
> greatly appreciated, whether it be basic or more complex.
>
> Thanks greatly in advance,

Try a hamfest. The Burnaby swap meet is particularly good.
Hell, try EBay.

Seriously, people crop up here all the time wanting to
build relatively complicated gear, and few seem to have
any idea of what they're getting in to. You're certainly
not going to save any money.

Last time I checked, building transmitters wasn't
something a Basic licensee could do anyway.

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

4254. Re: Looking to build a novice transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-05 17:03:49 UTC
From: w3m78k_ep@yahoo.com
Message-ID: <158f6944.0212050903.4482d6c8@posting.google.com>
Source record: 39467

Thanks to all the Elmers who posted. You've been very helpful.

4255. QEX Sept/Oct 2002 wtb

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-05 18:03:50 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <uuv72tipjhvrad@corp.supernews.com>
Source record: 39468

Anyone have one for sale?
tnx
hank

4256. Re: 220 Homebrew- and HB'ing in general

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-05 22:08:54 UTC
From: Al Lorona <al_lorona@agilent.com>
Message-ID: <3DEFCE75.2D7E2F61@agilent.com>
Source record: 39469

Laura Halliday wrote:

> ... few seem to have
> any idea of what they're getting in to. You're certainly
> not going to save any money.
>
>
> Laura Halliday VE7LDH

Laura, you bring up an interesting point. I have often wondered about the cost of homebrewing vs. the cost of buying. I have agonized over starting several projects that I eventually undertook and now, looking back, I spent more than I should have. I mean, have you looked at what a roller inductor or a variable capacitor costs nowadays? Ridiculous!

My theory is that if we always made the decision to homebrew or not to homebrew just based on cost, that nobody would ever homebrew.

It almost always costs more to build a tech device yourself. Name a piece of electronics that doesn't. The only thing I can think of is an HF dipole, which will cost you upwards of $50 to buy but far less than that to build yourself... and a dipole is really the lowest-tech device in the typical shack.

What costs less, buying the latest CD of a Beethoven piano sonata, or spending twenty years of your life taking lessons, practicing, and performing it yourself? But how can you make a decision like this based solely on price?

Maybe this thinking, more than anything else, is what's killing homebrewing in amateur radio.

Regards,

Al W6LX

4257. Re: 220 Homebrew

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-05 23:42:19 UTC
From: "Kevin Harding - TriCity-Web.com" <kevin@tricity-web.com>
Message-ID: <vvRH9.166110$ka.3691267@news1.calgary.shaw.ca>
Source record: 39470

Well I know that a basic can't build anything.
I want to get plans.
You're really not encouraging me to upgrade are you?
I plan on it however.

"Laura Halliday" <marsgal42@hotmail.com> wrote in message
news:d42b5a72.0212050857.11a58cf4@posting.google.com...
> "Kevin Harding - TriCity-Web.com" <kevin@tricity-web.com> wrote in message
news:<SgxH9.161307$ka.3584225@news1.calgary.shaw.ca>...
> > Hi all,
> >
> > I'm new to the group (and kinda new to ham radio) and I was hoping if
> > anyone can give me some really basic information for making a 220MHz
> > portable transceiver for use up here in Canada. ANY information would
be
> > greatly appreciated, whether it be basic or more complex.
> >
> > Thanks greatly in advance,
>
> Try a hamfest. The Burnaby swap meet is particularly good.
> Hell, try EBay.
>
> Seriously, people crop up here all the time wanting to
> build relatively complicated gear, and few seem to have
> any idea of what they're getting in to. You're certainly
> not going to save any money.
>
> Last time I checked, building transmitters wasn't
> something a Basic licensee could do anyway.
>
> Laura Halliday VE7LDH "Que les nuages soient notre
> Grid: CN89lg pied a terre..."
> ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

4258. Re: NE555 VCO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-05 23:44:01 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <5xRH9.39801$vM1.3128288@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39471
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

lol...

--
||||||||||||||||||||||||||||||||||||||||
Brian Griffey
http://home.att.net/~briangriffey/Index.htm
||||||||||||||||||||||||||||||||||||||||

> So we can say that Maxim is the first firm to have centered its job around
> providing free samples.

4259. Re: 220 Homebrew- and HB'ing in general

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-06 00:32:53 UTC
From: Bill Janssen <billj@ieee.org>
Message-ID: <3DEFF035.E78AE9C0@ieee.org>
Source record: 39472

Al Lorona wrote:

> Laura Halliday wrote:
>
> > ... few seem to have
> > any idea of what they're getting in to. You're certainly
> > not going to save any money.
> >
> >
> > Laura Halliday VE7LDH
>
> Laura, you bring up an interesting point. I have often wondered about
> the cost of homebrewing vs. the cost of buying. I have agonized over
> starting several projects that I eventually undertook and now, looking
> back, I spent more than I should have. I mean, have you looked at what a
> roller inductor or a variable capacitor costs nowadays? Ridiculous!

I agree on costs. However I still home brew some equipment. My approach
Is to not design and then get the parts, but get some parts and then see
what
I can make. This makes for some sub optimum designs, but if it works I am
happy.

Parts come from surplus equipment, ham swap meets etc.

Bill K7NOM

>
>
> My theory is that if we always made the decision to homebrew or not to
> homebrew just based on cost, that nobody would ever homebrew.
>
> It almost always costs more to build a tech device yourself. Name a
> piece of electronics that doesn't. The only thing I can think of is an
> HF dipole, which will cost you upwards of $50 to buy but far less than
> that to build yourself... and a dipole is really the lowest-tech device
> in the typical shack.
>
> What costs less, buying the latest CD of a Beethoven piano sonata, or
> spending twenty years of your life taking lessons, practicing, and
> performing it yourself? But how can you make a decision like this based
> solely on price?
>
> Maybe this thinking, more than anything else, is what's killing
> homebrewing in amateur radio.
>

> Regards,
>
> Al W6LX

4260. Re: NE555 VCO

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-06 07:58:42 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0212052358.5e75e006@posting.google.com>
Source record: 39473
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Hi Mike again,
what about the LTC1799 circuit ? Its frequency is set by one resistor (10 kiloohm < R < 200 kiloohm) in the range 5 kHz < f < 20 MHz. No other external parts (except a decoupling capacitor) are used. I think the resistor could be replaced by a FET to obtain a VCO. Smaller frequencies can be obtained using an external divider.
Just an idea.

BR from Ivan

4261. Re: 220 Homebrew- and HB'ing in general

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-06 08:04:15 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0212060004.2271d437@posting.google.com>
Source record: 39474

Hi Al,
you are right. The main aim of homebrewing is to learn how the stuff works and to enjoy some fun. The price should be almost unimportant. It is the same case as with all other hobbies. "Monetary and market approach" kills them like a poison.

BR from Ivan

4262. Re: Racal RA1772 xtal filters (1.4MHz)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-06 10:04:50 UTC
From: la8ak.xnd@online.no
Message-ID: <3defecc0.86778091@news.online.no>
Source record: 39475

On Tue, 03 Dec 2002 07:58:26 -0800, Dan Rae <rae4@ix.netcom.com>
wrote:

>
>
>J M Noeding wrote:
>
>>
>> my RA1772 receiver has the following 1.4MHz xtal filters:
>>
>
>> BD45249 (5) (3kHz BW LSB)
>> BD45250 (2) (1kHz BW) symmetrical
>> BD45251 (6) (300Hz BW) Carrier, symmetrical
>>
>> BD46975 (3) (600Hz BW)
>> BD46976 (4) (300Hz BW)
>> BD602856 (1) (2.7kHz BW USB)
>>
>
>Jan-Martin, This is not the standard list for this Radio. I note the
>apparent lack of an AM filter, usually 6,7 or 8 KHz wide.
>
>Also BD 45249 is a 3 KHz symmetrical filter, not LSB.
>
>The carrier filter (BD45253) for those radios fitted with the AFC option
>is 100 Hz wide, and can be linked to be used for CW, the wiring is
>fitted to the filter switch, you just need to move the switch stop.
>
>45250 and 45251 are the ones usually fitted for CW use.
>
>A lot of the radios on the UK surplus market and thus ebay have been
>fitted with offset data filters for use with data on one sideband and
>voice on the other. You may have one of these. I don't recognise your
>number 3 and 4. The 4697* numbers are not in my book.
>
>These filters are spec'ed for 1 K with 75 pF in parallel, so that is
>what you need to look for. A lot of the filters offered on ebay as
>being suitable for the 1772 and so on are 50 Ohm, so watch it! You can
>probably find the 2.7 matching LSB filter on ebay as well.
>
>Remember the radio inverts, the actual USB filter is for listening to
>LSB signals, and vice-versa.
>

>73 Dan ac6ao g3ncr

Tnx info!
My receiver has been used a coast station, not sure if it was medium- or shortwave. But the BD45249 works fine for LSB (80/40m ssb).

I am considering some mods.
First I will place a alu-plate on the rear for connection to loadspeaker, mute, cwkey (i/p) and other for the connectors I've standardized to in my shack (i.e. RCA phono and conhex).
Then I am considering a fast MUTE - without relays (don't like relays - removed half hundred douzens relays from operation when I worked at Rogaland radio 25 years ago). It seems possible to feed 3V from voltage divider to pin 8 or 9 on the First IF board to bias the PIN-diode attenuator towards off-state and reduce sensitivity when tx is keyed.

will also add an 1N4148 on AGC switch to enable use of IF gain when AGC is in operation, as for all the other gears I have in the shack

The first IF (35.4) uses the BD44454 filter- Wonder what is the selectivity? The second mixer isn't particularly good, but is said to have 20dB balance without any tricks

73
Jan-Martin
LA8AK

--
remove ,xnd to reply

4263. Re: 220 Homebrew- and HB'ing in general

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-06 14:47:23 UTC
From: troglodite@aol.com
Message-ID: <20021206094723.21179.00000003@mb-cu.aol.com>
Source record: 39476

>you are right. The main aim of homebrewing is to learn how the stuff
>works and to enjoy some fun. The price should be almost unimportant.
>It is the same case as with all other hobbies. "Monetary and market
>approach" kills them like a poison.
>

Couldn't agree more. I grew up very impoverished, and quickly learned to be resourceful. If I ever got bored, I'd get my junkbox and dump everything out on the floor, then try to figure out what I could build with what was there.

I scrounged a lot of stuff from local radio and TV shops. To me, this was half the fun. As a Novice, I worked 27 states on a homemade two tube transmitter. What a blast. Some aspects of the craft may have changed, but it's still possible to have a lot of fun, learn a thing or two, and not go broke.

Doug Moore KB9TMY (Formerly K6HWY)

4264. atomic clocks in Seattle

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-06 17:06:01 UTC
From: charlesh3 <charlesh3@msn.com>
Message-ID: <7r2cnTy1Kt5mRW2gXTWcoA@giganews.com>
Source record: 39477

I can't figure out a better newsgroup than this to post this question, so please accept a slighty off topic post.

Here in Seattle, I have two atomic clocks and neither will receive WWVB with any regularity. Is there anyone in the area (preferably in the city with all the QRN) that can recommend a clock that is actually locking onto WWVB?The other problem is just plain lack of signal. Seattle falls outside the 100 uv/m contour during part of the day - as does a lot of the west coast.

Chuck

4265. Re: atomic clocks in Seattle

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-06 17:22:33 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <t15l9.12497$Wa.1053284@news1.east.cox.net>
Source record: 39478

Most clocks seem to sync up best during a short window during the
night-time hours. One trick is re-orientating the clock, the antenna
may be directional.

Pete

"charlesh3" <charlesh3@msn.com> wrote in message
news:7r2cnTy1Kt5mRW2gXTWcoA@giganews.com...
> I can't figure out a better newsgroup than this to post this question, so
> please accept a slighty off topic post.
>
> Here in Seattle, I have two atomic clocks and neither will receive WWVB
with
> any regularity. Is there anyone in the area (preferably in the city with
all
> the QRN) that can recommend a clock that is actually locking onto WWVB?The
> other problem is just plain lack of signal. Seattle falls outside the 100
> uv/m contour during part of the day - as does a lot of the west coast.
>
>
> Chuck
>
>
>

4266. Re: 220 Homebrew- and HB'ing in general

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-06 17:27:20 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0212060927.74fba843@posting.google.com>
Source record: 39479

Al Lorona <al_lorona@agilent.com> wrote in message news:<3DEFCE75.2D7E2F61@agilent.com>...

> (snip...)
> My theory is that if we always made the decision to homebrew or not to
> homebrew just based on cost, that nobody would ever homebrew.
>
> It almost always costs more to build a tech device yourself. Name a
> piece of electronics that doesn't. The only thing I can think of is an
> HF dipole, which will cost you upwards of $50 to buy but far less than
> that to build yourself... and a dipole is really the lowest-tech device
> in the typical shack.
>
> What costs less, buying the latest CD of a Beethoven piano sonata, or
> spending twenty years of your life taking lessons, practicing, and
> performing it yourself? But how can you make a decision like this based
> solely on price?
>
> Maybe this thinking, more than anything else, is what's killing
> homebrewing in amateur radio.

Good points, all.

Building equipment for financial reasons alone is nonsense,
and has been so for decades. YaeComWood and their ilk
can crank out gear for far less than anybody could possibly
build it themselves.

I see two particularly good reasons to build something
nowadays: to build a piece of equipment that is not
commercially available (either too specialized, or
weird specs that don't interest the YaeComWood bean-
counters), or as a learning experience.

Both are excellent reasons to build something, and I've
done both myself. However, both motivations require a
certain amount of experience; even in 2002, you must
learn to walk before you can attempt to run.

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

4267. Re: atomic clocks in Seattle

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-06 18:16:09 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <uv1qbct1nmc42b@corp.supernews.com>
Source record: 39480

I'm in Tulsa, OK and I can hear anything on60kcs but the clock synch up in
the middle of the just after i put the batteries in it..
I took it apart to see what it had for an antenna and it's a 4 inch ferrite
loop and a couple of ICs and thats's it...
the designer certainly knew what he was doing..
I bought mine about a year ago at Scams for about $20 and now they're down
to less than $10.00 or $25 for oine with an outdoor thermometer..
why didn't wait?
73
hank wd5jfr
"charlesh3" <charlesh3@msn.com> wrote in message
news:7r2cnTy1Kt5mRW2gXTWcoA@giganews.com...
> I can't figure out a better newsgroup than this to post this question, so
> please accept a slighty off topic post.
>
> Here in Seattle, I have two atomic clocks and neither will receive WWVB
with
> any regularity. Is there anyone in the area (preferably in the city with
all
> the QRN) that can recommend a clock that is actually locking onto WWVB?The
> other problem is just plain lack of signal. Seattle falls outside the 100
> uv/m contour during part of the day - as does a lot of the west coast.
>
>
> Chuck
>
>
>

4268. Re: atomic clocks in Seattle

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-06 18:55:29 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3DF0F2A1.886D1B2A@mfi.net>
Source record: 39481

Henry Kolesnik wrote:
>
> I'm in Tulsa, OK and I can hear anything on60kcs but the clock synch up in
> the middle of the just after i put the batteries in it..
> I took it apart to see what it had for an antenna and it's a 4 inch ferrite
> loop and a couple of ICs and thats's it...
> the designer certainly knew what he was doing..
> I bought mine about a year ago at Scams for about $20 and now they're down
> to less than $10.00 or $25 for oine with an outdoor thermometer..
> why didn't wait?
> 73
> hank wd5jfr
> "charlesh3" <charlesh3@msn.com> wrote in message
> news:7r2cnTy1Kt5mRW2gXTWcoA@giganews.com...
> > I can't figure out a better newsgroup than this to post this question, so
> > please accept a slighty off topic post.
> >
> > Here in Seattle, I have two atomic clocks and neither will receive WWVB
> with
> > any regularity. Is there anyone in the area (preferably in the city with
> all
> > the QRN) that can recommend a clock that is actually locking onto WWVB?The
> > other problem is just plain lack of signal. Seattle falls outside the 100
> > uv/m contour during part of the day - as does a lot of the west coast.
> >
> >
> > Chuck
> >
> >
> >

I'm south of Ocala Florida, and I have no problem picking up the
signal. The signal level meter is full scale all the time. You may be
getting interference from something like a TV or monitor.
--

Michael A. Terrell
Central Florida

4269. Re: atomic clocks in Seattle

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-06 19:04:57 UTC
From: Al Lorona <al_lorona@agilent.com>
Message-ID: <3DF0F4D9.BA917CB0@agilent.com>
Source record: 39482

Uncle Peter wrote:
>
> Most clocks seem to sync up best during a short window during the
> night-time hours. One trick is re-orientating the clock, the antenna
> may be directional.
>
> Pete
>

Yes, this is probably it. The signal here in Los Angeles is also very weak and usually makes it after midnight, but the position of the clock is really critical.

You need to move around the clock on the desk to find a good spot. Move it, then leave it overnight without touching it. Next morning, see if it got a good signal.

Keep the clock away from metal.

Orient the clock so that the ferrite rod antenna inside is broadside to Ft. Collins, CO.

It will take you several nights, but eventually you will find a good spot. Good luck.

Al

4270. MC13135 - where?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-06 20:31:36 UTC
From: Andreas Weller <weller@andreas-weller.de>
Message-ID: <asr1f3$n2f$05$1@news.t-online.com>
Source record: 39483
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components

Hallo!

Does any one know where I can find the Motorola IC: MC13135 dual conversion narrowband fm receiver

It seems to be no longer available :-(

Thank you very much!

Greetings,
Andreas Weller, DF1PAW

4271. FS. Two-Way Radio Service Manuals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-06 21:57:17 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <p49I9.33497$L47.3925908@read2.cgocable.net>
Source record: 39484
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

Have acquired a quantity of Commercial & some Amateur, Two Way Radio Service Manuals...Take a look and see if you have a need for any. Am trying to add to my HTML page as time permits.
73...Norm VE3CZI

http://home.cogeco.ca/~rodemi/Service%20Manuals/Service%20Manuals.html

4272. QRP RADIO - Spy Set Radio set for Sale on Ebay

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-06 22:06:00 UTC
From: monotika@yahoo.gr
Message-ID: <a638f16b.0212061406.2dfc8e2c@posting.google.com>
Source record: 39485
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.equipment,rec.radio.swap,rec.radio.amateur.homebrew

Spy radio set QRP radio set , qrp rig !
Item number: 1943862553

http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=1943862553

4273. Re: atomic clocks in Seattle

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-06 23:28:25 UTC
From: averyfineman@aol.com
Message-ID: <20021206182825.03466.00000003@mb-fz.aol.com>
Source record: 39486

In article <3DF0F4D9.BA917CB0@agilent.com>, Al Lorona <al_lorona@agilent.com>
writes:

>Uncle Peter wrote:
>>
>> Most clocks seem to sync up best during a short window during the
>> night-time hours. One trick is re-orientating the clock, the antenna
>> may be directional.
>>
>> Pete
>
>Yes, this is probably it. The signal here in Los Angeles is also very
>weak and usually makes it after midnight, but the position of the clock
>is really critical.

I live in the east end of the San Fernando Valley in Los Angeles
and have not encountered any weakness in WWVB despite
the Verdugo Hills at our "back" (towards Boulder, CO).

My wife and I have taken our Oregon Scientific "atomic clock"
to our second home outside of Tacoma and haven't had any
problems with it...only some loss of signal when packed inside
the car while driving up and back.

>You need to move around the clock on the desk to find a good spot. Move
>it, then leave it overnight without touching it. Next morning, see if it
>got a good signal.
>
>Keep the clock away from metal.

These little $30 clocks aren't a Wonder Radio capable of
working through QRM or QRN. Of course they might be
"critical" as to positioning. I am surprised and delighted
that the Oregon Scientific units work as well as they do!

Len Anderson
retired (from regular hours) electronic engineer person

4274. Re: 220 Homebrew- and HB'ing in general

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-07 01:49:09 UTC
From: la8ak.xnd@online.no
Message-ID: <3df13bd7.172574115@news.online.no>
Source record: 39487

On 6 Dec 2002 09:27:20 -0800, marsgal42@hotmail.com (Laura Halliday)
wrote:

>Good points, all.
>
>Building equipment for financial reasons alone is nonsense,
>and has been so for decades. YaeComWood and their ilk
>can crank out gear for far less than anybody could possibly
>build it themselves.
>
you may build a stage or part of a rig, or a simpler rig if you would
like to try a particular concept. I've just heard that two OPs builds
a receiver with 7360 as mixer

>I see two particularly good reasons to build something
>nowadays: to build a piece of equipment that is not
>commercially available (either too specialized, or
>weird specs that don't interest the YaeComWood bean-
>counters), or as a learning experience.
>

I would choose one of those YaeComWood, but they normally don't serve
my interntions, so a lot of mods are required to achieve the
performance needed.
Usually it is no provision for using transverters with the 100W RF
stage disabled, signals split into two coax cables, with +12V to
signal to start the transverter in the TX-coax. Also often a good
improvement to add a plate or bracket with standard connectors for
interface towards other equipment in the shack

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

4275. Re: 220 Homebrew- and HB'ing in general

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-07 02:05:22 UTC
From: ghldbrd@ccp.com
Message-ID: <598dc4be.0212061805.91db53d@posting.google.com>
Source record: 39488

Bill Janssen <billj@ieee.org> wrote in message news:<3DEFF035.E78AE9C0@ieee.org>...
> Al Lorona wrote:
>
> > Laura Halliday wrote:
> >
> > > ... few seem to have
> > > any idea of what they're getting in to. You're certainly
> > > not going to save any money.
> > >
> > >
> > > Laura Halliday VE7LDH
> >
> > Laura, you bring up an interesting point. I have often wondered about
> > the cost of homebrewing vs. the cost of buying. I have agonized over
> > starting several projects that I eventually undertook and now, looking
> > back, I spent more than I should have. I mean, have you looked at what a
> > roller inductor or a variable capacitor costs nowadays? Ridiculous!
>
> I agree on costs. However I still home brew some equipment. My approach
> Is to not design and then get the parts, but get some parts and then see
> what
> I can make. This makes for some sub optimum designs, but if it works I am
> happy.
>
> Parts come from surplus equipment, ham swap meets etc.
>
> Bill K7NOM
>
> >
> >
> > My theory is that if we always made the decision to homebrew or not to
> > homebrew just based on cost, that nobody would ever homebrew.

Well, homebrew is definitely NOT practical for a SOTA HF transceiver,
but surplus converson, antenna tuners and small power supplies is
still a good area to start. Or boatanchor restoration.

Nowdays there's too many candy bars at the ham stores that the hams
have become "CBified". Pay your money and play with your toy.

There is nothing like the thrill of making something work with a bit
of blood, sweat and tears. Even simple projects give me that thrill,
after 34 years in this hobby.

As far as costs, learning how to be a good hunter/scrounger at hamfests is paramount. Being a typicl frugal ham I don't like paying retail for anything. With experience, one learns how to substitute parts, rather than relying on EXACT items.

Gary Hildebrand WA7KKP

4276. Re: MC13135 - where?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-07 07:37:18 UTC
From: Brett <tempacc0302@hostedscripts.com>
Message-ID: <ass7vq$t0n3h$1@ID-144300.news.dfncis.de>
Source record: 39489
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.components

Future/Active has some in stock, however you need to buy 30 at $1.750.
Allied Electronics has none, but sells them in single quantities.

"Andreas Weller" <weller@andreas-weller.de> wrote in message
news:asr1f3$n2f$05$1@news.t-online.com...
> Hallo!
>
> Does any one know where I can find the Motorola IC: MC13135 dual
conversion
> narrowband fm receiver
>
> It seems to be no longer available :-(
>
> Thank you very much!
>
>
> Greetings,
> Andreas Weller, DF1PAW
>
>

4277. Re: FT101 6JS6C to 6146 conversion advice please

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-07 10:55:46 UTC
From: nm5k@wt.net
Message-ID: <25eb70d7.0212070255.7c536205@posting.google.com>
Source record: 39490

"mkelly@powerup.com.au" <mkelly@powerup.com.au> wrote in message news:<3DEC9C5F.D9FFC107@powerup.com.au>...
> The 'W' is a stronger envelope only - the 'B' has more dissipation.
> I used 300 on the screens at abt. 900v on the plate.
> The Radio Inspector put it on his analyser and pronouced it
> 'fine'. It was emitting 180W PEP.
>
> It had the 'B' tubes.
>
> Cheers.
> Murray

Hummm. I was always curious what the exact difference between a "W" and a "B" was. I thought the W was a military version with the same appx specs as a "B". I was under the impression that they both had the same 35 watt plate dissipation. I know the "B" was 35 watts, with the old "A" 6146 having 25 watts dissipation. If the "W" is lower, what is the dissipation? I do notice most "B"'s seem to cost more...The 6146 was probably the best power tube made for that size tube. Much harder to kill than most sweep tubes. Drake 6JB6's in particular don't hold up to abuse with their puny 17 watt dissipation. I used to eat a set a year, back when I ran drake twins non stop. MK

http://web.wt.net/~nm5k/

4278. Re: FT101 6JS6C to 6146 conversion advice please

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-07 14:09:24 UTC
From: n2ey@aol.com
Message-ID: <20021207090924.03466.00000013@mb-fz.aol.com>
Source record: 39491

In article <25eb70d7.0212070255.7c536205@posting.google.com>, nm5k@wt.net (Mark Keith) writes:

>"mkelly@powerup.com.au" <mkelly@powerup.com.au> wrote in message
>news:<3DEC9C5F.D9FFC107@powerup.com.au>...
>> The 'W' is a stronger envelope only - the 'B' has more dissipation.
>> I used 300 on the screens at abt. 900v on the plate.
>> The Radio Inspector put it on his analyser and pronouced it
>> 'fine'. It was emitting 180W PEP.
>>
>> It had the 'B' tubes.
>>
>> Cheers.
>> Murray
>
>Hummm. I was always curious what the exact difference between a "W"
>and a "B" was. I thought the W was a military version with the same
>appx specs as a "B". I was under the impression that they both had the
>same 35 watt plate dissipation. I know the "B" was 35 watts, with the
>old "A" 6146 having 25 watts dissipation. If the "W" is lower, what is
>the dissipation? I do notice most "B"'s seem to cost more...

"W"s are just ruggedized "A"s. The "B" is different enough that it interchangeability is an issue. Some rigs can use Bs and some can't. Others require adjustments like reneutralization or even minor circuit modifications.,

>The 6146
>was probably the best power tube made for that size tube. Much harder
>to kill than most sweep tubes. Drake 6JB6's in particular don't hold
>up to abuse with their puny 17 watt dissipation. I used to eat a set a
>year, back when I ran drake twins non stop.

I think the main reason Drake and others used sweep tubes was that, in their time, they were less expensive and more easily available than 6146s! How times change...

73 de Jim, N2EY
>

4279. Re: MC13135 - where?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-07 18:57:03 UTC
From: Paul <pswarman@screaming.net>
Message-ID: <3df24488_1@mk-nntp-1.news.uk.worldonline.com>
Source record: 39492

Farnells in the Uk sell them at £2.70 in single quamtities and £1.33 for 10+

If I can help, let me know.

Paul G0odp

Andreas Weller <weller@andreas-weller.de> wrote in message
news:asr1f3$n2f$05$1@news.t-online.com...
> Hallo!
>
> Does any one know where I can find the Motorola IC: MC13135 dual
conversion
> narrowband fm receiver
>
> It seems to be no longer available :-(
>
> Thank you very much!
>
>
> Greetings,
> Andreas Weller, DF1PAW
>
>

4280. Re: FT101 6JS6C to 6146 conversion advice please

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-07 20:44:51 UTC
From: gaschafer@attbi.com
Message-ID: <3df25e0e.3587597@netnews.attbi.com>
Source record: 39493

The W supposedly had a more rugged filament. The 6146W can be a
regular 6146 type or it
can be a 6146B type depending on when it was made. Supposedly the
later W versions were
the same as the 6146B as far as electrical specs. The B came out some
time in 1964 but the W
did not adopt it immediately but some time after that. So if you have
W's after 66 or 67?? they
may be the same as the B.

As far as running high values of resistance in the screens, that will
raise IM. Also higher that
specked screen voltage will raise IM products. They should be run at
manufacturers spec on the
screens with a stiff supply.

73
Gary K4FMX

On 7 Dec 2002 02:55:46 -0800, nm5k@wt.net (Mark Keith) wrote:

>"mkelly@powerup.com.au" <mkelly@powerup.com.au> wrote in message
news:<3DEC9C5F.D9FFC107@powerup.com.au>...
>> The 'W' is a stronger envelope only - the 'B' has more dissipation.
>> I used 300 on the screens at abt. 900v on the plate.
>> The Radio Inspector put it on his analyser and pronouced it
>> 'fine'. It was emitting 180W PEP.
>>
>> It had the 'B' tubes.
>>
>> Cheers.
>> Murray
>
>Hummm. I was always curious what the exact difference between a "W"
>and a "B" was. I thought the W was a military version with the same
>appx specs as a "B". I was under the impression that they both had the
>same 35 watt plate dissipation. I know the "B" was 35 watts, with the
>old "A" 6146 having 25 watts dissipation. If the "W" is lower, what is
>the dissipation? I do notice most "B"'s seem to cost more...The 6146
>was probably the best power tube made for that size tube. Much harder
>to kill than most sweep tubes. Drake 6JB6's in particular don't hold
>up to abuse with their puny 17 watt dissipation. I used to eat a set a
>year, back when I ran drake twins non stop. MK
>
>http://web.wt.net/~nm5k/

4281. Blade welder transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-07 21:06:36 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3DF2640F.50308@attbi.com>
Source record: 39494

Mike,
here is some more info on the recyleing idea,
"Sam Goldwasser wrote:
> I DO recoomend you totally remove (by blasting if necessary) the HV
> winding to prevent, shall we say, unfortunate accidents.

How would you add a LV secondary without removing the HV winding anyway?
It isn't hard at all BTW. I used a small cold chisel, sharpened a
little,and cut right through the winding in four places - straight down
the face of the core - then use a square punch (piece of wood) to push
out the remnants. Took less than a minute, and left the insulation intact.

Getting a hefty secondary winding in there was more of a nuisance.
Anyone care to share a smart solution?"
This is from a Newsgroup thread on reusing these transformers, if you
are going to run it for a long cycle time (not likely) you would want to
add a cooling fan for the transformer.
Bill

4282. 2 metre module

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-07 21:26:31 UTC
From: Graham Lodge <grahamlodge@xtra.co.nz>
Message-ID: <2ltl9.41017$_h6.560139@news.xtra.co.nz>
Source record: 39495

Has anyone got a 2 metre module for the Yaesu 767GX TX for sale

Graham Lodge
grahamlodge@xtra.co.nz

4283. Re: Blade welder transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-07 21:31:10 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3DF269D1.3020807@attbi.com>
Source record: 39496

Sorry, for the missposting
This was to go to a fiend whos build a Blade wleder for his cheap bandsaw.
Bill Higdon
Bill Higdon wrote:
> Mike,
> here is some more info on the recyleing idea,
> "Sam Goldwasser wrote:
> > I DO recoomend you totally remove (by blasting if necessary) the HV
> > winding to prevent, shall we say, unfortunate accidents.
>
> How would you add a LV secondary without removing the HV winding anyway?
> It isn't hard at all BTW. I used a small cold chisel, sharpened a
> little,and cut right through the winding in four places - straight down
> the face of the core - then use a square punch (piece of wood) to push
> out the remnants. Took less than a minute, and left the insulation intact.
>
> Getting a hefty secondary winding in there was more of a nuisance.
> Anyone care to share a smart solution?"
> This is from a Newsgroup thread on reusing these transformers, if you
> are going to run it for a long cycle time (not likely) you would want to
> add a cooling fan for the transformer.
> Bill
>
>

4284. AM Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-08 05:08:42 UTC
From: azkb7ryu@aztec.asu.edu
Message-ID: <asuk4q$se0$1@news.asu.edu>
Source record: 39497

Hello,

I am designing an extremely low power (<<1 W input) AM transmitter and have encountered several difficulties including how to determine the impedance of the modulation transformer.

Suggestions on this or anything else (operating points etc) would be appreciated.

Thanks.

Joel
--

4285. Re: surface mount tools?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-08 06:02:37 UTC
From: Paul Zerkel <pzerkel@insightbb.com>
Message-ID: <1gBI9.159364$GR5.47907@rwcrnsc51.ops.asp.att.net>
Source record: 39498

Thanks for the response. Being somewhat new to the homebrewing hobby, I am still a relative novice at soldering at all (unfortunately I never learned it in shop class). So I am now simply diving in having just owned a traditional temp. controlled iron about a year.

While it does get easier with practice, I freely admit that I am not the best solder-er in the world. I am wondering if working with a hot air station is generally easier, more difficult, or simply "different". So what kind of skills am I going to need to acquire if I want to start working with hot air rework stations? Or are those skills going to be totally dependent on what brand/type I purchase? I saw an infrared station go on ebay for just a shade over $500, and would like to see a comparison of that tool to the hot air stations for working with SMD.

Finally are there any good books and/or magazine articles you could refer me too that give advice as to getting started with hot air and/or infrared soldering.

-paul
N9PCS

4286. Tube socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-08 11:50:53 UTC
From: rob34 <rob34@infinet.com>
Message-ID: <3df33221$0$1452$4c5ecdc7@news.erinet.com>
Source record: 39499

I was wondering if anybody could tell what tube fits this socket I have, it is a ceramic socket made by Johnson and it is marked 122-101-100. Thanks for any info, Rob

4287. Re: AM Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-08 12:53:48 UTC
From: John Fletcher <johnfletch@2e1gmv.freeserve.co.uk>
Message-ID: <asvfd3bvp1@newsg2.svr.pol.co.uk>
Source record: 39500

use a normal eagle LT700 audio transformer or scrounge one from an old am pb txcrvr
"JOEL N. STEENIS" <azkb7ryu@aztec.asu.edu> wrote in message news:asuk4q$se0$1@news.asu.edu...
>
> Hello,
>
> I am designing an extremely low power (<<1 W input) AM transmitter and
> have encountered several difficulties including how to determine the
> impedance of the modulation transformer.
>
> Suggestions on this or anything else (operating points etc) would be
> appreciated.
>
> Thanks.
>
>
> Joel
> --
>
>
>
>

4288. Re: AM Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-08 13:29:57 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <pPHI9.49388$hK4.4306360@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39501

I would think that just about any "audio" type xfmr would work...

--
||||||||||||||||||||||||||||||||||||||||
Brian Griffey
http://home.att.net/~briangriffey/Index.html
||||||||||||||||||||||||||||||||||||||||

"JOEL N. STEENIS" <azkb7ryu@aztec.asu.edu> wrote in message
news:asuk4q$se0$1@news.asu.edu...
>
> Hello,
>
> I am designing an extremely low power (<<1 W input) AM transmitter and
> have encountered several difficulties including how to determine the
> impedance of the modulation transformer.
>
> Suggestions on this or anything else (operating points etc) would be
> appreciated.

4289. x-band controller circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-08 13:57:14 UTC
From: Mike Oreskovic <ores@idirect.com>
Message-ID: <uv6ldejctd2c72@corp.supernews.com>
Source record: 39502

Hi,

I am looking for a cross-band controller circuit. I want to set up two separate radios for cross-band (UHF-VHF) operation.

Mike

4290. FS: Old Radio-Related Books (1930's-40's)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-08 15:08:41 UTC
From: oldbooks78@aol.com
Message-ID: <20021208100841.04759.00000133@mb-fr.aol.com>
Source record: 39503

I currently have for sale the following old radio-related books. Postage is $2.50 for the first book, and $1 for each additional item. The books are:

Smith, Woodrow "Antenna Manual" Editors and Engineers Limited, 1948. The 306 page hardbound book is in very good condition, clean with no page tears or pen marks except for a previous owners name and address stamp inside the front cover. A few small white stains on the covers, otherwise tight and secure. The first edition of the Antenna Manual publication. A nice early radio reference book. Available for $10.

Federal Telephone and Radio Corporation "Reference Data for Radio Engineers, Second Edition" Federal Telephone and Radio Corporation, 1947. The 322 page hardbound book is in good+ condition. Clean with no page tears or pen marks except for a previous owners name and address inside the front cover. "The present edition has been greatly enlarged and a subject index included. Chapters on transformers and room acoutics have been added. The material on radio propagatiion and radio noise has been revised. The data on cathode-ray tubes have been considerably expanded." Available for $8.

Everitt, William Littell "Communication Engineering" McGraw-Hill, 1937. The 727 page hardbound book is in about very good condition. Clean with no page tears or pen marks except for a previous owners name and address inside the front cover, and a few passages underlined in pencil. A nice early text on the science of the radio. Available for $9.

Measurements Development Laboratory of the Sperry Gyroscope Company "Microwave Transmission Design Data" Sperry Gyroscope Company, 1944. Publication No. 23-80. The 215 page hardbound book is in very good condition, clean with no page tears or pen marks, and a strong binding. Originally issued during WWII as a "confidential" document. Chapter topics include General formulae for concentric lines; Attenuation in concentric lines; Reflections and impedance matching; General formulae for wave guides; Attenuation in wave guides; Reflections and impedance matching in wave guides; Wave guide tees and bends; Wave guides filled with dielectric material; Dielectric material: Cavity resonators; and Measurement techniques. A neat early book on ultra-high frequency radio waves. Available for $9.

Graham, Frank D. "Audels Radioman's Guide, Modern Radio Practice" Theo. Audel & Co., 1932. Tan cloth covers over flexible boards. The book is about 250 pages in length (pages are numbered oddly, making a total count difficult). A nice early vintage radio book, illustrated throughout. Clean with no page tears or pen marks except for a gift inscription inside the front cover. Cloth covers show some spotting and light staining from age, but not bad at all. Available for $10.

ARRL "The ARRL Antenna Book, 13th Edition" American Radio Relay League, 1977. The 336 page softbound book is in about very good condition. Clean with no page tears or pen marks. The covers show a bit of wear from previous use, but not bad at all.A comprehensive treatment of radio antennas. Available for $7.

Harrington, Thomas P. "Tune to Satellite Radio on Your Satellite System" Universal Electronics. First Edition. The 103 page magazine-sized softbound book is in fine condition, fresh and clean inside and out. Includes a separate "Chapter 8" dated September 1993 laid in. Available for $3.

Carrington, Eugene "Allied's Electronic Data Handbook" Allied Radio, 1959. Soft Cover. The 64 page softbound book is in very good condition, clean except for a previous owners name marked out inside the front cover. A compilation of formulas and data most commonly used in the field of radio and electronics. Available for $2.

Beam, Robert (editor) "A Dictionary of Electronic Terms" Allied Radio, 1959. The softbound 80 page book is in very good condition, clean except for a previous owners name marked out inside the front cover. Concise definitions of words used in radio, television and electronics. Available for $2.

Kiver, Milton S. "Understanding Transistors, Allied's Handbook of Transistor Fundamentals" Allied Radio, 1962. The 64 page softbound book is in fine condition, clean inside and out. Topics include transistor fundamentals, junction transistors, transistor symbols, basic amplifier circuits, radio- and intermediate-frequency amplifiers, transistor oscillators, and more. Available for $2.

Jordan, Edward C.; Paul H. Nelson; William Carl Osterbrook; Fred H. Pumphrey; Lynne C. Smeby; and W.L. Everitt (editor) "Fundamentals of Radio" Prentice-Hall, 1944. The 400 page hardbound book is in good+ condition, clean with no page tears or pen marks except for a previous owners name inside the front cover. Gray cloth covers with some minor spotting on the front cover, otherwise nice. A nice early radio related text. Available for $9.

US War Department "Technical Manual - Radio Fundamentals, TM 11-455" U.S. GPO, 1941. The 140 page softbound book is in fine condition, fresh and clean inside and out except for a previous owners name on the front cover. A nice WWII vintage radio manual. Available for $10.

If interested in any of the above, please email to "Oldbooks78@aol.com" to reserve. Thanks.

Dave

4291. Re: surface mount tools?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-08 16:33:01 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-0812021134360001@c-66-176-144-254.se.client2.attbi.com>
Source record: 39504

In article <1gBI9.159364$GR5.47907@rwcrnsc51.ops.asp.att.net>, "Paul Zerkel" <pzerkel@insightbb.com> wrote:

> Thanks for the response. Being somewhat new to the homebrewing hobby, I am
> still a relative novice at soldering at all (unfortunately I never learned
> it in shop class). So I am now simply diving in having just owned a
> traditional temp. controlled iron about a year.
>
> While it does get easier with practice, I freely admit that I am not the
> best solder-er in the world. I am wondering if working with a hot air
> station is generally easier, more difficult, or simply "different". So what
> kind of skills am I going to need to acquire if I want to start working with
> hot air rework stations? Or are those skills going to be totally dependent
> on what brand/type I purchase? I saw an infrared station go on ebay for just
> a shade over $500, and would like to see a comparison of that tool to the
> hot air stations for working with SMD.
>
> Finally are there any good books and/or magazine articles you could refer me
> too that give advice as to getting started with hot air and/or infrared
> soldering.
>
> -paul
> N9PCS

My eyes are not all that good and my hands are shaky, but give me a microscope and a decent temp controlled iron and I can usually solder and desolder many smd's. When you get down to pin pitches of 0.5 mm or so, then there's a real problem with conventional techniques. Hot air is fantastic, but expensive and still requires the magic ingredient; patience. Good, simple tips for soldering are: keep you tip clean (use a tip cleaner and sponge), solder to a clean interface by putting on flux if necessary, and don't force the tip down onto what you're soldering. Use a light touch.

Steve WB4CZR

4292. 2 meter yagi feedlines

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-08 20:04:40 UTC
From: John Koch <jakoch@centurytel.net>
Message-ID: <5e97vuk7qhvlma7fh1e9g72i9237uu1ufo@4ax.com>
Source record: 39505

I have just got into making antennas. I have made a couple for 2 meters. They work ok but my question is one I can not find on the internet. I am making some yagi beams and I am confused about the driven element. Some have the driven in two parts and therefor the feed line is one each of the elements... some have the driven in one peice centered on the boom. These antennas say nothing about where or how to connect the feed line. Can someone shed some light on this subject. I have been just cutting the driven in the middle on all my projects. Is this what I should be doing?

BTW, I am getting the ARRL book but thougt I would try to get this question answered first.

Thanks
N5RVN

4293. Re: 2 meter yagi feedlines

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-08 20:07:31 UTC
From: Bill M <"\\exray\"\"\"@n-o- .caribe.net>">
Message-ID: <uv79if52vrfdaf@corp.supernews.com>
Source record: 39506

John Koch wrote:
> I have just got into making antennas. I have made a couple for 2
> meters. They work ok but my question is one I can not find on the
> internet. I am making some yagi beams and I am confused about the
> driven element. Some have the driven in two parts and therefor the
> feed line is one each of the elements... some have the driven in one
> peice centered on the boom. These antennas say nothing about where or
> how to connect the feed line. Can someone shed some light on this
> subject. I have been just cutting the driven in the middle on all my
> projects. Is this what I should be doing?
>
> BTW, I am getting the ARRL book but thougt I would try to get this
> question answered first.
>
> Thanks
> N5RVN

If you are using a solid driven element, the easiest thing to do is make
a gamma match.
-Bill WX4A

4294. Re: 2 meter yagi feedlines

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-08 20:12:28 UTC
From: John Koch <jakoch@centurytel.net>
Message-ID: <er97vuke0132rk0qa2gc3vpcqf0avconmi@4ax.com>
Source record: 39507

Could you explain a gamma match. I have used them and seen them but I
do not fully understand them exactly.

Is it permissable to just always cut them or is there some benifit to
the gamma match?

Thanks again

On Sun, 08 Dec 2002 16:07:31 -0400, Bill M <""\"exray\"\"\"@n-o-
.caribe.net> wrote:

>John Koch wrote:
>> I have just got into making antennas. I have made a couple for 2
>> meters. They work ok but my question is one I can not find on the
>> internet. I am making some yagi beams and I am confused about the
>> driven element. Some have the driven in two parts and therefor the
>> feed line is one each of the elements... some have the driven in one
>> peice centered on the boom. These antennas say nothing about where or
>> how to connect the feed line. Can someone shed some light on this
>> subject. I have been just cutting the driven in the middle on all my
>> projects. Is this what I should be doing?
>>
>> BTW, I am getting the ARRL book but thougt I would try to get this
>> question answered first.
>>
>> Thanks
>> N5RVN
>
>If you are using a solid driven element, the easiest thing to do is make
>a gamma match.
>-Bill WX4A

4295. Re: 2 meter yagi feedlines

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-08 20:56:48 UTC
From: Bill M <"\\exray\"\"\"@n-o- .caribe.net>">
Message-ID: <uv7cessrln6535@corp.supernews.com>
Source record: 39508

John Koch wrote:
> Could you explain a gamma match. I have used them and seen them but I
> do not fully understand them exactly.
>
> Is it permissable to just always cut them or is there some benifit to
> the gamma match?
>
>
> Thanks again

I'll try :-)
First consider that the impedance of a typical properly tuned yagi is
something considerably less than 50 ohms. If you have been using a
split element I suspect that you are going out from center a couple
inches in either direction to attain a 50 ohm match.
A gamma match simply does a similar thing to one side only. The shield
of the coax goes directly to the center of the element and the center
wire goes a few inches out from center.
But it doesn't end there. This configuration produces a bit of
reactance and there is usually a capacitor in series with the center
wire. This may be a fixed value, a trimmer, or a trombone type of
assembly made with tubing.
Its a little more complicated but the solid element offers a direct
ground which may mean less precipitation static, lightning protection
and often easier/more solid construction.
No particular need for a balun is also an issue but that's a very
subjective subject anyway.

Hope this helps.

-Bill

4296. Re: 2 meter yagi feedlines

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-08 21:30:54 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3df3b9cc.1053355@news.freeserve.net>
Source record: 39509

>John Koch wrote:
>> Could you explain a gamma match. I have used them and seen them but I
>> do not fully understand them exactly.
>>
>> Is it permissable to just always cut them or is there some benifit to
>> the gamma match?
>>
This has to be a TROLL

4297. Re: 2 meter yagi feedlines

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-08 21:44:17 UTC
From: John Koch <jakoch@centurytel.net>
Message-ID: <49f7vus9gigap1jpm6h892ao21unksdu8k@4ax.com>
Source record: 39510

What is a TROLL?

On Sun, 08 Dec 2002 21:30:54 GMT, mike@corn2.freeserve.co.uk (Mike W)
wrote:

>>John Koch wrote:
>>> Could you explain a gamma match. I have used them and seen them but I
>>> do not fully understand them exactly.
>>>
>>> Is it permissable to just always cut them or is there some benifit to
>>> the gamma match?
>>>
>This has to be a TROLL

4298. Re: 2 meter yagi feedlines

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-08 21:59:09 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <NgPI9.50272$hK4.4362811@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39511

A little guy that lives under bridges... lol

--
||||||||||||||||||||||||||||||||||||||||
Brian Griffey
http://home.att.net/~briangriffey/Index.html
||||||||||||||||||||||||||||||||||||||||

"John Koch" <jakoch@centurytel.net> wrote in message
news:49f7vus9gigap1jpm6h892ao21unksdu8k@4ax.com...
> What is a TROLL?

4299. Re: 2 meter yagi feedlines

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-08 23:06:20 UTC
From: john graesser <graesser@tca.net>
Message-ID: <uv7k0psfgrj9db@corp.supernews.com>
Source record: 39512

"Bill M" <""\"exray\"\"\"@n-o- .caribe.net> wrote in message
news:uv7cessrln6535@corp.supernews.com...
> John Koch wrote:
> > Could you explain a gamma match. I have used them and seen them but I
> > do not fully understand them exactly.
> >
> > Is it permissable to just always cut them or is there some benifit to
> > the gamma match?
> >
> >
> > Thanks again
>
> I'll try :-)
> First consider that the impedance of a typical properly tuned yagi is
> something considerably less than 50 ohms. If you have been using a
> split element I suspect that you are going out from center a couple
> inches in either direction to attain a 50 ohm match.
> A gamma match simply does a similar thing to one side only. The shield
> of the coax goes directly to the center of the element and the center
> wire goes a few inches out from center.
> But it doesn't end there. This configuration produces a bit of
> reactance and there is usually a capacitor in series with the center
> wire. This may be a fixed value, a trimmer, or a trombone type of
> assembly made with tubing.
> Its a little more complicated but the solid element offers a direct
> ground which may mean less precipitation static, lightning protection
> and often easier/more solid construction.
> No particular need for a balun is also an issue but that's a very
> subjective subject anyway.
>
> Hope this helps.
>
> -Bill

An alternative to gamma feed or dipole feed is a Jpole feed, where the
driven element is a Jpole, it spans the middle ground between gamma and
dipole feeds.

If you do a search on "cheap yagi" you can find the plans for 2m and 440
versions of the cheap yagi. I built the 9 element 440 version and with it I
can hit a repeater with my handheld that I can't hit otherwise.
thanks, John.
KC5DWD

4300. Re: 2 meter yagi feedlines

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-08 23:24:57 UTC
From: "Joe S." <joe@schlatter.org>
Message-ID: <at0k9u0t8o@enews1.newsguy.com>
Source record: 39513

Try these:

http://dipole.w4zt.com/

http://www.kwarc.on.ca/tech/j-pole.html

http://www.latorilla.com/vhf/b-d2f-1.htm

http://members.fortunecity.com/xe1bef/2meters-antenna.htm

http://ac6v.com/antprojects.htm Scroll down to the 2 meter antennas
section.

--

Regards,
Joe S.
W4HH

"John Koch" <jakoch@centurytel.net> wrote in message
news:5e97vuk7qhvlma7fh1e9g72i9237uu1ufo@4ax.com...
> I have just got into making antennas. I have made a couple for 2
> meters. They work ok but my question is one I can not find on the
> internet. I am making some yagi beams and I am confused about the
> driven element. Some have the driven in two parts and therefor the
> feed line is one each of the elements... some have the driven in one
> peice centered on the boom. These antennas say nothing about where or
> how to connect the feed line. Can someone shed some light on this
> subject. I have been just cutting the driven in the middle on all my
> projects. Is this what I should be doing?
>
> BTW, I am getting the ARRL book but thougt I would try to get this
> question answered first.
>
> Thanks
> N5RVN

4301. Tones on an FT-225RD

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 03:10:18 UTC
From: dss117@aol.com
Message-ID: <20021208221018.01467.00000187@mb-cr.aol.com>
Source record: 39514

I have a Yaesu FT-225RD 2 meter base. It does not have an internal tone unit to access the repeaters. I hope to add one. Has anyone done this with this rig? Where does the tone unit conect to the rig?
Any help would be great!

4302. Re: AM Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 03:35:42 UTC
From: Kent Haase <ijeh99@mb.sympatico.ca>
Message-ID: <fbUI9.4484$kK1.20531@news1.mts.net>
Source record: 39515

The method used by Ed Noll in his book "Radio Transmitter Priciples and Projects" is to measure the supply current used by the stage(s) to be modulated and divide that value into the supply voltage (remember, this is prior to any modulation being applied, just the carrier is present). The resulting value of resistance is what the secondary of the modulation transformer should be.

Kent VE4KEH

"JOEL N. STEENIS" <azkb7ryu@aztec.asu.edu> wrote in message news:asuk4q$se0$1@news.asu.edu...
>
> Hello,
>
> I am designing an extremely low power (<<1 W input) AM transmitter and
> have encountered several difficulties including how to determine the
> impedance of the modulation transformer.
>
> Suggestions on this or anything else (operating points etc) would be
> appreciated.
>
> Thanks.
>
>
> Joel
> --
>
>
>
>

4303. Re: 2 meter yagi feedlines

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 04:24:02 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3DF41AE1.20626166@northwest.com>
Source record: 39516

isn't antenna theory on the tests anymore?

you could also use a V-match to a ladder line. if you use a gamma match,
don;t forget to use a Pausey balun.

larryc, n3ccw
=====

Bill M wrote:

> John Koch wrote:
> > I have just got into making antennas. I have made a couple for 2
> > meters. They work ok but my question is one I can not find on the
> > internet. I am making some yagi beams and I am confused about the
> > driven element. Some have the driven in two parts and therefor the
> > feed line is one each of the elements... some have the driven in one
> > peice centered on the boom. These antennas say nothing about where or
> > how to connect the feed line. Can someone shed some light on this
> > subject. I have been just cutting the driven in the middle on all my
> > projects. Is this what I should be doing?
> >
> > BTW, I am getting the ARRL book but thougt I would try to get this
> > question answered first.
> >
> > Thanks
> > N5RVN
>
> If you are using a solid driven element, the easiest thing to do is make
> a gamma match.
> -Bill WX4A

4304. Unknown pin assignment on oscilator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 04:50:28 UTC
From: Marvin Kroll <merkinp@worldnet.att.net>
Message-ID: <oiVI9.50941$hK4.4411468@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39517

I have several oscillators, each in a metal case about 2" square and 0.5" thick. The case has a label that includes a stylized logo that I can't read with certainty, but it may be NFC. There is an sma output(?) connector on the side and four pins on the bottom. One of these is directly connected to the case but the other three are isolated and are positioned at three corners of a square 1" on a side. Is this a standard pin-out? Where can I find the pin assignment? MK

4305. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 07:45:10 UTC
From: rstevew@deeptht.armory.com
Message-ID: <3df44a06$0$37690$8eec23a@newsreader.tycho.net>
Source record: 39518
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

In article <tXWG9.208881$NH2.14367@sccrnsc01>,
Rick Karlquist <richard@karlquist.remove.this.com> wrote:
>See this URL:
>
>http://www.analog.com/library/applicationNotes/dataConverters/PDF/AN-279.pdf
>Rick N6RK

Page desn't fucking exist! DON'T POST OLD LINKS!!
-Steve

>"morphiend" <morphiend-n0-spam@fuse.net> wrote in message
>news:pdgluu4lbp6b1ue3rpdnb73eqj3mmgec8d@4ax.com...
>> I am working on a project for a class I am currently enrolled in and
>> need to construct a zero-crossing detector FM demodulation circuit.
>>
>> I know the specifications of the incoming FM'd signal:
>> fc = 122kHz.
>> fm = 5kHz.
>> deviation/modulation of 5.
>>
>> I was wondering if anyone had any circuit diagrams that contained such
>> a device and the constraints for tuning it to recieve the
>> aforementioned signal.
>>
>>
>> Thanks.
>>
>> Mike Koss
>
>

4306. Re: AM Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 09:16:26 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <KbZI9.12218$B03.29470@news-server.bigpond.net.au>
Source record: 39519

JOEL N. STEENIS wrote:
> Hello,
>
> I am designing an extremely low power (<<1 W input) AM transmitter and
> have encountered several difficulties including how to determine the
> impedance of the modulation transformer.
>
> Suggestions on this or anything else (operating points etc) would be
> appreciated.
>
> Thanks.
>

As I recall, turns ratio of modulation transformer = SQR_RT(Z1 * Z2) where
Z1=Modulator impedance and Z2=RF power amplifier (or stage to be modulated)
impedance.

4307. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 09:31:33 UTC
From: chrisdot muriel <muriel@analogdot.com>
Message-ID: <3io8vus3rtli6bg6j4drdnkg2thp3m0u42@4ax.com>
Source record: 39520
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

On 09 Dec 2002 07:45:10 GMT, rstevew@deeptht.armory.com (Richard
Steven Walz) wrote:

>In article <tXWG9.208881$NH2.14367@sccrnsc01>,
>Rick Karlquist <richard@karlquist.remove.this.com> wrote:
>>See this URL:
>>
>>http://www.analog.com/library/applicationNotes/dataConverters/PDF/AN-279.pdf
>>Rick N6RK
>-------------------------
>Page desn't fucking exist! DON'T POST OLD LINKS!!
>-Steve
>
>
>>"morphiend" <morphiend-n0-spam@fuse.net> wrote in message
>>news:pdgluu4lbp6b1ue3rpdnb73eqj3mmgec8d@4ax.com...
>>> I am working on a project for a class I am currently enrolled in and
>>> need to construct a zero-crossing detector FM demodulation circuit.
>>>
>>> I know the specifications of the incoming FM'd signal:
>>> fc = 122kHz.
>>> fm = 5kHz.
>>> deviation/modulation of 5.
>>>
>>> I was wondering if anyone had any circuit diagrams that contained such
>>> a device and the constraints for tuning it to recieve the
>>> aforementioned signal.
>>>
>>>
>>> Thanks.
>>>
>>> Mike Koss
OK, here are 2 ways to get to the apps note :

1) Go to ADI homepage www.analog.com
Enter "AN-279" in search box & hit button

2) Enter AD650 in search box & hit button
Hit "Technical Library" link

2nd method gives a number of apps note related to the topic.

Chris Muriel, G3ZDM, Analog Dervices.

>

4308. Re: AM Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 09:33:33 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <NrZI9.12247$B03.29662@news-server.bigpond.net.au>
Source record: 39521

Steve Andrew wrote:
> JOEL N. STEENIS wrote:
>> Hello,
>>
>> I am designing an extremely low power (<<1 W input) AM transmitter
>> and have encountered several difficulties including how to determine
>> the impedance of the modulation transformer.
>>
>> Suggestions on this or anything else (operating points etc) would be
>> appreciated.
>>
>> Thanks.
>>
>
> As I recall, turns ratio of modulation transformer = SQR_RT(Z1 * Z2)
> where Z1=Modulator impedance and Z2=RF power amplifier (or stage to
> be modulated) impedance.

Sorry - Just seen the typoe :-(- it should be Turns Ratio = SQRT(Z1 / Z2)

4309. Re: 2 meter yagi feedlines

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 12:39:52 UTC
From: John Koch <jakoch@centurytel.net>
Message-ID: <4l39vusoe69ltgfr51h2ifautccivr64n8@4ax.com>
Source record: 39522

Larry, I am sure it is but it has been about 3 years since I have been involved and about 10 years since I took my test. I am trying to relearn everything. I was in high school the first time I learned it all and I have slept since then. And the first time I used a lot of the knowledge blindly. I knew what to do but not why.

JK

On Sun, 08 Dec 2002 20:24:02 -0800, L Caracciolo
<larryc@northwest.com> wrote:

>isn't antenna theory on the tests anymore?
>
>you could also use a V-match to a ladder line. if you use a gamma match,
>don;t forget to use a Pausey balun.
>
>larryc, n3ccw
>=====
>
>Bill M wrote:
>
>> John Koch wrote:
>> > I have just got into making antennas. I have made a couple for 2
>> > meters. They work ok but my question is one I can not find on the
>> > internet. I am making some yagi beams and I am confused about the
>> > driven element. Some have the driven in two parts and therefor the
>> > feed line is one each of the elements... some have the driven in one
>> > peice centered on the boom. These antennas say nothing about where or
>> > how to connect the feed line. Can someone shed some light on this
>> > subject. I have been just cutting the driven in the middle on all my
>> > projects. Is this what I should be doing?
>> >
>> > BTW, I am getting the ARRL book but thougt I would try to get this
>> > question answered first.
>> >
>> > Thanks
>> > N5RVN
>>
>> If you are using a solid driven element, the easiest thing to do is make
>> a gamma match.
>> -Bill WX4A

4310. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 12:53:04 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0212090453.5b3c5629@posting.google.com>
Source record: 39523
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

rstevew@deeptht.armory.com (Richard Steven Walz) wrote in message news:<3df44a06$0$37690$8eec23a@newsreader.tycho.net>...
> >See this URL:
> >http://www.analog.com/library/applicationNotes/dataConverters/PDF/AN-279.pdf
> -------------------------
> Page desn't fucking exist! DON'T POST OLD LINKS!!
> -Steve

I can access this URL with NO PROBLEM !!!!!!

BR from Ivan

4311. Re: 2 meter yagi feedlines

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 13:02:40 UTC
From: remove_ok1sip@atlas.cz
Message-ID: <5f5159fa.0212090502.7ad625c@posting.google.com>
Source record: 39524

"john graesser" <graesser@tca.net> wrote in message
news:<uv7k0psfgrj9db@corp.supernews.com>...
> If you do a search on "cheap yagi" you can find the plans for 2m and 440
> versions of the cheap yagi. I built the 9 element 440 version and with it I
> can hit a repeater with my handheld that I can't hit otherwise.
> thanks, John.
> KC5DWD

http://www.clarc.org/Articles/uhf.htm

73 de Ivan

4312. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 13:48:26 UTC
From: shoppa@trailing-edge.com
Message-ID: <bec993c8.0212090548.ede6c79@posting.google.com>
Source record: 39525
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

rstevew@deeptht.armory.com (Richard Steven Walz) wrote in message
news:<3df44a06$0$37690$8eec23a@newsreader.tycho.net>...
> In article <tXWG9.208881$NH2.14367@sccrnsc01>,
> Rick Karlquist <richard@karlquist.remove.this.com> wrote:
> >See this URL:
> >
> >http://www.analog.com/library/applicationNotes/dataConverters/PDF/AN-279.pdf
> >Rick N6RK
> -------------------------
> Page desn't fucking exist! DON'T POST OLD LINKS!!

Link works as-is for me.

Tim.

4313. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 14:19:48 UTC
From: Paul Burke <paul@scazon.com>
Message-ID: <3DF4A683.54E178DD@scazon.com>
Source record: 39526
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

Tim Shoppa wrote:
>
> rstevew@deeptht.armory.com (Richard Steven Walz) wrote in message
news:<3df44a06$0$37690$8eec23a@newsreader.tycho.net>...
> > In article <tXWG9.208881$NH2.14367@sccrnsc01>,
> > Rick Karlquist <richard@karlquist.remove.this.com> wrote:
> > >See this URL:
> > >
> > >http://www.analog.com/library/applicationNotes/dataConverters/PDF/AN-279.pdf
> > >Rick N6RK
> > -------------------------
> > Page desn't exist! DON'T POST OLD LINKS!!
>
> Link works as-is for me.

Doesn't work for me though! 404. What is going on here?

Paul Burke

4314. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 14:30:46 UTC
From: Winfield Hill <whill@picovolt.com>
Message-ID: <at29em02t70@drn.newsguy.com>
Source record: 39527
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

shoppa@trailing-edge.com wrote...
>
> rstevew@deeptht.armory.com (Richard Steven Walz) wrote
>> Rick Karlquist <richard@karlquist.remove.this.com> wrote:
>>> See this URL:
>>> http://www.analog.com/library/applicationNotes/dataConverters/PDF/AN-279.pdf
>> -------------------------
>> Page desn't fucking exist! DON'T POST OLD LINKS!!
>
> Link works as-is for me.

Not for me either, but I get this message at Analog's site:

The site is currently down for maintenance.
Please check back in a few minutes.

Thanks,
- Win

4315. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 15:34:08 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <i0e9vukfkd7vc4jt2g6mrpf7qhvgqstd0a@4ax.com>
Source record: 39528
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

On 9 Dec 2002 06:30:46 -0800,
Winfield Hill <whill@picovolt.com>,
In Newsgroup: sci.electronics.design,
Article: <at29em02t70@drn.newsguy.com>,
Entitled: "Re: Zero Crossing Detectors, FM Demodulation",
Wrote the following:

|shoppa@trailing-edge.com wrote...
|>
|> rstevew@deeptht.armory.com (Richard Steven Walz) wrote
|>> Rick Karlquist <richard@karlquist.remove.this.com> wrote:
|>>> See this URL:
|>>> http://www.analog.com/library/applicationNotes/dataConverters/PDF/AN-279.pdf
|>> -------------------------
|>> Page desn't fucking exist! DON'T POST OLD LINKS!!
|>
|> Link works as-is for me.
|
| Not for me either, but I get this message at Analog's site:
|
| The site is currently down for maintenance.
| Please check back in a few minutes.
|
| Thanks,
| - Win

Works this morning.

...Jim Thompson
--
James E.Thompson, P.E.	mens
Analog Innovations, Inc.	et
Analog/Mixed-Signal ASIC's and Discrete Systems	manus
Phoenix, Arizona Voice:(480)460-2350	
Jim-T@analog_innovations.com Fax:(480)460-2142	Brass Rat
http://www.analog-innovations.com	1962

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.

4316. Battery Charger question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 18:22:45 UTC
From: Mark Symms <symmshsd@earthlink.net>
Message-ID: <Xns92DF7E15AE08Dmsymms@207.217.77.21>
Source record: 39529

Hi All,
I am currently trying to build a batttery charger for my Yaesu FT-416 HH. The battery charger hookup is an 1/8 inch headphone jack. My question is polarity. If the tip is negative on output does it have to be positive for charging? Also the batery is 800mAh, and the charger is 300mAh. How long for a full charge?

As you can tell I am no EE.
Thanks for any help
-mark

4317. Re: Battery Charger question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 18:25:25 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <PoOdnX5ybN_oc2mgXTWcrg@ctc.net>
Source record: 39532

YOu hook the charger up to the battery so that the positive output of the charger will be to the positive of the battery. To findout how long it will take to charge the battery you devide the battery mAh by the charger current. If you have the 800 mAh battery it is 800/300 which is about 2.6 hours. To that you have to add 'fudge factor' which means that it will take about 3 hours to get a full charge. That is assuming the battery is designed to take a charging rate that high. Some are and some are not designed to take a charging rate that high. The battery can over heat and vent out some gas. Then it will not take a charge very well.

"Mark Symms" <symmshsd@earthlink.net> wrote in message
news:Xns92DF7E15AE08Dmsymms@207.217.77.21...
> Hi All,
> I am currently trying to build a batttery charger for my Yaesu FT-416
> HH. The battery charger hookup is an 1/8 inch headphone jack. My
question
> is polarity. If the tip is negative on output does it have to be positive
> for charging? Also the batery is 800mAh, and the charger is 300mAh. How
> long for a full charge?
>
> As you can tell I am no EE.
> Thanks for any help
> -mark

4318. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 18:26:32 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <e0o9vugnans12499583pf7pbbag5bfd0en@4ax.com>
Source record: 39530
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

Page fucking exists. Use a decent browser. Take your meds.

Jim

rstevew@deeptht.armory.com (Richard Steven Walz)
shared these priceless pearls of wisdom:
->-------------------------
->Page desn't fucking exist! DON'T POST OLD LINKS!!
->-Steve

4319. Re: surface mount tools?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 18:39:43 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3DF4E36F.8D247284@mfi.net>
Source record: 39531

carltons wrote:
>
> In article <1gBI9.159364$GR5.47907@rwcrnsc51.ops.asp.att.net>, "Paul
> Zerkel" <pzerkel@insightbb.com> wrote:
>
> > Thanks for the response. Being somewhat new to the homebrewing hobby, I am
> > still a relative novice at soldering at all (unfortunately I never learned
> > it in shop class). So I am now simply diving in having just owned a
> > traditional temp. controlled iron about a year.
> >
> > While it does get easier with practice, I freely admit that I am not the
> > best solder-er in the world. I am wondering if working with a hot air
> > station is generally easier, more difficult, or simply "different". So what
> > kind of skills am I going to need to acquire if I want to start working with
> > hot air rework stations? Or are those skills going to be totally dependent
> > on what brand/type I purchase? I saw an infrared station go on ebay for just
> > a shade over $500, and would like to see a comparison of that tool to the
> > hot air stations for working with SMD.
> >
> > Finally are there any good books and/or magazine articles you could refer me
> > too that give advice as to getting started with hot air and/or infrared
> > soldering.
> >
> > -paul
> > N9PCS
>
> My eyes are not all that good and my hands are shaky, but give me a
> microscope and a decent temp controlled iron and I can usually solder and
> desolder many smd's. When you get down to pin pitches of 0.5 mm or so,
> then there's a real problem with conventional techniques. Hot air is
> fantastic, but expensive and still requires the magic ingredient;
> patience. Good, simple tips for soldering are: keep you tip clean (use a
> tip cleaner and sponge), solder to a clean interface by putting on flux if
> necessary, and don't force the tip down onto what you're soldering. Use a
> light touch.
>
> Steve WB4CZR

Not only do you need patience, the paste solder has a limited shelf
life, and is expensive to buy and dispose of unused, expired solder,
legally. If you are doing short production runs, the hot air station is
good. Some people only use them to remove parts, and resolder by hand.
I spent four years doing fine pitch board testing and did most of my own
rework. A good boom mounted stereo microscope, a Ungar Loner soldering

iron with a small tip and Ersin Multicore .015" solder performed very
well. Some of my rework is aboard the space station.
--

Michael A. Terrell
Central Florida

4320. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 18:44:18 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <S8YR5ZACSO99EwFw@jmwa.demon.co.uk>
Source record: 39534
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

I read in sci.electronics.design that Richard Steven Walz
<rstevew@deeptht.armory.com> wrote (in <3df44a06$0$37690$8eec23a@newsrea
der.tycho.net>) about 'Zero Crossing Detectors, FM Demodulation', on
Mon, 9 Dec 2002:
>In article <tXWG9.208881$NH2.14367@sccrnsc01>,
>Rick Karlquist <richard@karlquist.remove.this.com> wrote:
>>See this URL:
>>
>>http://www.analog.com/library/applicationNotes/dataConverters/PDF/AN-279.pdf
>>Rick N6RK
>-------------------------
>Page desn't fucking exist! DON'T POST OLD LINKS!!

It's very frustrating to be directed to a dead page, but pages can
disappear without notice. It's best to check that the link works
immediately before you post, but that's not always convenient.
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

4321. Re: Unknown pin assignment on oscilator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 19:46:08 UTC
From: k7itm@aol.com
Message-ID: <3200347.0212091146.5d2a9193@posting.google.com>
Source record: 39533

"Marvin Kroll" <merkinp@worldnet.att.net> wrote in message
news:<oiVI9.50941$hK4.4411468@bgtnsc05-news.ops.worldnet.att.net>...
> I have several oscillators, each in a metal case about 2" square and 0.5"
> thick. The case has a label that includes a stylized logo that I can't read
> with certainty, but it may be NFC. There is an sma output(?) connector on
> the side and four pins on the bottom. One of these is directly connected to
> the case but the other three are isolated and are positioned at three
> corners of a square 1" on a side. Is this a standard pin-out? Where can I
> find the pin assignment? MK

Any way you could take a picture of the label, or perhaps just scan
it? Is there a part number too? (Please don't post it here, but
perhaps to one of the alt.binaries groups or send by email to those
who ask.)

I suppose one pin is oscillator power, one is frequency control, and
one might be oven power if they are oven oscillators, or perhaps an
"at temperature" indication. Perhaps it's a pin that would be the
output if they weren't SMA output style, but isn't connected to
anything in this case. Of course I don't know for sure that they are
oven-controlled at this point, though we've used some that size that
are. I wouldn't count on any standard pin configurations...I've been
burned by too many that weren't when I thought they were! :-)

Cheers,
Tom

4322. Amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 20:27:57 UTC
From: Richard Parkin <"r_parkin at tiscali dot co dot uk">
Message-ID: <3df4fe85_2@mk-nntp-2.news.uk.tiscali.com>
Source record: 39535
Cross-posted to: alt.ham-radio.atv,rec.radio.amateur.homebrew

Can anyone point me towards an video amplifier module or IC suitable for a 2.4Ghz transmitter that has about 4mW OP? I just need a little more power; cheap and light is good ;-)

Thanks & 73's

Richard
GW7NLX

4323. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 21:42:46 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3DF50E56.66D785C3@mfi.net>
Source record: 39536
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

John Woodgate wrote:
>
> I read in sci.electronics.design that Richard Steven Walz
> <rstevew@deeptht.armory.com> wrote (in <3df44a06$0$37690$8eec23a@newsrea
> der.tycho.net>) about 'Zero Crossing Detectors, FM Demodulation', on
> Mon, 9 Dec 2002:
> >In article <tXWG9.208881$NH2.14367@sccrnsc01>,
> >Rick Karlquist <richard@karlquist.remove.this.com> wrote:
> >>See this URL:
> >>
> >>http://www.analog.com/library/applicationNotes/dataConverters/PDF/AN-279.pdf
> >>Rick N6RK
> >>--------------------------
> >Page desn't fucking exist! DON'T POST OLD LINKS!!
>
> It's very frustrating to be directed to a dead page, but pages can
> disappear without notice. It's best to check that the link works
> immediately before you post, but that's not always convenient.
> --
> Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
> Interested in professional sound reinforcement and distribution? Then go to
> http://www.isce.org.uk
> PLEASE do NOT copy news posts to me by E-MAIL!

You can get a 404 error if the URL isn't found on the DNS server used
by your ISP, or the files were moved to a new IP address, and the update
hasn't hit their DNS server. I ran into this a few years ago. One of
my suppliers changed their host, and i couldn't access them because my
ISP had their own DNS ideas, and it wasn't updated, but i could go to
another provider and had no problem reaching them. This went on for
almost three months, before they got mad enough to fix the problem.
--

Michael A. Terrell
Central Florida

4324. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 22:49:03 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <3DF51DDF.A78F105B@one.net>
Source record: 39537
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

Another entry joins the kill file.

Richard Steven Walz wrote:
>
> In article <tXWG9.208881$NH2.14367@sccrnsc01>,
> Rick Karlquist <richard@karlquist.remove.this.com> wrote:
> >See this URL:
> >
> >http://www.analog.com/library/applicationNotes/dataConverters/PDF/AN-279.pdf
> >Rick N6RK
> -------------------------
> Page desn't f....

4325. Re: Unknown pin assignment on oscilator

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 22:52:07 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <r89J9.52216$hK4.4504099@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39538

Normal pinout is power, ground, output and no connection.
Maybe Connor-Winfield????
http://www.conwin.com/pages/home.html

--
||||||||||||||||||||||||||||||||||||||||
Brian Griffey
http://home.att.net/~briangriffey/Index.html
||||||||||||||||||||||||||||||||||||||||

"Marvin Kroll" <merkinp@worldnet.att.net> wrote in message
news:oiVI9.50941$hK4.4411468@bgtnsc05-news.ops.worldnet.att.net...
> I have several oscillators, each in a metal case about 2" square and 0.5"
> thick. The case has a label that includes a stylized logo that I can't
read
> with certainty, but it may be NFC. There is an sma output(?) connector on
> the side and four pins on the bottom. One of these is directly connected
to
> the case but the other three are isolated and are positioned at three
> corners of a square 1" on a side. Is this a standard pin-out? Where can I
> find the pin assignment? MK
>
>

4326. Re: Amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 22:57:04 UTC
From: "Thomas C. Sefranek" <WA1RHP@ARRL.net>
Message-ID: <4d9J9.1001$cL4.111899@newsread1.prod.itd.earthlink.net>
Source record: 39539
Cross-posted to: alt.ham-radio.atv,rec.radio.amateur.homebrew

MiniCircuits Lab.

Richard Parkin <r_parkin at tiscali dot co dot uk ;-p> wrote in message
news:3df4fe85_2@mk-nntp-2.news.uk.tiscali.com...
> Can anyone point me towards an video amplifier module or IC suitable for a
> 2.4Ghz transmitter that has about 4mW OP? I just need a little more power;
> cheap and light is good ;-)
>
> Thanks & 73's
>
> Richard
> GW7NLX
>
>

4327. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 23:23:39 UTC
From: Jim Thompson <Jim-T@analog_innovations.com>
Message-ID: <sd9avusqpurja7ivh5pki3nvmunehffftb@4ax.com>
Source record: 39540
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

On Mon, 09 Dec 2002 17:49:03 -0500,
Rich Griffiths <richgrif@one.net>,
In Newsgroup: sci.electronics.design,
Article: <3DF51DDF.A78F105B@one.net>,
Entitled: "Re: Zero Crossing Detectors, FM Demodulation",
Wrote the following:

|Another entry joins the kill file.
|
|
|
|Richard Steven Walz wrote:
|>
|> In article <tXWG9.208881$NH2.14367@sccrnsc01>,
|> Rick Karlquist <richard@karlquist.remove.this.com> wrote:
|> >See this URL:
|> >
|> >http://www.analog.com/library/applicationNotes/dataConverters/PDF/AN-279.pdf
|> >Rick N6RK
|> -------------------------
|> Page desn't f....

"Author: Richard Steven Walz" is in my permanent kill file. If the
rest of you would refrain from replying to him he could be made
totally invisible ;-)

...Jim Thompson
--
James E.Thompson, P.E.	mens
Analog Innovations, Inc.	et
Analog/Mixed-Signal ASIC's and Discrete Systems	manus
Phoenix, Arizona Voice:(480)460-2350	
Jim-T@analog_innovations.com Fax:(480)460-2142	Brass Rat
http://www.analog-innovations.com	1962

For proper E-mail replies SWAP "-" and "_"

I love to cook with wine. Sometimes I even put it in the food.

4328. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-09 23:43:27 UTC
From: "Sir Charles W. Shults III" <aichip@cfl.rr.com>
Message-ID: <zU9J9.3270$Db4.71289@twister.tampabay.rr.com>
Source record: 39541
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

Oh, is he still here? ;-)

Cheers!

Chip Shults
My robotics, space and CGI web page - http://home.cfl.rr.com/aichip

4329. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-10 00:04:12 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <0caJ9.13138$B03.34862@news-server.bigpond.net.au>
Source record: 39542
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

Richard Steven Walz wrote:
> In article <tXWG9.208881$NH2.14367@sccrnsc01>,
> Rick Karlquist <richard@karlquist.remove.this.com> wrote:
>> See this URL:
>>
>>
http://www.analog.com/library/applicationNotes/dataConverters/PDF/AN-279.pdf
>> Rick N6RK
> -------------------------
> Page desn't fucking exist! DON'T POST OLD LINKS!!
> -Steve
>

Works OK for me..... ???

4330. IC-T81A Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-10 02:37:43 UTC
From: Peter Pohlmann <peter@e-partner.com>
Message-ID: <RqcJ9.2577$281.492898@news20.bellglobal.com>
Source record: 39543

Hello Folks,

I have a question to the ICOM IC-T81A in regards to the Battery operation.
This unit has only one connector to power it up via ac adaptor.
I am afraid to overcharge the battery if it is always hooked up to the
AC Adaptor.

A second thing that concerns me is is how to store the device - battery
harged or
empty ?

THanks for any help

Peter
VE3POH

--
IBS
224 Wallace Street
Toronto, Ontario
L4L2P4

Phone + (905) 850 - 6924
7-24 + (416) 230 - 2473

4331. FS: CARDWELL 2000 PF AT EBAY

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-10 02:41:18 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <ivcJ9.46021$vM1.3684801@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39544

see at # 1944285338 or seller heytubeguy

tnx

4332. 3-1000Z AMP FA...FT....?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-10 03:49:33 UTC
From: kf4toh@aol.com
Message-ID: <20021209224933.25643.00000450@mb-ci.aol.com>
Source record: 39545

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1943515894

please read specs

Comes with 4 eimac 3-1000z tubes

would trade for desk top amp
in the QRO 2500DX ALPHA 86 OR COMMANDER 2500
CLASS

THANKS JOE KF4TOH

4333. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-10 03:53:51 UTC
From: rstevew@deeptht.armory.com
Message-ID: <3df5654e$0$79561$8eec23a@newsreader.tycho.net>
Source record: 39546
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

In article <5f5159fa.0212090453.5b3c5629@posting.google.com>,
OK1SIP <remove_ok1sip@atlas.cz> wrote:
>rstevew@deeptht.armory.com (Richard Steven Walz) wrote in message
>news:<3df44a06$0$37690$8eec23a@newsreader.tycho.net>...
>> >See this URL:
>> >http://www.analog.com/library/applicationNotes/dataConverters/PDF/AN-279.pdf
>> --------------------------
>> Page desn't fucking exist! DON'T POST OLD LINKS!!
>> -Steve
>
>I can access this URL with NO PROBLEM !!!!!!
>
>BR from Ivan

Okay, yesterday, cut-n-paste resulted in "page does not exist",
today IT WORKS!
-Steve
--
-Steve Walz rstevew@armory.com ftp://ftp.armory.com/pub/user/rstevew
Electronics Site!! 1000's of Files and Dirs!! With Schematics Galore!!
http://www.armory.com/~rstevew or http://www.armory.com/~rstevew/Public

4334. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-10 04:01:11 UTC
From: rstevew@deeptht.armory.com
Message-ID: <3df56706$0$22477$8eec23a@newsreader.tycho.net>
Source record: 39397
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

In article <e0o9vugnans12499583pf7pbbag5bfd0en@4ax.com>,
Jim Weir <jim@rst-engr.com> wrote:
>Page fucking exists. Use a decent browser. Take your meds.
>Jim

No, read thread, realize that a genuine problem exists,
then shut up.
-Steve

>rstevew@deeptht.armory.com (Richard Steven Walz)
>shared these priceless pearls of wisdom:
>->---
>->Page desn't fucking exist! DON'T POST OLD LINKS!!
>->-Steve
>

4335. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-10 04:04:16 UTC
From: rstevew@deeptht.armory.com
Message-ID: <3df567c0$0$79561$8eec23a@newsreader.tycho.net>
Source record: 39399
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

In article <3DF51DDF.A78F105B@one.net>,
Rich Griffiths <richgrif@one.net> wrote:
>Another entry joins the kill file.

You're a pretender who diddles himself into imagining anyone cares.
Steve

>Richard Steven Walz wrote:
>>
>> In article <tXWG9.208881$NH2.14367@sccrnsc01>,
>> Rick Karlquist <richard@karlquist.remove.this.com> wrote:
>> >See this URL:
>> >
>> >http://www.analog.com/library/applicationNotes/dataConverters/PDF/AN-279.pdf
>> >Rick N6RK
>> ---
>> Page desn't f....

4336. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-10 04:06:39 UTC
From: rstevew@deeptht.armory.com
Message-ID: <3df5684f$0$79555$8eec23a@newsreader.tycho.net>
Source record: 39400
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

In article <sd9avusqpurja7ivh5pki3nvmunehffftb@4ax.com>,
Jim Thompson <Jim-T@analog_innovations.com> wrote:
>On Mon, 09 Dec 2002 17:49:03 -0500,
>Rich Griffiths <richgrif@one.net>,
>In Newsgroup: sci.electronics.design,
>Article: <3DF51DDF.A78F105B@one.net>,
>Entitled: "Re: Zero Crossing Detectors, FM Demodulation",
>Wrote the following:
>
>|Another entry joins the kill file.
>|
>|
>|
>|Richard Steven Walz wrote:
>|>
>|> In article <tXWG9.208881$NH2.14367@sccrnsc01>,
>|> Rick Karlquist <richard@karlquist.remove.this.com> wrote:
>|> >See this URL:
>|> >
>|> >http://www.analog.com/library/applicationNotes/dataConverters/PDF/AN-279.pdf
>|> >Rick N6RK
>|> -------------------------
>|> Page desn't f....
>
>"Author: Richard Steven Walz" is in my permanent kill file. If the
>rest of you would refrain from replying to him he could be made
>totally invisible ;-)
> ...Jim Thompson

Fucking coward like you trying to find more members for your cult again,
eh? If enough people blind themselves they won't know what ANYONE says!
-Steve
--
-Steve Walz rstevew@armory.com ftp://ftp.armory.com/pub/user/rstevew
Electronics Site!! 1000's of Files and Dirs!! With Schematics Galore!!
http://www.armory.com/~rstevew or http://www.armory.com/~rstevew/Public

4337. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-10 05:36:30 UTC
From: sideband <KRNO8SPAMLR@cac.net>
Message-ID: <3DF57065.4020200@cac.net>
Source record: 39401
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

Wow.. I had to check the newsgroup names here to be sure I didn't
venture into a CB newsgroup by accident.

Grow up, fellas.. It's just a hobby.

Richard Steven Walz wrote:
> In article <e0o9vugnans12499583pf7pbbag5bfd0en@4ax.com>,
> Jim Weir <jim@rst-engr.com> wrote:
>
>>Page fucking exists. Use a decent browser. Take your meds.
>>Jim
>
> -------------------------
> No, read thread, realize that a genuine problem exists,
> then shut up.
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>>rstevew@deeptht.armory.com (Richard Steven Walz)
>>shared these priceless pearls of wisdom:
>>->-------------------------
>>->Page desn't fucking exist! DON'T POST OLD LINKS!!
>>->-Steve
>>
>
>
>

4338. Re: Thordarsen Meissner website?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-10 05:57:59 UTC
From: Jeremy Cusick <gtarman@shawneelink.net>
Message-ID: <3DF58267.F8970DFA@shawneelink.net>
Source record: 39398

Yup... they're on Rt. 1, just S. of town. Where you from, Greg Spiller?

Greg Spiller wrote:

> Don't know about a website, but my local phone book shows this:
>
> Thordarson Meissner
> 11969 Hwy 1
> Mt. Carmel, IL 62863
> Phone 618-262-5121
>
> 73
> Greg W9XI
>
> Philip de Cadenet wrote:
>
> > Does anyone know if the above company are represented on the web?
> >
> > I was unable to find them using Google!
> >
> > Thanks
> > --
> > Philip de Cadenet G4ZOW
> > Transmitters 'R' Us
> > http://www.transmittersrus.com

4339. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-10 06:22:28 UTC
From: John Woodgate <jmw@jmwa.demon.contraspam.yuk>
Message-ID: <mKR8kDAkgY99Ewg6@jmwa.demon.co.uk>
Source record: 39402
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

I read in sci.electronics.design that sideband <KRNO8SPAMLR@cac.net>
wrote (in <3DF57065.4020200@cac.net>) about 'Zero Crossing Detectors,
FM Demodulation', on Tue, 10 Dec 2002:
>Grow up, fellas.. It's just a hobby.
rec.radio.amateur.homebrew may be just a hobby, but
sci.electronics.design is a way of life. (;-)
--
Regards, John Woodgate, OOO - Own Opinions Only. http://www.jmwa.demon.co.uk
Interested in professional sound reinforcement and distribution? Then go to
http://www.isce.org.uk
PLEASE do NOT copy news posts to me by E-MAIL!

4340. AD831 mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-10 12:14:01 UTC
From: Peter Koch <pk@kom.auc.dk>
Message-ID: <3DF5DA89.55CCD2D4@kom.auc.dk>
Source record: 39403

Hi,

Anybody who have done some homebrew experiments using
the AD831 mixer...?? Want to share some ideas, thanks.

73, OZ1LFI Peter

4341. Looking for a god RF L-C filter design program

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-10 13:28:01 UTC
From: Frank Mikkelsen <frank@ifa.au.dk>
Message-ID: <at4q52dgk1@news.net.uni-c.dk>
Source record: 39404

Hi

I am looking for at god filter design program to design passive filters, are there anyone there can recommends a specific program, links etc.

Best regards

--
Frank Mikkelsen

University of Aarhus
Institute of Physics & Astronomi
Nymunkegade, Bygn. 520
DK-8000 Denmark

Phone +45 89423799 or +45 89423795
Fax: +45 89423794

4342. Re: Looking for a god RF L-C filter design program

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-10 13:48:57 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <dhmJ9.53300$hK4.4589533@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39405

The one from Almost All Digital Electronics (www.aade.com) is not too bad;
don't let the 30 dollar price fool you.

Pete

4343. Re: AD831 mixer

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-10 13:51:52 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <YjmJ9.53302$hK4.4589766@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39406

I did some experiments with the AD831; it isn't too bad of a mixer. The noise figure is around 10dB, so by the time you put some RF amplification ahead of it, the IP3 is similar to a Level 7 diode ring mixer. One advantage is the lower required LO drive, but like the old 1496 mixers, quite a few external parts are required. I ran into the same thing when using the AD607 Quadrature I.F. strip, and shelved that idea.

Pete

4344. How much VFO shielding do I need?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-10 14:08:29 UTC
From: Jim Glover <psykey@okcforum.org>
Message-ID: <uvbtatc36cegc3@corp.supernews.com>
Source record: 39407

My question concerns breadboarding HF oscillator circuits. VFO's (and other sorts of LC local oscillator circuits) are often built with elaborate separate shielding. What I'm wondering is whether it's possible to get a simple LC oscillator running well enough to evaluate its usefulness (for RF mixing purposes) in a breadboard fashion before building the heavily shielded version, or if the shielding should come at a fairly early stage.

If you prefer posts that "get to the point" please skip to the paragraph headed "Back to the original problem." If you like to know a little background, read on through.

My expertise level: Over the last 30+ years, Since the age of 10 or so, I've put together a handful of electronics projects, some from circuit diagrams and some from kits, including audio, digital, and basic radio projects. I've managed to make a few repairs over the years, too, but I must admit that diagnosis often eludes me. I do more reading than tinkering, but these days, I'm trying to shift a little toward doing.

My style: I'm a cheapskate. I'd much rather build circuits that can be put together on a whim by anyone with a pile of 2N2222's, and assortments of basic components like ceramic capacitors, diodes, and resistors, than the kind where I'd have to place an order for parts. A project I built myself with parts I'd stocked or scrounged, which I understood from start to finish because I'd tinkered with every stage of it, which worked somewhere between poorly and fairly well (depending on whether your rating scale is a little stiff, or like mine, rates as "fair" or better anything which works well enough to be used for casual QSO's) would be more valuable to me, personally, than, say, a project built from a kit that would hold its own against typical commercial offerings. What I learn is at least as important to me as the finished product. I hope to some day reach a point where I could build a reasonably well working ham station using nothing but parts scrounged from some old discarded piece of equipment such as a worn out computer monitor.

My current project: This is a meandering project. It started out as a plan to program a PIC chip for a huff 'n' puff VFO. (I'm a computer guy by profession, and I've done assembler programming before, including a little bit for microprocessors in control circuits, but haven't actually programmed a PIC.) The thing is, before I can program a PIC chip to control a VFO, I think I need to be able to build and control a VFO myself. So, I planned to play with some VFO circuits. Of course, it's important to keep this stuff fun, too, so I wanted to do something entertaining. What I came up with was to go ahead and do something I'd been wanting to do: make a "shortwave converter" for an old AM-only

car radio I bought at an estate sale for $3. Just to get the project going, I started with a crystal oscillator. (The plan is to replace the crystal oscillator with a LO, or VFO, or whatever you want to call it, when everything is working.) Next, I made a doubly balanced mixer, and a simple LC preselector. The crystal frequency is around 8.2 MHz, allowing me to receive the 41 and 31 meter SWBC bands using the AM receiver as a tunable IF in a band imaging scheme. Surprisingly, this thing works pretty darn well. Satisfyingly, it serves a dual purpose. It's an interesting project to tinker with when I get a chance, and in between, I get to enjoy a little SWBC listening.

Back to the original problem: The last time I got a few hours to work on the project, I tried to build an LC oscillator to use as an LO, rather than the crystal oscillator I started with. I used Harry Lythall's basic oscillator circuit:

http://w1.859.telia.com/~u85920178/blocks/osc-1.htm

...under "Tuneable RF Oscillator" a little more than halfway down the page. I wound a coil on a 1.25" pill bottle, and wired in a gear-driven 150 pF air variable (from an old ARC-5 or something, I think) for the tuned circuit, designed to include 8.2 MHz in its tuning range (factoring in the other three frequency-determining capacitors in the circuit, all NP0 ceramics). The rest was built in a corner of the Radio Shack solderless breadboard panel I've been building this project on.

When I tried to listen for stations when I used the new LC oscillator (followed by some further amplification) instead of the crystal oscillator I'd started with, the results were dismal. Tuning the air variable caused a horrendous cacophony of whines, groans, buzzes, and hums to assault the speaker. Experimentation convinced me that more of the raucous ruckus was related to my movements in the proximity of the tuning capacitor and my touching it, than to the actual adjustment of the capacitor. Moving my hand anywhere within a 10-inch or so radius of the coil and tuning capacitor varied the symphony of strange noises, as did touching ground anywhere on or around the project (which is currently spread all over the bench). Much to my surprise, the horrible sounds remained even after I disconnected the output of the LC oscillator, and put the crystal oscillator back as the LO. I had to cut power to the LC oscillator circuit before things returned to normal.

After I thought about it a bit, that last detail game me a major clue: If the horrible sounds weren't coming (only) through the mixer, how were they getting into my audio output? ...probably through B+. I'd totally neglected to include a bypass capacitor on the B+! Of course, Harry's "basic building block" circuit diagram omitted such details. I hope to have better results next time I get to play with this, when I'll insert a bypass capacitor and hook the LC oscillator back up. However, I wonder how much of the problem will remain. Those several-inch-long leads connecting the air variable and coil to the rest of the circuit can't be helping, either.

So, my question: Should I expect to have to build the LC oscillator in a shielded compartment of some sort before it will put out the sort of clean, usable signal the crystal oscillator is providing? I know that I could avoid some of the problem if I used a toroidal coil rather than the pill-bottle coil form I'm using, but, what can I say? ...I love to use ordinary everyday building blocks, such as pill bottles, whenever possible. Can one evaluate open-air solenoid coil LC oscillator circuits in a breadboard fashion? If so, what's the key to cleaning it up? Or, will I need to build a proper shielded enclosure to make it sing, even for breadboarding purposes? Or, to look at it another way: Are my current problems likely due to construction techniques, which I should correct before reaching conclusions, or do I probably have something else wrong?

Thanks for any advice you can give me!

73,
Jim WB5UDE

4345. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-10 16:35:37 UTC
From: Rick Karlquist <richard@karlquist.remove.this.com>
Message-ID: <tJoJ9.307911$QZ.45837@sccrnsc02>
Source record: 39408
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

"John Woodgate" <jmw@jmwa.demon.contraspam.yuk> wrote in message
news:S8YR5ZACSO99EwFw@jmwa.demon.co.uk...
> It's very frustrating to be directed to a dead page, but pages can
> disappear without notice. It's best to check that the link works
> immediately before you post, but that's not always convenient.
> --
> Regards, John Woodgate, OOO - Own Opinions Only.
http://www.jmwa.demon.co.uk

FWIW, I *DID* check the link *IMMEDIATELY* before I posted
it. What more can I do? If someone has a problem with it,
complain to Analog's webmaster.

Rick Karlquist N6RK

4346. Re: Looking for a god RF L-C filter design program

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-10 16:36:50 UTC
From: Rick Karlquist <richard@karlquist.remove.this.com>
Message-ID: <CKoJ9.103606$pN3.7267@sccrnsc03>
Source record: 39409

Check out Eagleware by Randall Rhea.

Rick N6RK

"Frank Mikkelsen" <frank@ifa.au.dk> wrote in message
news:at4q52dgk1@news.net.uni-c.dk...
> Hi
>
> I am looking for at god filter design program to design passive filters,
are
> there anyone there can recommends a specific program, links etc.
>
> Best regards
>
>
> --
> Frank Mikkelsen
>
> University of Aarhus
> Institute of Physics & Astronomi
> Nymunkegade, Bygn. 520
> DK-8000 Denmark
>
> Phone +45 89423799 or +45 89423795
> Fax: +45 89423794
>
>

4347. FS:RADIO 'STUFF' ON EBAY

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-10 22:01:30 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <_utJ9.47022$vM1.3785047@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39410

EIMAC SK-416 CHIMNEY
GATES RIGHT ANGLE DR
CARDWELL 2000 PF CONDENSER
BUD RF COKE
BAILEY XTALS

see seller heytubeguy if interested
Joe

4348. Re: Looking for a god RF L-C filter design program

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-10 23:03:27 UTC
From: nx7u@arrl.net
Message-ID: <3df672c1.1033718@news.west.cox.net>
Source record: 39411

"elsie" by a WB6??? is pretty good for small filters...a demo version
will do 3 or 4 stage filters. Search the 'net for elsie+filter and
you'll probably find it.
Elsie=L-C...get it? pretty cute...but a totally cool program

On Tue, 10 Dec 2002 16:36:50 GMT, "Rick Karlquist"
<richard@karlquist.remove.this.com> wrote:

>Check out Eagleware by Randall Rhea.
>
>Rick N6RK
>
>
>"Frank Mikkelsen" <frank@ifa.au.dk> wrote in message
>news:at4q52dgk1@news.net.uni-c.dk...
>> Hi
>>
>> I am looking for at god filter design program to design passive filters,
>are
>> there anyone there can recommends a specific program, links etc.
>>
>> Best regards
>>
>>
>> --
>> Frank Mikkelsen
>>
>> University of Aarhus
>> Institute of Physics & Astronomi
>> Nymunkegade, Bygn. 520
>> DK-8000 Denmark
>>
>> Phone +45 89423799 or +45 89423795
>> Fax: +45 89423794
>>
>>
>
>

4349. Re: 2 meter yagi feedlines

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 01:16:16 UTC
From: bjorn890@aol.com57304573
Message-ID: <20021210201616.26126.00000904@mb-fv.aol.com>
Source record: 39412

The spilt driven would be the more simple method. You could build something similar to a dipole in the middle then use latter line to feed that into a balun then coax into that.

There is plenty of DOS left in Windows, just make a boot disk!
Bjorn890

4350. Re: How much VFO shielding do I need?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 01:23:17 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3DF69385.25A8A81B@visi.com>
Source record: 39413

Jim Glover wrote:

> My question concerns breadboarding HF oscillator circuits. VFO's (and
> other sorts of LC local oscillator circuits) are often built with
> elaborate separate shielding. What I'm wondering is whether it's
> possible to get a simple LC oscillator running well enough to evaluate
> its usefulness (for RF mixing purposes) in a breadboard fashion before
> building the heavily shielded version, or if the shielding should come
> at a fairly early stage.

Well, you address several good topics here....Here are a few suggestions:

I would recommend getting rid of the proto-board. Build the ckt up 'dead-bug' style over an unetched copper plated (single sided) PC board. My experience suggests this is the single most important factor when working above a MHz or so.

If you have a scope, look at the output wave form with as much resolution as your scope can make to see if you can get a glimmer of the wave shape. Use a 10X probe if at all possible. Sometimes LC oscillators end up with way too much feedback and produce a really ugly wave form. ;)

Follow the osc with at least one stage of buffering. Use a 10-100 Ohm resistor in series with the positive voltage feed to each stage and put a .01uF cap to ground from the end of the resistor that goes to the ckt. Use a scope to check this wave shape as well.

Shielding is a wonderful thing but I get the sense that that is not the main problem right now. You might want to mount the variable cap behind a panel (another piece of PC board material), to cut down on the hand capacity effect.

BTW, I have built several converters of the type you mention feeding AM radios. They can offer very nice performance when teamed with a good BC set.

Let me know if you would like me to elaborate on any of the above.

Good luck and happy oscillating. :)

Bob L WB0POQ

4351. Re: How much VFO shielding do I need?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 02:01:48 UTC
From: Dan Tayloe <dtayloe@cox.net>
Message-ID: <3DF69CD6.E28BFA99@cox.net>
Source record: 39414

It has been my experience that no shielding is needed if this is a superhet design. However, solderless breadboards are nasty for RF. I build my homebrew radios using a combination of deadbug and small "nibbler tool" pads as needed right on the PC ground plane. Every power connection is bypassed to ground using small 0.1 uf ceramic bypass caps.

Deadbug style is great for prototyping. If a circuit does not work out, it can be unsoldered and reworked with a different circuit, and the parts can be reused. I do this frequently, even with the deadbug mounted ICs.

Some VFO topologies can tend to operate on more than one frequency at once, and the solderless breadboard will not help the situation. My favorite VFO is a Hartley using a FET and a tapped VFO inductor for feedback. It seems to be both simple and effective. You can probably find several examples of this in the ARRL handbook.

If your design is a direct conversion, shielding can be useful to keep the VFO signal out of the antenna and self detecting its own noise. In addition, if you use the same VFO for transmitting, the transmit signal can get into the VFO and cause it to pull, producing an undesirable chirp.

A simple shielded box does well for this. It does not have to be really elaborate. One suggestion might be to use an Altoids mint tin. Cut a section of PC board to fit inside the box and build deadbug style on top of this. It may or may not help to solder the lid shut in a couple of places once you have it all tuned up. Since it is steel, 2% silver bearing solder would make this step easier. Make sure you bypass the power that goes into the box. You might try a bypass cap to ground on both the inside and outside.

Good Luck!

- Dan, N7VE

Jim Glover wrote:
>
> My question concerns breadboarding HF oscillator circuits. VFO's (and
> other sorts of LC local oscillator circuits) are often built with
> elaborate separate shielding. What I'm wondering is whether it's
> possible to get a simple LC oscillator running well enough to evaluate
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> If you prefer posts that "get to the point" please skip to the paragraph
> headed "Back to the original problem." If you like to know a little
> background, read on through.
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> My expertise level: Over the last 30+ years, Since the age of 10 or so,
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> My style: I'm a cheapskate. I'd much rather build circuits that can be
> put together on a whim by anyone with a pile of 2N2222's, and assortments
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> than the kind where I'd have to place an order for parts. A project
> I built myself with parts I'd stocked or scrounged, which I understood
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> worked somewhere between poorly and fairly well (depending on whether
> your rating scale is a little stiff, or like mine, rates as "fair" or
> better anything which works well enough to be used for casual QSO's)
> would be more valuable to me, personally, than, say, a project built
> from a kit that would hold its own against typical commercial offerings.
> What I learn is at least as important to me as the finished product.
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> My current project: This is a meandering project. It started out as a
> plan to program a PIC chip for a huff 'n' puff VFO. (I'm a computer guy
> by profession, and I've done assembler programming before, including
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> actually programmed a PIC.) The thing is, before I can program a PIC
> chip to control a VFO, I think I need to be able to build and control a
> VFO myself. So, I planned to play with some VFO circuits. Of course,
> it's important to keep this stuff fun, too, so I wanted to do something
> entertaining. What I came up with was to go ahead and do something I'd
> been wanting to do: make a "shortwave converter" for an old AM-only
> car radio I bought at an estate sale for $3. Just to get the project
> going, I started with a crystal oscillator. (The plan is to replace
> the crystal oscillator with a LO, or VFO, or whatever you want to call
> it, when everything is working.) Next, I made a doubly balanced mixer,
> and a simple LC preselector. The crystal frequency is around 8.2 MHz,
> allowing me to receive the 41 and 31 meter SWBC bands using the AM
> receiver as a tunable IF in a band imaging scheme. Surprisingly, this
> thing works pretty darn well. Satisfyingly, it serves a dual purpose.
> It's an interesting project to tinker with when I get a chance, and in
> between, I get to enjoy a little SWBC listening.
>
> Back to the original problem: The last time I got a few hours to work on
> the project, I tried to build an LC oscillator to use as an LO, rather

> than the crystal oscillator I started with. I used Harry Lythall's
> basic oscillator circuit:
>
> http://w1.859.telia.com/~u85920178/blocks/osc-1.htm
>
> ...under "Tuneable RF Oscillator" a little more than halfway down the
> page. I wound a coil on a 1.25" pill bottle, and wired in a gear-driven
> 150 pF air variable (from an old ARC-5 or something, I think) for the
> tuned circuit, designed to include 8.2 MHz in its tuning range (factoring
> in the other three frequency-determining capacitors in the circuit,
> all NP0 ceramics). The rest was built in a corner of the Radio Shack
> solderless breadboard panel I've been building this project on.
>
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> oscillator I'd started with, the results were dismal. Tuning the air
> variable caused a horrendous cacophony of whines, groans, buzzes, and
> hums to assault the speaker. Experimentation convinced me that more of
> the raucous ruckus was related to my movements in the proximity of the
> tuning capacitor and my touching it, than to the actual adjustment of
> the capacitor. Moving my hand anywhere within a 10-inch or so radius of
> the coil and tuning capacitor varied the symphony of strange noises, as
> did touching ground anywhere on or around the project (which is currently
> spread all over the bench). Much to my surprise, the horrible sounds
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> and put the crystal oscillator back as the LO. I had to cut power to
> the LC oscillator circuit before things returned to normal.
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> If the horrible sounds weren't coming (only) through the mixer, how were
> they getting into my audio output? ...probably through B+. I'd totally
> neglected to include a bypass capacitor on the B+! Of course, Harry's
> "basic building block" circuit diagram omitted such details. I hope
> to have better results next time I get to play with this, when I'll
> insert a bypass capacitor and hook the LC oscillator back up. However,
> I wonder how much of the problem will remain. Those several-inch-long
> leads connecting the air variable and coil to the rest of the circuit
> can't be helping, either.
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> So, my question: Should I expect to have to build the LC oscillator in
> a shielded compartment of some sort before it will put out the sort of
> clean, usable signal the crystal oscillator is providing? I know that
> I could avoid some of the problem if I used a toroidal coil rather than
> the pill-bottle coil form I'm using, but, what can I say? ...I love to
> use ordinary everyday building blocks, such as pill bottles, whenever
> possible. Can one evaluate open-air solenoid coil LC oscillator circuits
> in a breadboard fashion? If so, what's the key to cleaning it up? Or,
> will I need to build a proper shielded enclosure to make it sing, even for
> breadboarding purposes? Or, to look at it another way: Are my current
> problems likely due to construction techniques, which I should correct

> before reaching conclusions, or do I probably have something else wrong?
>
> Thanks for any advice you can give me!
>
> 73,
> Jim WB5UDE

4352. Re: How much VFO shielding do I need?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 08:07:10 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <uvdsht99l4uj14@corp.supernews.com>
Source record: 39415

I concur with all Dan's advice, including his choice of oscillator circuit. I highly recommend using a diode from gate to ground. It provides fixed and predictable limiting, and greatly improves temperature stability. Rohde and others have commented that this degrades oscillator noise performance, but it's nowhere near a noticeable level in a straightforward superhet or DC design. If you're designing a PLL where oscillator noise is greatly amplified, the diode might not be a good idea -- but then temperature stability isn't such a problem, either.

While VFO shielding doesn't seem important in a superhet, I've found that BFO shielding can be very important. When designing an AGC, I found BFO leakage to be a real problem -- it was much larger than the signal, and it was keeping the AGC biased up. Careful BFO shielding coupled with going to differential stages for the IF resulted in negligible problems with BFO leakage. And the sweetest AGC I've ever used.

Roy Lewallen, W7EL

Dan Tayloe wrote:
> It has been my experience that no shielding is needed if this is a
> superhet design. However, solderless breadboards are nasty for RF. I
> build my homebrew radios using a combination of deadbug and small
> "nibbler tool" pads as needed right on the PC ground plane. Every power
> connection is bypassed to ground using small 0.1 uf ceramic bypass caps.
>
> Deadbug style is great for prototyping. If a circuit does not work out,
> it can be unsoldered and reworked with a different circuit, and the
> parts can be reused. I do this frequently, even with the deadbug
> mounted ICs.
>
> Some VFO topologies can tend to operate on more than one frequency at
> once, and the solderless breadboard will not help the situation. My
> favorite VFO is a Hartley using a FET and a tapped VFO inductor for
> feedback. It seems to be both simple and effective. You can probably
> find several examples of this in the ARRL handbook.
>
> If your design is a direct conversion, shielding can be useful to keep
> the VFO signal out of the antenna and self detecting its own noise. In
> addition, if you use the same VFO for transmitting, the transmit signal
> can get into the VFO and cause it to pull, producing an undesirable
> chirp.
>
> A simple shielded box does well for this. It does not have to be really
> elaborate. One suggestion might be to use an Altoids mint tin. Cut a

> section of PC board to fit inside the box and build deadbug style on top
> of this. It may or may not help to solder the lid shut in a couple of
> places once you have it all tuned up. Since it is steel, 2% silver
> bearing solder would make this step easier. Make sure you bypass the
> power that goes into the box. You might try a bypass cap to ground on
> both the inside and outside.
>
> Good Luck!
>
> - Dan, N7VE
>
>
> Jim Glover wrote:
>
>>My question concerns breadboarding HF oscillator circuits. VFO's (and
>>other sorts of LC local oscillator circuits) are often built with
>>elaborate separate shielding. What I'm wondering is whether it's
>>possible to get a simple LC oscillator running well enough to evaluate
>>its usefulness (for RF mixing purposes) in a breadboard fashion before
>>building the heavily shielded version, or if the shielding should come
>>at a fairly early stage.
>>
>>If you prefer posts that "get to the point" please skip to the paragraph
>>headed "Back to the original problem." If you like to know a little
>>background, read on through.
>>
>>My expertise level: Over the last 30+ years, Since the age of 10 or so,
>>I've put together a handful of electronics projects, some from circuit
>>diagrams and some from kits, including audio, digital, and basic radio
>>projects. I've managed to make a few repairs over the years, too, but
>>I must admit that diagnosis often eludes me. I do more reading than
>>tinkering, but these days, I'm trying to shift a little toward doing.
>>
>>My style: I'm a cheapskate. I'd much rather build circuits that can be
>>put together on a whim by anyone with a pile of 2N2222's, and assortments
>>of basic components like ceramic capacitors, diodes, and resistors,
>>than the kind where I'd have to place an order for parts. A project
>>I built myself with parts I'd stocked or scrounged, which I understood
>>from start to finish because I'd tinkered with every stage of it, which
>>worked somewhere between poorly and fairly well (depending on whether
>>your rating scale is a little stiff, or like mine, rates as "fair" or
>>better anything which works well enough to be used for casual QSO's)
>>would be more valuable to me, personally, than, say, a project built
>>from a kit that would hold its own against typical commercial offerings.
>>What I learn is at least as important to me as the finished product.
>>I hope to some day reach a point where I could build a reasonably well
>>working ham station using nothing but parts scrounged from some old
>>discarded piece of equipment such as a worn out computer monitor.
>>
>>My current project: This is a meandering project. It started out as a

>>plan to program a PIC chip for a huff 'n' puff VFO. (I'm a computer guy
>>by profession, and I've done assembler programming before, including
>>a little bit for microprocessors in control circuits, but haven't
>>actually programmed a PIC.) The thing is, before I can program a PIC
>>chip to control a VFO, I think I need to be able to build and control a
>>VFO myself. So, I planned to play with some VFO circuits. Of course,
>>it's important to keep this stuff fun, too, so I wanted to do something
>>entertaining. What I came up with was to go ahead and do something I'd
>>been wanting to do: make a "shortwave converter" for an old AM-only
>>car radio I bought at an estate sale for $3. Just to get the project
>>going, I started with a crystal oscillator. (The plan is to replace
>>the crystal oscillator with a LO, or VFO, or whatever you want to call
>>it, when everything is working.) Next, I made a doubly balanced mixer,
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>>receiver as a tunable IF in a band imaging scheme. Surprisingly, this
>>thing works pretty darn well. Satisfyingly, it serves a dual purpose.
>>It's an interesting project to tinker with when I get a chance, and in
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>>...under "Tuneable RF Oscillator" a little more than halfway down the
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>>I wonder how much of the problem will remain. Those several-inch-long
>>leads connecting the air variable and coil to the rest of the circuit
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>>use ordinary everyday building blocks, such as pill bottles, whenever
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>>problems likely due to construction techniques, which I should correct
>>before reaching conclusions, or do I probably have something else wrong?
>>
>>Thanks for any advice you can give me!
>>
>>73,
>>Jim WB5UDE
>

4353. fraud Frankie lee willian sanborn

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 09:04:16 UTC
From: dennis <wt1078@charter.net>
Message-ID: <uve0c5545p6r42@corp.supernews.com>
Source record: 39416

Frankie lee willian sanborn
424 nick street
newark delaware 19702

302-836-7998
all about radio sending and no radio?????

dennis kb7wfv wt1078@charter.net

4354. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 09:15:35 UTC
From: Master of the universe and supreme ruler of all living beings <john.smith@micro$oft.com>
Message-ID: <at6v3j$7s4$1@newstoo.ericsson.se>
Source record: 39417
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

Yes. it DOES exist. I have just been there and downloaded it.
BR IN

>
>http://www.analog.com/library/applicationNotes/dataConverters/PDF/AN-279.pd
f
> >Rick N6RK
> Page desn't fucking exist! DON'T POST OLD LINKS!!
> -Steve

And what's witht he foul language? Do you speak like that on the radio?

BR IN

4355. Re: AM Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 09:28:49 UTC
From: Master of the universe and supreme ruler of all living beings <john.smith@micro$oft.com>
Message-ID: <at6vsc$91g$1@newstoo.ericsson.se>
Source record: 39418

> I am designing an extremely low power (<<1 W input) AM transmitter and
> have encountered several difficulties including how to determine the
> impedance of the modulation transformer.

Hi Joel,

I think you will find it is like driving a lightbulb (lamp). A car battery, for example, has a low output impedance (ca: 0.01-Ohms) but it drives a 12v 1A lamp (ca: 12-Ohms) without showing any "sagging".

If you are modulating a PA with AM, then you need to have a peak-to-peak AF waveform that is almost twice the supply voltage, AND the PA load (impedance) should NOT cause the voltage to "sag" (distort).

If you have a 12v supply to the PA and the modulator then the peak-to-peak output voltage from the modulator must be 24v, that is, varying from 0v to +24v. In practice it should be a little less or you will be overmodulating. If the PA was a 1-watt transmitter then you theoretically only need 500mW to modulate it. If you had an AF amplifier that would deliver, say, 2-Watts, then the PA will not be pushing the modulator to the edge of it's capabilities.

An Auto-transformer (eg 12-0-12v AC mains transformer) will do the job, even though it is for audio. Connect the 12- to the DC-12v supply and the -0- terminal to the modulator. The -12 terminal is the 12v supply to your PA stage. The AF stage cannot deliver more than the 12v supply, in fact it will be somewhat short of this due to losses in the output pair. It should not be possible to overmodulate with this arrangement. The AF output stage will only draw as much current as is required by the load, just like the battery/lamp earlier.

4356. how to double frequency at output of a wobulator?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 09:33:01 UTC
From: Johan Prins <mitchellwing@nospam_free.fr>
Message-ID: <1103_1039599181@news.free.fr>
Source record: 39419

Hi,

I picked up a R&S Polyskop 2 for 200 Euros and aftr a minor repair it works as designed up to 1.1 GHz.
Apparently with a mechanical mod in the wobbler cavity I can get it to cover 1296MHz too. (still have to get the details)

My question: How could I extend it's range to 2,4GHz after that?
I wonder if doubling the output frequency and using a appropriate external detector head instad of the built-in detector would do the job

Anyone who would have a valid hint on how to double the frequency on a range between, say, 1 to 1,25 GHz more or less linearly?

Thanks

Johan
P.S. needless to say, if I had either the money for playing or nearby friends to assist me in building one, I'd have a spectrum analyzer for years now.

4357. Re: Looking for a god RF L-C filter design program

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 11:29:22 UTC
From: Jari <poisjari.ojala@kotinet.com>
Message-ID: <3DF721A8.9F70CB2E@kotinet.com>
Source record: 39420

To simulate and calculate, try www.hydesign.co.uk. (RFSim99) free and usefull!

Jari 8LQ

Frank Mikkelsen wrote:

> Hi
>
> I am looking for at god filter design program to design passive filters, are
> there anyone there can recommends a specific program, links etc.
>
> Best regards
>
> --
> Frank Mikkelsen
>
> University of Aarhus
> Institute of Physics & Astronomi
> Nymunkegade, Bygn. 520
> DK-8000 Denmark
>
> Phone +45 89423799 or +45 89423795
> Fax: +45 89423794

4358. Re: how to double frequency at output of a wobulator?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 11:45:57 UTC
From: Alan Melia <Alan.Melia@btinternet.com>
Message-ID: <at78hl$993$2@sparta.btinternet.com>
Source record: 39421

Mini-Circuits do a doubler for this frequency range.....if you have enough output, you could split the signal and feed it into the LO and IF terinals of a mixer and HP filter the o/p then use an external attenuator. You would probably have to use an external "leveller" if you want that facility.

Alan Melia
"Johan Prins" <mitchellwing@nospam_free.fr> wrote in message news:1103_1039599181@news.free.fr...
> Hi,
>
> I picked up a R&S Polyskop 2 for 200 Euros and aftr a minor repair it works
> as designed up to 1.1 GHz.
> Apparently with a mechanical mod in the wobbler cavity I can get it to cover
> 1296MHz too. (still have to get the details)
>
> My question: How could I extend it's range to 2,4GHz after that?
> I wonder if doubling the output frequency and using a appropriate external
> detector head instad of the built-in detector would do the job
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> Anyone who would have a valid hint on how to double the frequency on a range
> between, say, 1 to 1,25 GHz more or less linearly?
>
> Thanks
>
> Johan
> P.S. needless to say, if I had either the money for playing or nearby friends to
> assist me in building one, I'd have a spectrum analyzer for years now.
>
>
>

4359. FT comp for vhf/uhf

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 12:04:34 UTC
From: Tazanator <tazanator1@hotmail.com>
Message-ID: <mRFJ9.320622$WL3.104437@rwcrnsc54>
Source record: 39422
Cross-posted to:
alt.ham-radio.marketplace,alt.ham-radio.vhf-uhf,rec.ham-radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.swap

Okay need to clear the computer room and I have space in the ham shack
sooo...

2 233 MHZ pent MMX
full towers 11 bays/ 8 bays
84/98 MB ram
2.45gig/2.5 gig IDE H/D space
Creative labs sound cards
ATI video cards
SCSI cards and Hard drive /CD-Roms optional

2 mini case systems
Mini tower with
motherboard (socket 370)
USB sound
video modem power supply is P4 capable

Heathkit HW1411 paddle keyer

486 gateway 2000
upgraded to 120mhz
1 gig hard drive runs win ME
modem
sound

Phillips PM 3200 O'scope...

Will trade for about anything would love parts for yeasu FT 736R (voice
chip/ message processor/Desktop mic .....
feel free to make offers would even do all of it for a good mobile... Call
Sign KB9YMX

4360. MFJ v Autek v Palomar v HB R-X NB ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 12:44:55 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <uvecqc2ona0l66@corp.supernews.com>
Source record: 39423

I'm in the process of retiring (modest budget) and hoping to do some HF and VLF antenna work. I have a Palomar R-X noise bridge that has served me reasonably well but it doesn't go below 1 mHz. I've used a borrowed MFJ 259 and Autek RF-1 but not enough experience to make a decision other than they sure are convenient. I've reviewed the Dec. 87 QST article on a Lab-Style RX noise bridge as well as the Aug. 89 QST on Improving R-X noise bridges by using a binocular ferrite core for the transformer, the "heart" of the noise bridge. I'm looking for intelligent opinions on what I should consider for my last or next to last antenna bridge. Right now I'm sort of leaning to building the Lab-Style in Dec 87 QST substituting the binocular ferrite core but I'm not sure what it'll take to get the instrument down to VLF and maybe LF, maybe two instruments or a band switch.. Have there been any articles elsewhere that I should find and read? Are there commercial instruments perhaps by HP or others that might be on the used market and should be considered?

73
hank wd5jfr

4361. Re: MFJ v Autek v Palomar v HB R-X NB ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 12:57:46 UTC
From: Ricardo Martins <ricardo.martins@pt.uu.net>
Message-ID: <3DF7364A.542963AE@pt.uu.net>
Source record: 39424

Hello,

See: http://www4.tpgi.com.au/users/ldbutler/LFBridge.htm
"look's nice" for your proposes :-)

73 de CT2GQV

Henry Kolesnik wrote:
>
> I'm in the process of retiring (modest budget) and hoping to do some HF and
> VLF antenna work. I have a Palomar R-X noise bridge that has served me
> reasonably well but it doesn't go below 1 mHz. I've used a borrowed MFJ 259
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> LF, maybe two instruments or a band switch.. Have there been any articles
> elsewhere that I should find and read? Are there commercial instruments
> perhaps by HP or others that might be on the used market and should be
> considered?
>
> 73
> hank wd5jfr

--
Ricardo Martins

4362. Stub-line Transformers. New program.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 15:56:51 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <at7n83rjd4@sparta.btinternet.com>
Source record: 39426

NOW AVAILABLE

New Program " STUBTUNE.exe "

This program assists with the design of stub-line transformers used for such purposes as matching the feedpoint impedance of balanced radio antennas to the Zo impedance of the transmission line from the transmitter. This program is applicable only to balanced-pair lines. Transmission efficiency theough the transformer is calculated.

It is an improved version of program STUMATCH.exe in that it takes into account conductor loss in the transformer and is therefore more accurate when extreme ratios of (Antenna Impedance)/(Feedline Zo) are involved. Operating procedure is more complicated than STUMATCH. However it performs calculations beyond the facilities offered by the Smith Chart,

The program is peculiar in that the Zo of the feedline is not entered. All input data is variable in small up/down increments until the input impedance of the transformer is equal to the Zo of the line to be matched. Educational.

STUBTUNE is self-contained in one small file, download in a few seconds from website below, run immediately.

==========
Regards from Reg G4FGQ
For Free Radio Design Software
Go to http://www.g4fgq.com
==========

4363. Stub-line Transformers. New program.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 15:56:52 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <at7n84rjd5@sparta.btinternet.com>
Source record: 39425

NOW AVAILABLE

New Program " STUBTUNE.exe "

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The program is peculiar in that the Zo of the feedline is not entered. All input data is variable in small up/down increments until the input impedance of the transformer is equal to the Zo of the line to be matched. Educational.

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4364. Re: Looking for a god RF L-C filter design program

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 19:17:31 UTC
From: averyfineman@aol.com
Message-ID: <20021211141731.07579.00000945@mb-mn.aol.com>
Source record: 39427

In article <3df672c1.1033718@news.west.cox.net>, nx7u@arrl.net (Scott Townley)
writes:

>"elsie" by a WB6??? is pretty good for small filters...a demo version
>will do 3 or 4 stage filters. Search the 'net for elsie+filter and
>you'll probably find it.
>Elsie=L-C...get it? pretty cute...but a totally cool program

"LCie" is a shareware program released in 1996, written and
copyrighted by Leonard H. Anderson. It will synthesize any
conventional L-C lowpass, highpass, bandpass, or bandstop
Butterworth, Chebyshev (choose your passband ripple in db),
or one type of Elliptic/Cauer response shape. It also
synthesizes relatively narrow "resonator" bandpass filter
values having high- or low-level coupling, capacitive or
inductive. It will draw a little diagram on an ASCII text printer
for the values.

"LCie" also analyzes filter response, either output amplitude
in db with relative phase ange and group delay or input impedance
or admittance with/without source resistance loading. Individual
values can be modified as desired and Qs set for finite values.
"LCie" can do sensitivity runs of input/output characteristics with
specified L and/or C variations within a given tolerance, plotting
the min, max, and average characteristics over frequency.

4365. Re: Looking for a god RF L-C filter design program

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 19:40:06 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <ma48ta.op7.ln@mylinuxbox.net>
Source record: 39429

In article <3DF721A8.9F70CB2E@kotinet.com>, Jari wrote:
> To simulate and calculate, try www.hydesign.co.uk. (RFSim99) free and usefull!

www.hydesign.co.uk is not reachable from here. If anyone
else is having problems finding it, RFSim99 can be found at:
http://sharon.esrac.ele.tue.nl/pub/funk2001/Etronik/rfsim/

73, Ed. EI9GQ.

--
Remove 'X' to reply via e-mail.
http://homepage.eircom.net/~ei9gq
Linux 2.4.20

4366. Re: Amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 21:04:25 UTC
From: Richard Parkin <"r_parkin at tiscali dot co dot uk">
Message-ID: <3df7aa1b$1_1@mk-nntp-2.news.uk.tiscali.com>
Source record: 39428
Cross-posted to: alt.ham-radio.atv,rec.radio.amateur.homebrew

Thomas C. Sefranek <WA1RHP@ARRL.net> wrote in message
news:4d9J9.1001$cL4.111899@newsread1.prod.itd.earthlink.net...
> MiniCircuits Lab.
>
> Richard Parkin <r_parkin at tiscali dot co dot uk ;-p> wrote in message
> news:3df4fe85_2@mk-nntp-2.news.uk.tiscali.com...
> > Can anyone point me towards an video amplifier module or IC suitable for
a
> > 2.4Ghz transmitter that has about 4mW OP? I just need a little more
power;
> > cheap and light is good ;-)
> >
> > Thanks & 73's
> >
> > Richard
> > GW7NLX

Thanks for that link Thomas, don't think I have run across that company
before.

Richard ;-)

4367. Re: Looking for a god RF L-C filter design program

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 22:05:36 UTC
From: MiSTer <support@microsoft.com>
Message-ID: <3DF7B6B0.BE11010@microsoft.com>
Source record: 39430

RFSim

(search for: RFSim991.exe)

Frank Mikkelsen wrote:
>
> Hi
>
> I am looking for at god filter design program to design passive filters, are
> there anyone there can recommends a specific program, links etc.
>
> Best regards
>
> --
> Frank Mikkelsen
>
> University of Aarhus
> Institute of Physics & Astronomi
> Nymunkegade, Bygn. 520
> DK-8000 Denmark
>
> Phone +45 89423799 or +45 89423795
> Fax: +45 89423794

4368. Re: Looking for a god RF L-C filter design program

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 22:07:00 UTC
From: MiSTer <support@microsoft.com>
Message-ID: <3DF7B704.AD18F50B@microsoft.com>
Source record: 39431

ah... didnt se ALL the posts... hmm, please just ignore me... :)

MiSTer wrote:
>
> RFSim
>
> (search for: RFSim991.exe)
>
> Frank Mikkelsen wrote:
> >
> > Hi
> >
> > I am looking for at god filter design program to design passive filters, are
> > there anyone there can recommends a specific program, links etc.
> >
> > Best regards
> >
> > --
> > Frank Mikkelsen
> >
> > University of Aarhus
> > Institute of Physics & Astronomi
> > Nymunkegade, Bygn. 520
> > DK-8000 Denmark
> >
> > Phone +45 89423799 or +45 89423795
> > Fax: +45 89423794

4369. Re: how to double frequency at output of a wobulator?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 22:23:08 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <gVOJ9.56628$hK4.4757092@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39432

Yes, and don't forget some type of filtering on the output to reduce
harmonic content...

--
||||||||||||||||||||||||||||||||||||||||
Brian Griffey
http://home.att.net/~briangriffey/Index.html
||||||||||||||||||||||||||||||||||||||||

"Alan Melia" <Alan.Melia@btinternet.com> wrote in message
news:at78hl$993$2@sparta.btinternet.com...
> Mini-Circuits do a doubler for this frequency range.....if you have enough
> output, you could split the signal and feed it into the LO and IF terinals
> of a mixer and HP filter the o/p then use an external attenuator. You
would
> probably have to use an external "leveller" if you want that facility.

4370. Re: Looking for a god RF L-C filter design program

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-11 23:14:41 UTC
From: averyfineman@aol.com
Message-ID: <20021211181441.04052.00001182@mb-mo.aol.com>
Source record: 39433

In article <20021211141731.07579.00000945@mb-mn.aol.com>, averyfineman@aol.com (Avery Fineman) writes:

> "LCie" also analyzes filter response, either output amplitude
> in db with relative phase ange and group delay or input impedance
> or admittance with/without source resistance loading. Individual
> values can be modified as desired and Qs set for finite values.
> "LCie" can do sensitivity runs of input/output characteristics with
> specified L and/or C variations within a given tolerance, plotting
> the min, max, and average characteristics over frequency.

Sorry, didn't complete the message...

While LCie is indicated as shareware, I'm not looking for any fees.
If anyone wants an LCie package in a private e-mail attachment,
just write and its on its way. Free.

LCie works fine in any MS DOS, DOS 7 supplied with Win95 and
Win98 don't accept the command menu colors (works OK in
MS DOS 6.22). Microsoft stopped supporting their FORTRAN
shortly after I released LCie, would not explain why MS FORTRAN
DOS statements aren't all compatible with DOS 7. Calculations
and value results are still as accurate as before.

LCie's documentation includes some practical tips on filter
design.

Len Anderson
retired (from regular hours) electronic engineer person

4371. Re: Battery Charger question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-12 01:42:26 UTC
From: scott <acepilot@bloomer.net>
Message-ID: <3DF7E982.DE97B2C0@bloomer.net>
Source record: 39436

Typically, for a 14-16 charge time I believe they usually charge at about 10% of the Amp Hour rating of the battery (which is what most wall warts supply that come with the handheld), so in this case if you build a charger that puts out a constant current of about 80 mA, you can leave the charger hooked up indefinitely. I's think thats about how it works. Nicads need a constant current source, not a constant voltage source like a DC power supply puts out. Maybe you can find the right charger for the HT on ebay...

Scott
N0EDV

Ralph Mowery wrote:

> YOu hook the charger up to the battery so that the positive output of the
> charger will be to the positive of the battery. To findout how long it
> will take to charge the battery you devide the battery mAh by the charger
> current. If you have the 800 mAh battery it is 800/300 which is about 2.6
> hours. To that you have to add 'fudge factor' which means that it will take
> about 3 hours to get a full charge. That is assuming the battery is
> designed to take a charging rate that high. Some are and some are not
> designed to take a charging rate that high. The battery can over heat and
> vent out some gas. Then it will not take a charge very well.
>
> "Mark Symms" <symmshsd@earthlink.net> wrote in message
> news:Xns92DF7E15AE08Dmsymms@207.217.77.21...
> > Hi All,
> > I am currently trying to build a batttery charger for my Yaesu FT-416
> > HH. The battery charger hookup is an 1/8 inch headphone jack. My
> question
> > is polarity. If the tip is negative on output does it have to be positive
> > for charging? Also the batery is 800mAh, and the charger is 300mAh. How
> > long for a full charge?
> >
> > As you can tell I am no EE.
> > Thanks for any help
> > -mark

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

4372. Re: Amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-12 01:46:15 UTC
From: scott <acepilot@bloomer.net>
Message-ID: <3DF7EA67.C8C3A4B@bloomer.net>
Source record: 39434
Cross-posted to: alt.ham-radio.atv,rec.radio.amateur.homebrew

Legal? Licensed or unlicensed? Trying to extend the range of those 2.4 GHz video camera modules? Probably not legal to boost it.....Now, if it operates somewhere in the ham band up there, that's a different story! There are a few places that sell amplifier brick amps, but they're not cheap! Maybe try Down East Microwave at
http://www.downeastmicrowave.com/

Scott
N0EDV

Richard Parkin wrote:

> Can anyone point me towards an video amplifier module or IC suitable for a
> 2.4Ghz transmitter that has about 4mW OP? I just need a little more power;
> cheap and light is good ;-)
>
> Thanks & 73's
>
> Richard
> GW7NLX

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

4373. Re: Looking for a god RF L-C filter design program

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-12 02:09:51 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <at8r5gftq1@slb0.atl.mindspring.net>
Source record: 39435

"Eamon Skelton" <Xnospam@oceanfree.net> Wrote:
> In article <3DF721A8.9F70CB2E@kotinet.com>, Jari wrote:
> > To simulate and calculate, try www.hydesign.co.uk.
> > (RFSim99) free and usefull!
>
> www.hydesign.co.uk is not reachable from here. If anyone
> else is having problems finding it, RFSim99 can be found at:
> http://sharon.esrac.ele.tue.nl/pub/funk2001/Etronik/rfsim/
>
> 73, Ed. EI9GQ.

I have found RFSim99 a VERY powerful program. It is an S parameter simulator with schematic entry and you can also do a Monte Carlo style tolerance analysis.

I've imported quite a few devices as S parameters so adding new devices is pretty straightforward.

It was a completely free program offered by Hydesign.

I have not been able to get to the Hydesign website for quite a long time, maybe a year or so....

Still, the program is avaliable free many places on the web.

Jim Pennell
N6BIU

4374. Re: Zero Crossing Detectors, FM Demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-12 03:50:49 UTC
From: rstevew@deeptht.armory.com
Message-ID: <3df80799$0$79562$8eec23a@newsreader.tycho.net>
Source record: 39437
Cross-posted to: sci.electronics.design,sci.electronics.misc,rec.radio.amateur.homebrew

In article <at6v3j$7s4$1@newstoo.ericsson.se>,
Master of the universe and supreme ruler of all living beings <john.smith@micro$oft.com>
wrote:
>Yes. it DOES exist. I have just been there and downloaded it.
>BR IN
>
>>
>>http://www.analog.com/library/applicationNotes/dataConverters/PDF/AN-279.pd
>f
>> >Rick N6RK
>> Page desn't fucking exist! DON'T POST OLD LINKS!!
>> -Steve
>
>And what's witht he foul language? Do you speak like that on the radio?
>
>BR IN

Yes, actually, you stupid vicious antisexual fuckwad!
Kill ALL miserable Xtian bigots!!
-Steve

4375. SWL Mods(triumph World Radio)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-12 04:07:48 UTC
From: Jason <kc7eip_nospam@shaw.ca>
Message-ID: <oYTJ9.150228$ea.2870973@news2.calgary.shaw.ca>
Source record: 39438

Well i have an old world radio made by Triumph or that may be the model... I've occasionally been able to pick up cw and ssb on it with some help from my Little Pixie radios..

I was wondering if anyone had schematics for this particular radio. I'm wanting to change the sw1
band so that when i tune it will only cover the 40 meter band. as it is right now 40 meters is only a small portion on it's tuning for the sw1 band.

I've done a search through google and on the web and only found for sale pages.. I've also considered using the radio for parts as it has a lot of nice caps and other parts... but it is working and would be a waste to ruin a working product. :)

4376. Re: Amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-12 05:35:13 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <leVJ9.57423$hK4.4807366@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39439
Cross-posted to: alt.ham-radio.atv,rec.radio.amateur.homebrew

MMICs from a couple of manufacturers such as Mini-Circuits, RF Micro Devices (RFMD) should fill the bill. Cost is around 3USD.

Pete

4377. Re: SWL Mods(triumph World Radio)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-12 05:39:06 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <uvg86s2cb03cf5@corp.supernews.com>
Source record: 39440

Jason wrote:
> Well i have an old world radio made by Triumph or that may be the model...
> I've occasionally been able to pick up cw and ssb on it with some help from
> my Little Pixie radios..
>
> I was wondering if anyone had schematics for this particular radio. I'm
> wanting to change the sw1
> band so that when i tune it will only cover the 40 meter band. as it is
> right now 40 meters is only a small portion on it's tuning for the sw1 band.
>
> I've done a search through google and on the web and only found for sale
> pages.. I've also considered using the radio for parts as it has a lot of
> nice caps and other parts... but it is working and would be a waste to ruin
> a working product. :)
>
>
I don't know the particular radio so maybe you could describe it or
provide a link???
In most radios that have say a 6-18 MHz SW range it is because they are
using the same main tuning capacitor as is used on BCB only with a
different coil to raise the frequency. The 'cure' is to change the
tuning cap to one with a much smaller range but that may necessitate
changing the coils, etc.
The tuning cap for BCB is typically on the order of 20-365pf for the RF
section and something like 12-260pf for the local oscillator section.
Now lets assume for this example that your SW band is indeed 6-18
MHz...that would mean that the 7 MHz portion might be only using
something like the 300-320pf portion of the RF section range and
220-240pf of the Oscillator section range.
In an old tube set you can yank out a bunch of the plates and get
something like the 0-20pf result indicated and use a fixed capacitor to
make up the overall difference.
In a transistor set with the little tiny tuning cap, forget it.
So, suffice it to say that yes, it could be done with an old tube set
with a sufficient amount of tinkering and an understanding of how it works.
However, once you did, the next question might involve the drift and
stability.
If the set has any resale value at all, a better option might be to
unload it on ebay and buy one of the little single-band receiver kits!

Good luck,
Bill

4378. Re: SWL Mods(triumph World Radio)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-12 14:03:05 UTC
From: Dale Parfitt <parinc@verizon.net>
Message-ID: <3DF893D0.944D9BDD@verizon.net>
Source record: 39441

Jason wrote:

> Well i have an old world radio made by Triumph or that may be the model...
> I've occasionally been able to pick up cw and ssb on it with some help from
> my Little Pixie radios..
>
> I was wondering if anyone had schematics for this particular radio. I'm
> wanting to change the sw1
> band so that when i tune it will only cover the 40 meter band. as it is
> right now 40 meters is only a small portion on it's tuning for the sw1 band.
>
> I've done a search through google and on the web and only found for sale
> pages.. I've also considered using the radio for parts as it has a lot of
> nice caps and other parts... but it is working and would be a waste to ruin
> a working product. :)

I'm with Bill- why start tearing up a classic, only to end up with a mediocre performer? Build or p/u one of the 40M kits on the market. Leave the old girl alone.

Dale W4OP

4379. Yahoogroup for FT-900 (CAT) is up now

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-12 14:31:35 UTC
From: Brian Vind <brian@oz1bv_SletDette_.dk>
Message-ID: <3df89dc8$0$47423$edfadb0f@dtext01.news.tele.dk>
Source record: 39442
Cross-posted to: alt.radio.amateur,rec.radio.amateur,rec.radio.amateur.homebrew,uk.radio.amateur

Take a look here: http://groups.yahoo.com/group/ft-900/

--

Vy 73 de OZ1BV, Brian
www.oz1bv.dk
www.oz1bv.dk/4sale
www.oz1bv.dk/manuals

4380. Re: SWL Mods(triumph World Radio)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-12 15:45:12 UTC
From: Jason <kc7eip_nospam@shaw.ca>
Message-ID: <ca2K9.83583$Qr.2008920@news3.calgary.shaw.ca>
Source record: 39443

Well its a transistor model i figure one of the earlier ones as it's got the number of transistors labeled on it like a selling point.. Covers 7 different ranges.. LW 150 -350kc
am
Marine band 1.6 -4.5
sw1 4.5 to 12 mhz
sw2 12 to 24 mhz
fm
and air 108 to 174..
As far as selling it i don't think that i could part with it is nice and does pick up local civil services so it's definitely not going to the parts bin just yet i was just hoping to get the schematics to figure out weather i could make a simple mod to adjust one of it's tuning ranges or weather it would effect the whole radio. As it sounds changing the caps would definitely ruin it's usefulness on the other bands and wouldn't be worth it..So like you say maybe i should just leave well enough alone and buy some other kit to keep my occupied.
"Dale Parfitt" <parinc@verizon.net> wrote in message news:3DF893D0.944D9BDD@verizon.net...
>
>
> Jason wrote:
>
> > Well i have an old world radio made by Triumph or that may be the model...
> > I've occasionally been able to pick up cw and ssb on it with some help from
> > my Little Pixie radios..
> >
> > I was wondering if anyone had schematics for this particular radio. I'm
> > wanting to change the sw1
> > band so that when i tune it will only cover the 40 meter band. as it is
> > right now 40 meters is only a small portion on it's tuning for the sw1 band.
> >
> > I've done a search through google and on the web and only found for sale
> > pages.. I've also considered using the radio for parts as it has a lot of
> > nice caps and other parts... but it is working and would be a waste to ruin
> > a working product. :)
>
> I'm with Bill- why start tearing up a classic, only to end up with a mediocre

> performer? Build or p/u one of the 40M kits on the market. Leave the old
girl
> alone.
>
> Dale W4OP
>
>

4381. Re: Thordarsen Meissner website?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-12 16:56:38 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <QCQ3BpOG$L+9Ewuf@fslife.co.uk>
Source record: 39444

In message <3DF58267.F8970DFA@shawneelink.net>, Jeremy Cusick
<gtarman@shawneelink.net> writes
>Yup... they're on Rt. 1, just S. of town. Where you from, Greg Spiller?
>
>Greg Spiller wrote:
>
>> Don't know about a website, but my local phone book shows this:
>>
>> Thordarson Meissner
>> 11969 Hwy 1
>> Mt. Carmel, IL 62863
>> Phone 618-262-5121
Hi Jeremy,

I'm located in London, UK.

I was looking for a current producer of RF anode (plate) chokes.

(((73))
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

4382. ARRL Freq Msmt Test revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-12 18:26:58 UTC
From: k7itm@aol.com
Message-ID: <3200347.0212121026.3e3a7c89@posting.google.com>
Source record: 39445

Since submissions to the ARRL frequency measurement test were supposed to be postmarked by 6 December, I guess it's OK to post my results. I used a pretty terrible antenna, and didn't hear anything at my location a bit N. of Seattle on 3.5 or 21MHz. I reported 7,046,882.23Hz +/- 0.5Hz and 14,049,083.6Hz +/- 1.0Hz for 40 and 20 meters. (The tolerances come from spectral spreading by the propagation for the most part.)

Anyone else?

Cheers,
Tom

4383. Re: ARRL Freq Msmt Test revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-12 19:34:50 UTC
From: dinoal7lz@aol.com
Message-ID: <20021212143450.02708.00000014@mb-ch.aol.com>
Source record: 39446

Tom----here's what I submitted:

80m -- 3579335.0 Hz (although I just looked and saw that I mistakenly marked them as "kHz" ooops), and

40m -- 7046882.6 Hz

I couldn't get any reliable measurements here in Virginia on 20m and 15m. League rep told me on Tuesday that the results will be posted soon as an article on the web page and that each participant will get a letter before Xmas.

Dino KLï¿½S/4

4384. Re: Looking for a god RF L-C filter design program

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-12 19:52:59 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <repata.de8.ln@mylinuxbox.net>
Source record: 39297

In article <at8r5gftq1@slb0.atl.mindspring.net>, Jim Pennell wrote:

>> www.hydesign.co.uk is not reachable from here. If anyone
>> else is having problems finding it, RFSim99 can be found at:
>> http://sharon.esrac.ele.tue.nl/pub/funk2001/Etronik/rfsim/
>>
>> 73, Ed. EI9GQ.
>
>
> I have found RFSim99 a VERY powerful program. It is an S parameter
> simulator with schematic entry and you can also do a Monte Carlo style
> tolerance analysis.

It is a very nice program. It also runs very well under
Wine (Windows emulator) on my Linux PC.

73, Ed. EI9GQ.

--
Remove 'X' to reply via e-mail.
http://homepage.eircom.net/~ei9gq
Linux 2.4.20

4385. book tree chips and ham radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-13 01:59:40 UTC
From: Deos <lineoffiretoday@yahoo.com>
Message-ID: <atbeeb$8vi$1@nic.grnet.gr>
Source record: 39298

Is it possible to use a pc TV tuner to copy ham radio bands (144mhz) has anyone done that

With book tree chips?
--
http://www.qsl.net/sv1hao

4386. Re: book tree chips and ham radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-13 06:13:18 UTC
From: Bruce Lane <SpammersAreVermin@dev.null>
Message-ID: <MPG.18631a5782c3d325989a8e@news.drizzle.com>
Source record: 39299

In article <atbeeb$8vi$1@nic.grnet.gr>, lineoffiretoday@yahoo.com says...

> Is it possible to use a pc TV tuner to copy ham radio bands (144mhz) has
> anyone done that

Possible? I'm not going to say no because I've learned that
anything is possible, if one is willing to throw enough money and effort
at it.

Desirable? Hardly. Remember that a TV tuner -- ANY TV tuner -- has
a per-channel bandwidth of 6MHz. Given that the typical bandwidth of even
an SSB transmission is around 6KHz, well... I think you can see where
that's going.

> With book tree chips?

Who the heck is "book tree?" Are you referring to Brooktree?

In any case... Not worth the effort. If you want to listen to 2
meters, pop over to Radio Shack and pick up a scanner. If you're licensed
for that band, and you want to do more than listen, there's plenty of
cheap/used 2m rigs available both at retail and on Ebay.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

4387. Re: book tree chips and ham radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-13 09:39:12 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <4VhK9.8328$TC4.29018@news-server.bigpond.net.au>
Source record: 39317

Bruce Lane wrote:
> In article <atbeeb$8vi$1@nic.grnet.gr>, lineoffiretoday@yahoo.com
> says...
>
>> Is it possible to use a pc TV tuner to copy ham radio bands (144mhz)
>> has anyone done that
>
> Possible? I'm not going to say no because I've learned that
> anything is possible, if one is willing to throw enough money and
> effort at it.
>
> Desirable? Hardly. Remember that a TV tuner -- ANY TV tuner -- has
> a per-channel bandwidth of 6MHz. Given that the typical bandwidth of
> even an SSB transmission is around 6KHz, well... I think you can see
> where that's going.

True, however the sound (FM) bandwidth is around 50KHz. A fair amount of the 2m transmissions that would be picked up are FM. The s/n ratio will not be all that it could be and the audio output may be a little low but it can be done. I have an I2C TV tuner I'm playing with and have no trouble listening to the local 2m repeater using a standard TV audio IF strip. I may be wrong, but is not the usual bandwidth of an SSB transmission in the region of 2.5-3.0KHz ?

Steve

>
>> With book tree chips?
>
> Who the heck is "book tree?" Are you referring to Brooktree?
>
> In any case... Not worth the effort. If you want to listen to 2
> meters, pop over to Radio Shack and pick up a scanner. If you're
> licensed for that band, and you want to do more than listen, there's
> plenty of cheap/used 2m rigs available both at retail and on Ebay.

4388. Re: book tree chips and ham radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-13 11:38:53 UTC
From: SyncoAth <syncoath@hol.gr>
Message-ID: <atcn7t$1lg$1@newsmaster.public.dc.hol.net>
Source record: 39300

> Bruce Lane <SpammersAreVermin@dev.null> ******* *** ******* **********:
MPG.18631a5782c3d325989a8e@news.drizzle.com...
> In article **<**atbeeb$8vi$1@nic.grnet.gr**>**, lineoffiretoday@yahoo.com says...

> Desirable? Hardly. Remember that a TV tuner -- ANY TV tuner -- has
> a per-channel bandwidth of 6MHz. Given that the typical bandwidth of even
> an SSB transmission is around 6KHz, well... I think you can see where
> that's going.
yes but why can you copy fm stations from 88-108 with a pc tuner????
i can see where it's going.....(to a point) ok fm stations are wide.....but
its not 6mhz........
can somone help us out here?

4389. Re: book tree chips and ham radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-13 13:38:37 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <UcidnWTJGNZuf2SgXTWc3w@comcast.com>
Source record: 39301

You can use an old analog UHF tuner to tune in just about anything !

"Deos" <lineoffiretoday@yahoo.com> wrote in message
news:atbeeb$8vi$1@nic.grnet.gr...
> Is it possible to use a pc TV tuner to copy ham radio bands (144mhz) has
> anyone done that
>
> With book tree chips?
> --
> http://www.qsl.net/sv1hao
>
>

4390. Re: book tree chips and ham radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-13 13:44:19 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <uvjoveqfq05t62@corp.supernews.com>
Source record: 39302

SyncoAth wrote:
> ï¿½ Bruce Lane <SpammersAreVermin@dev.null> ï¿½ï¿½ï¿½ï¿½ï¿½ï¿½ï¿½ ï¿½ï¿½ï¿½ï¿½
ï¿½ï¿½ï¿½ï¿½ï¿½ï¿½ï¿½ï¿½ ï¿½ï¿½ï¿½ï¿½ï¿½ï¿½ï¿½ï¿½ï¿½ï¿½ï¿½ï¿½:
> MPG.18631a5782c3d325989a8e@news.drizzle.com...
>
>>In article <atbeeb$8vi$1@nic.grnet.gr>, lineoffiretoday@yahoo.com says...
>
>
>
>>Desirable? Hardly. Remember that a TV tuner -- ANY TV tuner -- has
>>a per-channel bandwidth of 6MHz. Given that the typical bandwidth of even
>>an SSB transmission is around 6KHz, well... I think you can see where
>>that's going.
>
> yes but why can you copy fm stations from 88-108 with a pc tuner????
> i can see where it's going.....(to a point) ok fm stations are wide.....but
> its not 6mhz........
> can somone help us out here?
>
>
>
You CAN copy 144 MHz signals just like 88-108 FM and 152-174 Two-way, etc.
The bandwidth in regard to receiving the whole band 144-150 Mhz at one
time is the obvious issue because you have no means to select one single
station if there is more than one. You will be dependent on 'capture
effect' so that only the strongest signal(s) come through.
The other issue is the noise bandwidth of a 6 MHz wide receiver versus a
normal 15-30 kHz wide receiver. The result is very poor sensitivity for
such a narrow signal.
But, yes, if the signals are strong enough you can receive them.

-Bill M

4391. Re: book tree chips and ham radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-13 14:06:38 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <OPIK9.24605$y14.2159146@news1.east.cox.net>
Source record: 39303

"Deos" <lineoffiretoday@yahoo.com> wrote in message
news:atbeeb$8vi$1@nic.grnet.gr...
> Is it possible to use a pc TV tuner to copy ham radio bands (144mhz) has
> anyone done that
>
> With book tree chips?
> --
>

First, the IF filters determine the bandwidth of the receiver, NOT the
frontend.

Secondly, many TV cards use the intracarrier technique which beats the
visual and aural carriers together to produce the 4.5 MHz sound IF.

The answer is no.

Pete

4392. Re: book tree chips and ham radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-13 15:15:31 UTC
From: Bruce Lane <SpammersAreVermin@dev.null>
Message-ID: <MPG.1863996f53b3955f989a8f@news.drizzle.com>
Source record: 39304

In article <atcn7t$1lg$1@newsmaster.public.dc.hol.net>, syncoath@hol.gr
says...

> yes but why can you copy fm stations from 88-108 with a pc tuner????

The fact that the tuner is mounted in a PC is utterly irrelevant to
the design of the tuner. If said tuner is designed to pick up FM
broadcast stations, it will do so.

> i can see where it's going.....(to a point) ok fm stations are wide.....but
> its not 6mhz........

I should have made myself clearer. I believe it is physically
possible to copy 2m stations with a TV tuner based device. HOWEVER --
what I was getting at originally is that, assuming you can convince the
card to even tune those frequencies, the selectivity and adjacent-channel
rejection numbers for such a device would be horrible for narrow-band FM.
TV and FM tuners are, by design, broad as the proverbial barn door.

With a TV tuner, you'd end up getting the whole 2m band at once,
plus 2MHz of the commercial band either above it. An FM broadcast tuner
wouldn't be much better, with its 100KHz-per-channel spacing. The only
thing allowing you to hear a single 2m station with either device would
FM's characteristic 'capture' effect.

You're far better off using a scanner or 2m rig -- something that's
designed from the ground up to do what you want to do.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

4393. Re: book tree chips and ham radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-13 15:17:02 UTC
From: Bruce Lane <SpammersAreVermin@dev.null>
Message-ID: <MPG.186399c55c489bd7989a90@news.drizzle.com>
Source record: 39305

In article <OPlK9.24605$y14.2159146@news1.east.cox.net>,
radioconnectionNO@cox.netSPAM says...

<snip>

> First, the IF filters determine the bandwidth of the receiver, NOT the
> frontend.

Absolutely correct, and I should have pointed that out in my
original post (sound of palm hitting head).

> Secondly, many TV cards use the intracarrier technique which beats the
> visual and aural carriers together to produce the 4.5 MHz sound IF.

Thank you! This was the factor I had forgotten about.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

4394. Re: ARRL Freq Msmt Test revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-13 16:15:45 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3DFA07B1.CB978556@ix.netcom.com>
Source record: 39306

Tom Bruhns wrote:
>
> to be postmarked by 6 December, I guess it's OK to post my results. I
> used a pretty terrible antenna, and didn't hear anything at my
> location a bit N. of Seattle on 3.5 or 21MHz. I reported
> 7,046,882.23Hz +/- 0.5Hz and 14,049,083.6Hz +/- 1.0Hz for 40 and 20
> meters. (The tolerances come from spectral spreading by the
> propagation for the most part.)
>
>

Virtually identical to what I found in southern CA,Tom, which is not really surprising. I still maintain that it is relatively easy to measure frequency off air to with 1/100 of 1 Hz but that ionospheric spreading is often around two orders of magnitude greater than that for other than local stations. I even see what looks like a steady error of nearly a whole Hertz on WWV round local dusk and dawn at times, as the effective path length changes.

An interesting excercise though. Maybe next time I'll get the BC221 out of the garage, now that would be fun!

73
Dan ac6ao g3ncr

4395. Re: ARRL Freq Msmt Test revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-13 16:56:39 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3dfa10ef.17194589@news.freeserve.net>
Source record: 39307

OK, I give in..
What were you using to get off-air accuracy like this?.
My ears are probably good to 1Hz on a good day ;-)
atb Mike W
--
On Fri, 13 Dec 2002 08:15:45 -0800, Dan Rae <rae4@ix.netcom.com>
wrote:

>
>
>Tom Bruhns wrote:
>>
>> to be postmarked by 6 December, I guess it's OK to post my results. I
>> used a pretty terrible antenna, and didn't hear anything at my
>> location a bit N. of Seattle on 3.5 or 21MHz. I reported
>> 7,046,882.23Hz +/- 0.5Hz and 14,049,083.6Hz +/- 1.0Hz for 40 and 20
>> meters. (The tolerances come from spectral spreading by the
>> propagation for the most part.)
>>
>>
>
>Virtually identical to what I found in southern CA,Tom, which is not
>really surprising. I still maintain that it is relatively easy to
>measure frequency off air to with 1/100 of 1 Hz but that ionospheric
>spreading is often around two orders of magnitude greater than that for
>other than local stations. I even see what looks like a steady error of
>nearly a whole Hertz on WWV round local dusk and dawn at times, as the
>effective path length changes.
>
>An interesting excercise though. Maybe next time I'll get the BC221 out
>of the garage, now that would be fun!
>
>73
>Dan ac6ao g3ncr

4396. Re: book tree chips and ham radio?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-13 17:59:23 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <0o2kvu4rl0vmc0psq6kkcbkc04ulrmff6h@4ax.com>
Source record: 39308

On Fri, 13 Dec 2002 09:44:19 -0400, Bill M
<don'tspamme-exray@caribe.net> wrote:

>You CAN copy 144 MHz signals just like 88-108 FM and 152-174 Two-way, etc.
>The bandwidth in regard to receiving the whole band 144-150 Mhz at one
>time is the obvious issue because you have no means to select one single
>station if there is more than one. You will be dependent on 'capture
>effect' so that only the strongest signal(s) come through.
>The other issue is the noise bandwidth of a 6 MHz wide receiver versus a
>normal 15-30 kHz wide receiver. The result is very poor sensitivity for
> such a narrow signal.
>But, yes, if the signals are strong enough you can receive them.

As far as I know, the TV cards demodulate the TV signal down to video
baseband and is then going through an A/D converter with 8 bit
resolution.

A typical TV receiver will determine the a.g.c. voltage during the
synch tip. If there are no synch pulses in the receiver bandwidth, the
a.g.c. might not work.

However, if some form of a.g.c. will be generated, it most likely will
set the receiver gain so that the signal envelope will fit within the
ADC range. If there is a strong signal within the 4-6 MHz video
bandwidth, it will dominate the ADC range. With only 8 bit resolution,
the ADC dynamic range is only 48 dB, thus any desired signal which is
48 dB or more below the strongest signal in the video bandwidth would
be less than the LSB bit. Fortunately, the dithering effects will
permit recovering some information even if the amplitude of the
desired signal is below the 1 bit LSB amplitude.

Anyway, the narrow band FM signal would have to be extracted from the
digital stream sampled at about 13 MHz. This could be done by building
a bandpass filter running at the 13 MHz sampling frequency. An other
approach would be to multiply each "video" sample with a digital sine
wave carrier close to the desired signal, then low pass filter it with
a filter running at 13 MHz sampling frequency. The resulting
difference frequency can then be processed at a lower sampling
frequency to digitally demodulate the narrow band FM carrier.

While the extraction could be done if sufficient computing power is
available, the resulting dynamic range would be very poor due to the
analog a.g.c. and the 8 bit video ADC resolution.

Paul OH3LWR

4397. Re: Looking for a god RF L-C filter design program

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-13 18:01:27 UTC
From: k7itm@aol.com
Message-ID: <3200347.0212131001.54306754@posting.google.com>
Source record: 39309

Thanks to all the others who have contributed suggestions! There are
some in there I need to check out.

Here's another: Filter Solutions, from
http://www.filter-solutions.com. It's a little pricey, but I found it
to be very useful for some work I was doing a while ago. Free trial
for 30 days. They also have Filter Lite and Filter Free...less
expensive steps of the ladder.

Cheers,
Tom

"Frank Mikkelsen" <frank@ifa.au.dk> wrote in message
news:<at4q52dgk1@news.net.uni-c.dk>...
> Hi
>
> I am looking for at god filter design program to design passive filters, are
> there anyone there can recommends a specific program, links etc.
>
> Best regards
>
>
> --
> Frank Mikkelsen
>
> University of Aarhus
> Institute of Physics & Astronomi
> Nymunkegade, Bygn. 520
> DK-8000 Denmark
>
> Phone +45 89423799 or +45 89423795
> Fax: +45 89423794

4398. Drake Manuals for Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-13 19:22:53 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <hsqK9.59999$hK4.4984625@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39310

Hello folks, I know that this is slightly off topic, but since many of you have Drake equipment, I have decided to post in this area.
I have manuals for Drake equipment in PDF form. These would be for the 1A, 2B, 2C, R4A, R4B,R4C,
SPR-4, SW4 FS4, R7, R8, TR3, TR4, TR4C, T4X, TR6,TR7, UV3, MN2000, and other tuners. Also, I have the '7 series owners and service manuals, along with manuals for the RR-1, MSR-2, etc.
Price, including shipping in the USA will be $18.00 for each manual. In cases such as with the TR7, I will include both the Owners Manual and the Service manual for that price. With overseas customers, we will need to discuss shipping first.
Any interested parties can e-mail me directly.

Pete Gianakopoulos
Mount Prospect, Illinois
USA

4399. Re: MAX712 NiMh Charger Design Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-13 19:39:14 UTC
From: Mike Srock <msrock@chartermi.net>
Message-ID: <uvkdr57gq3ph6d@corp.supernews.com>
Source record: 39311

Hi Jordan

I built this one for charging gel cells but it should work fine for nicads.
http://www.rason.org/Projects/gelcell/gelcell.htm

I use a 20v laptop supply for my voltage source. It works great.
I am going to put a 10 turn 10k pot on the front panel so I can vary
the voltage for different batteries. Right now I have it built as
described.
I have designed a circuit board layout. If you are interested contact me.

Here's another link that might be useful.
http://wiredworld.tripod.com/tronics/batt_chg.html

Good Luck!

Mike
"Snowman" <jordan@accesscable.net> wrote in message
news:2a4ddbec.0211300719.6d117836@posting.google.com...
> Hello, I'm trying to get a MAX712 based charger working for a 14 cell
> AA pack. I'm trying to follow the datasheets "Typical Operating
> Circuit" design and I'm running into trouble with the high DC IN
> voltage that I will have to use.
>
> In fig 5,pg 9 & fig 15,pg 15 of the datasheet it shows how to deal
> with high DC IN but in the evaluation kit it has not used these at
> all. Since the evaluation kit says it's possible to charge up to 16
> series cells it leaves me with a few questions:
>
> 1) Do I need to use both of these voltage limiting circuits or can I
> just use one? If so which one?
>
> 2) If I do use both what happens to the 500 ohm resistor attached to
> the gate of Q1 and the DRV pin,(fig 15) when the 2N3904 is placed at
> the DRV pin,(fig 5)? Do I get rid of the resistor or do I attach it to
> the drain of the 2N3904 and the gate of Q1?
>
> Thanks for your help
> Jordan
>
> Here are the two datasheets for the circuits:
> http://pdfserv.maxim-ic.com/arpdf/MAX712-MAX713.pdf
> http://pdfserv.maxim-ic.com/arpdf/MAX712EVKIT.pdf

4400. Russian electromechanical filter.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-13 22:03:10 UTC
From: Pawe&#65533; Stobi&#65533;ski <sq9nry@wp.pl>
Message-ID: <atdlfv$45v$1@julia.coi.pw.edu.pl>
Source record: 39312

I've recently bought an electromechanical filter, hope it's a bargain. It's got written on the top: "42" - bold and big font, "Type: 450A-32" - guess it's 450kHz. My question is: what is the bandwidth and output/input impedance. The filter is frequently met in russian transceiver constructions, looks like a metal can 6x1.5x2 cm with 4 legs (2 input and 2 output). Thanks for any info!

--
Pawe&#65533; Stobi&#65533;ski SQ9NRY
Warsaw, Poland

4401. WANT Active Dual SWR Power Meter or schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-13 22:28:45 UTC
From: "frazier@flex.com" <frazier@flex.com>
Message-ID: <3DFA5F1D.69FA154F@flex.com>
Source record: 39313
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.radio.amateur

I've got a SignalCrafter model 30 SWR Power meter and would like to find another in working condition, or another SWR/Power meter with similar features.

The SignalCrafter Model 30 has two meters. The lefthand one displays Power in three ranges, 20W, 200W, and 2000W. The righthand meter displays SWR, and under the SWR scale is something they called reflection coefficient. It also provides the ability to switch between three antennas and a dummy load. I don't care about the switching for antennas, as I only use mine for a SWR/Power meter, and use a different custom switching array for my antenna switches.

The SignalCrafter Model 30 was made in the early 80's and is an ACTIVE SWR meter. There is no "set" knob or need to mess around with anything other than the switches that select the power level. It's operation is very similar to the dual panel meters that are built into the JW Miller AT2500 Antenna Tuner of similar vintage.

Does anyone know of the availability of a SignalCrafter Model 30 or similar unit, or have a schematic that could be used to modify (add circuitry) to the existing cross needle swr meters in my MFJ Differential T Tuners? I really dislike the cross needle meters that require you to interpret the swr by reading a red line where the needles cross. I can pretty easily make a new dial scale if I can get a schematic to build the active circuitry to drive the meters.

Thanks
-- Rick AH7H

4402. Re: how to double frequency at output of a wobulator?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-14 00:26:00 UTC
From: la8ak.xnd@online.no
Message-ID: <3dfa571b.93629206@news.online.no>
Source record: 39314

On Wed, 11 Dec 2002 11:45:57 +0000 (UTC), "Alan Melia"
<Alan.Melia@btinternet.com> wrote:

>Mini-Circuits do a doubler for this frequency range.....if you have enough
>output, you could split the signal and feed it into the LO and IF terinals
>of a mixer and HP filter the o/p then use an external attenuator. You would
>probably have to use an external "leveller" if you want that facility.
>
>Alan Melia

well, I had the large old Polyskope covering up to 1200MHz, but the
problem is when you operate it in populated areas, you probably block
all the TV channels. So it is better idea to buy some modern VCO's
from Mini-Circuits and use as little as possible of the old stuff

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

4403. Re: Russian electromechanical filter.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-14 01:03:06 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <ervK9.27461$y14.2290560@news1.east.cox.net>
Source record: 39315

"Pawe&#65533; Stobi&#65533;ski" <sq9nry@wp.pl> wrote in message
news:atdlfv$45v$1@julia.coi.pw.edu.pl...
> I've recently bought an electromechanical filter, hope it's a bargain.
It's
> got written on the top: "42" - bold and big font, "Type: 450A-32" -
guess
> it's 450kHz. My question is: what is the bandwidth and output/input
> impedance. The filter is frequently met in russian transceiver
> constructions, looks like a metal can 6x1.5x2 cm with 4 legs (2 input and
2
> output). Thanks for any info!
>
> --
> Pawe&#65533; Stobi&#65533;ski SQ9NRY
> Warsaw, Poland
>
>

If it is anything like the collins markings, the 32 probably means 3.2
kHz.
If it was intended for tube circuits and resonated by external tuning caps
it is probably fairly high impedance in the parallel tuned mode.

Pete

4404. Re: ARRL Freq Msmt Test revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-14 01:40:22 UTC
From: k7itm@aol.com
Message-ID: <3200347.0212131740.4b55c6e3@posting.google.com>
Source record: 39316

:-) I used a couple of old prototype HP3588 spectrum analyzers, one on 40 meters and one on 20 meters, locked to an HP10811D oven oscillator reference. Those analyzers use digitization, decimation, and FFT techniques to get down to very narrow resolution bandwidths (a few millihertz minimum). I used 0.35Hz resolution bandwidth for the measurements I made. The propagation conditions didn't deserve any better than that. Even though I used that RBW, it's quite possible to resolve much finer increments of frequency from the same length of measurement, because the effective filter shapes are known quite accurately, allowing interpolation. I'd agree with Dan that resolution down to better than 0.01Hz is straightforward, given a clean signal. But some of the samples from the FMT evening were spread out quite badly.

WWV, around sun-up or sun-down, often splits into two distinct peaks here, presumably one for WWV and one for WWVH. Like Dan, I've seen shifts of 1Hz and greater on 10 and 15MHz.

Cheers,
Tom

mike@corn2.freeserve.co.uk (Mike W) wrote in message news:<3dfa10ef.17194589@news.freeserve.net>...
> OK, I give in..
> What were you using to get off-air accuracy like this?.
> My ears are probably good to 1Hz on a good day ;-)
> atb Mike W
> --
> On Fri, 13 Dec 2002 08:15:45 -0800, Dan Rae <rae4@ix.netcom.com>
> wrote:
>
> >
> >
> >Tom Bruhns wrote:
> >>
> >> to be postmarked by 6 December, I guess it's OK to post my results. I
> >> used a pretty terrible antenna, and didn't hear anything at my
> >> location a bit N. of Seattle on 3.5 or 21MHz. I reported
> >> 7,046,882.23Hz +/- 0.5Hz and 14,049,083.6Hz +/- 1.0Hz for 40 and 20
> >> meters. (The tolerances come from spectral spreading by the
> >> propagation for the most part.)
> >>
> >>
> >
> >Virtually identical to what I found in southern CA,Tom, which is not

> >really surprising. I still maintain that it is relatively easy to
> >measure frequency off air to with 1/100 of 1 Hz but that ionospheric
> >spreading is often around two orders of magnitude greater than that for
> >other than local stations. I even see what looks like a steady error of
> >nearly a whole Hertz on WWV round local dusk and dawn at times, as the
> >effective path length changes.
> >
> >An interesting excercise though. Maybe next time I'll get the BC221 out
> >of the garage, now that would be fun!
> >
> >73
> >Dan ac6ao g3ncr

4405. Re: ARRL Freq Msmt Test revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-14 05:29:59 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <atefka$4dr$1@slb9.atl.mindspring.net>
Source record: 39326

Tom:

[snip]
> WWV, around sun-up or sun-down, often splits into two distinct peaks
> here, presumably one for WWV and one for WWVH. Like Dan, I've seen
> shifts of 1Hz and greater on 10 and 15MHz.
>
> Cheers,
> Tom
[snip]

I presume those shifts can only b due to Doppler spreading caused by motion of the ionoshpere at that time. Are the amounts of shift plausible?

--
Peter K1PO
Indialantic By-the-Sea, FL

4406. Re: WANT Active Dual SWR Power Meter or schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-14 05:49:54 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3DFAC682.35EE27C1@cwis.net>
Source record: 39318
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.radio.amateur

Rick,
Try an Autek Research 'WM-1'. Sounds like the same thing
except for the switching...
'Doc

4407. Kenwood TS-130S

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-14 14:29:38 UTC
From: Keith Piercey <salmo@nf.sympatico.ca>
Message-ID: <mfHK9.5599$cN6.188838@ursa-nb00s0.nbnet.nb.ca>
Source record: 39319

I have a TS-130S that a friend asked me to sell. It works fine on all bands on a dummy load and 80 & 40 meters when I switch to an antenna -but when I go to 15 and above the needles on a dual meter ping to the top and no adjusting of an antenna tuner will get it down.

I took the rig to a friend's shack near me and tried it using his antennas...same deal.

Anyone run into this and have any suggestions?

de Keith VO1AE

4408. Re: Kenwood TS-130S

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-14 15:01:04 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uvmi1eq0hgsa14@corp.supernews.com>
Source record: 39320

Keith

I'm not an expert on the 130, but sometimes when you drive the finals on a rig a little too hard they go into a mode of oscillating on multiple frequencies, often with lots of output. The output filtering can't whack out these high levels of spurs so the output is rich in spurious signals. Of course, with plenty of frequencies in the output, no amount of twiddling the antenna tuner can bring about a match. I suspect if this is happening, and you look at the output on a fast scope (probably lots of the spurs are very high frequencies) you probably aren't going to see a nice sine wave.

..

"Keith Piercey" <salmo@nf.sympatico.ca> wrote in message news:mfHK9.5599$cN6.188838@ursa-nb00s0.nbnet.nb.ca...
> I have a TS-130S that a friend asked me to sell. It works fine on all bands
> on a dummy load and 80 & 40 meters when I switch to an antenna -but when I
> go to 15 and above the needles on a dual meter ping to the top and no
> adjusting of an antenna tuner will get it down.
>
> I took the rig to a friend's shack near me and tried it using his
> antennas...same deal.
>
> Anyone run into this and have any suggestions?
>
>
> de Keith VO1AE
>

4409. RF output power transistor recommendation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-14 15:10:58 UTC
From: Paul Burridge <pb@notthisbitosiris1.co.uk>
Message-ID: <qbcmvugts54a9mbd5p1jasdpt63jb4ho7k@4ax.com>
Source record: 39321

Hi,

Can anyone suggest a suitable commonly-available device that would
provide around 5W output at 40MHZ? I was thinking of maybe one of the
CB types that would extend to this frequency perhaps?
thanks.

P.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

4410. "L-match"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-14 15:10:59 UTC
From: Paul Burridge <pb@notthisbitosiris1.co.uk>
Message-ID: <bicmvuso4v3h4l8889d14v5v79apvd7c8h@4ax.com>
Source record: 39322

Hi,

What does an "L-match" consist of and how does one go about
calculating what values of what need to be chosen to transform
impedance x to impedance y?
thanks,
p.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

4411. Re: ARRL Freq Msmt Test revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-14 16:02:02 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <3DFB55FA.A94069C9@ix.netcom.com>
Source record: 39325

Mike W wrote:
>
> OK, I give in..
> What were you using to get off-air accuracy like this?.
> My ears are probably good to 1Hz on a good day ;-)
> atb Mike W
> --

Tom's set-up is a little more sophisticated, but I was using a Racal RA1792 receiver, the frequency measuring version with 1 Hz readout, that has a 100 KHz IF output, in which all the oscillators are derived from a standard frequency. I was either using a Racal 9475 Rubidium or a Shera GPS standard, I don't remember. The 100 KHz ouput is fed either to a counter or to a double beam scope, with the other input fed from 100 KHz derived from the same standard.

This method of comparison, with the scope, is very useful, and can get very precise resolution over a period of time.

With the scope set-up you can see "chirp" on one of the W1AW Txs as it is keyed. It is les than 1 Hz, I imagine it is disturbances on the PLL control line

So ears don't really enter into it :^)

And, yes, observed shifts like that are totally plausible on the WWV signals. WWV is best mid afternoon local time, then you can get to within 1 part in 10 to the 8 with a bit of luck. My standards are around 3 orders of magnitude better than that.

dr

4412. FYI: Hombrew Antenna Roundup - Updated

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-14 17:34:06 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <iYJK9.65091$r4.5300431@news1.west.cox.net>
Source record: 39323

Hundreds at URL:
http://ac6v.com/antprojects.htm
And Happy Holidays to a FB Group

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com

4413. Re: RF output power transistor recommendation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-14 18:13:16 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3DFB75F4.7040407@attbi.com>
Source record: 39324

It should work, Check out Harry's homebrew web page for mor info
http://sm0vpo.8m.com/
Bill Higdon
Paul Burridge wrote:
> Hi,
>
> Can anyone suggest a suitable commonly-available device that would
> provide around 5W output at 40MHZ? I was thinking of maybe one of the
> CB types that would extend to this frequency perhaps?
> thanks.
>
> P.

4414. Re: Kenwood TS-130S

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-14 19:05:36 UTC
From: Keith Piercey <salmo@nf.sympatico.ca>
Message-ID: <4iLK9.5697$cN6.201959@ursa-nb00s0.nbnet.nb.ca>
Source record: 39327

Here's a solution I was sent....

"It's a bad earth problem-very common on these sets. You need to open it up and make sure all internal screws in the PA and driver area are seated properly, so that there is good connection to the chassis of the set. You will probably find one or two loose!"

de Keith VO1AE

4415. Re: RF output power transistor recommendation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-14 22:22:34 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <KaOK9.53422$vM1.4271031@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39328

FET or bipolar?

--
||||||||||||||||||||||||||||||||||||||||
Brian Griffey
http://home.att.net/~briangriffey/Index.html
||||||||||||||||||||||||||||||||||||||||

"Paul Burridge" <pb@notthisbitosiris1.co.uk> wrote in message
news:qbcmvugts54a9mbd5p1jasdpt63jb4ho7k@4ax.com...
>
> Hi,
>
> Can anyone suggest a suitable commonly-available device that would
> provide around 5W output at 40MHZ? I was thinking of maybe one of the
> CB types that would extend to this frequency perhaps?
> thanks.
>
> P.
> --
>
> "What is now proved was once only imagin'd"
> - William Blake, 1793

4416. Re: "L-match"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-14 22:28:15 UTC
From: Bill & Suzie Whatley <spud286@attbi.com>
Message-ID: <3gOK9.355761$P31.132723@rwcrnsc53>
Source record: 39329

An "L match" is also called an L network and usually consists of an inductor and a capacitor.
It is used for impedance transformation or "matching".

A rough example...

If you want to match a 100 ohm source to a 1000 ohm load at 10 Mhz:

The network Q is the square root of [1000 / 100] -1.

1000 / 100 is 10 and 10 - 1=9. The square root of 9 is 3 which is the Q.

The series reactance needed is Q * Rs = 3 * 100 = 300 ohms.

The parallel reactance needed is Rp / Q = 1000 / 3 = 333.3 ohms.

Now just find the L and C that give those reactances at 10 Mhz.

L = Xs / 2 * Pi * F = 4.77 uH
C = 1 / 2 * Pi * F * Xp = 48 pF

This simplified method works best when the Q is around 5 or higher.
In the above example, the source and load are resistive impedances (R +/- J0).

There is plenty of reading material available to turn this molehill into a mountain if you need all the details.

73
WA5VRL
Willis

4417. Re: "L-match"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-14 23:05:19 UTC
From: averyfineman@aol.com
Message-ID: <20021214180519.01356.00000081@mb-fq.aol.com>
Source record: 39330

In article <bicmvuso4v3h4l8889d14v5v79apvd7c8h@4ax.com>, Paul Burridge
<pb@notthisbitosiris1.co.uk> writes:

>What does an "L-match" consist of and how does one go about
>calculating what values of what need to be chosen to transform
>impedance x to impedance y?

An L-Match network consists of a series reactance and a
shunt reactance, the shunt on either source or load end
although usually on the load end. Such a network is good
only for a relatively narrow range of frequencies big enough
to accomodate 30 to 40 KHz span at lower HF.

A very quick way to find out values is to use available computer
programs such as Reg Edwards' nice little DOS executables.
Another way is to look in several countries' amateur handbooks
for value tables or formulas.

You can derive your own values by some simple algebra...and
prehaps learn a bit more about complex quantities at the same
time. That takes some effort, especially if one hasn't done that
since formal schooling. That procedure for finding the L and C
values for a pure resistive impedance at the source is as follows:

1. Transform the known load impedance into an admittance.
Just do a complex inversion of the impedance.
2. Add an unknown susceptance (represented only as a symbol)
in shunt with the load admittance. Admittances in shunt will
always add algebraically.
3. Do a complex inversion of this total to find a temporary total
impedance. Add an unknown reactance to this impedance
(only as a symbol, value to be found later). The reactance
will always be of opposite type to the shunt admittance (if
one is capacitive, the other is inductive).
4. The temporary total achieved thus far is a complex
impedance which represents "what is seen by the source
looking towards the load." What is known at this point is
the resistive and reactive values of the load and the desired
resistive value that the source "wants to see." Algebra is
now required to solve for the values of the L-Match unknowns.
5. It may help to find another equated expression...the total
impedance of the desired resistive source plus the reactance
in series, that equated with the inverted total admittance of
the load plus the added shunt susceptance. That yields two
equated expressions to help solve two unknowns.
6. The algebra takes some work even if experienced with solving

equations. That work should result in a conjugate match
where the added series and shunt network values "cancel
out" (reduce to zero) the load reactance...AND the impedance
"looking into the source" is entirely resistive and of the desired
source resistance value.
7. The magnitude of the total load impedance can be higher or
lower than the desired resistive value at the source end. The
Ls and Cs of the L-Match network will swap positions with
load-higher versus load-lower than desired source resistance.
8. An L-Match network can handle a wide range of load impedance
magnitudes, usually greater than 10 times source resistance to
less than 1/10th source resistance. [there are definite limits,
but the match range is exremely wide] With only two added
components they present the best on good power transfer
source to load. The network is effective at only one frequency
but works over nearly all amateur HF to VHF signal bandwidths.
9. A PC can find the exact values in milliseconds if programmed
correctly. Handbook tables and formulas exist. One has to
be familiar enough with complex quantities to tackle the
algebraic solution direct route. :-)

Len Anderson
retired (from regular hours) electronic engineer person

4418. RF 3.9MHz Booster amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 01:28:42 UTC
From: la8ak.xnd@online.no
Message-ID: <3dfbda1e.192718256@news.online.no>
Source record: 39333

Hi

My mobile boatanchor transmitter has 100mW output on AM/CW (from RL2P3 stage) and I would like to build a linear amplifier for 3.500MHz CW and 3.965MHz AM operation..

Available transistors in larger amount in my shack are SRF1191=2N5941 =MRF466, 2N6370 and IRF630.
The SRF1191=MRF466 has 26dB gain on 4MHz according to Motorola RF design manual (40W RF for 0.1W drive), but it is for 28V supply voltage, the car battery voltage is limited to max 14.4V, it is probably around 10W for 12V supply, so I wonder which type to choose, and I don't want to use a voltage converter for the PA (It is bad enough that the rig need 2V 1.5A and 150V 40mA).

Also have a lot of VHF and UHF power devices, they will have tremendous gain on HF, but are they tame? 2N6082 and 2N6084 have 19-20dB gain on 50MHz with 20W RF out.
Suggest using simple L-C-C input and output matching. MRF466 has 3.7-j1.45 input impedance.

Would like to hear your opinion about which device to choose for at least 10W RF o/p, instead of buying a new one

73,
Jan-Martin
LA8AK

Collector of German WW2 Radio equipment
http://www.laud.no/la6nca/LA8AK/

--
remove ,xnd to reply

4419. Re: pi section harmonic filter software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 01:30:03 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <uvnmou3bqtd1d0@corp.supernews.com>
Source record: 39332

There's a very simple filter type that's used very often for this purpose. It doesn't provide as much harmonic attenuation as some other filter types, but it's adequate for this purpose, is dead simple to design and implement, and is extremely forgiving of component variations. It's a lowpass pi network (input shunt capacitor to ground, series inductor, output shunt capacitor to ground) with each of the elements having a reactance of 50 ohms at the operating frequency. You can find the equations for reactance in any handbook, to calculate the component values. This particular implementation can be called a "quarter wave filter", since it gives the same impedance transformation at the operating frequency as a quarter wave transmission line. Two can be cascaded to become a "half wave filter" for greater harmonic attenuation. When doing this, the center capacitors are usually combined into one capacitor with twice the value (that is, the combined center capacitor has a reactance of 25 ohms at the operating frequency).

Filter design is a complex topic, involving a number of properties that have to be traded off against each other. The above approach is fast and simple, and, unless you need an extreme amount of harmonic attenuation with the minimum number of components and are willing to put up with a more critical design, is adequate for the purpose.

Roy Lewallen, W7EL

Jim wrote:
> I need to design low pass filters to filter unwanted harmonics in very low
> power tranmitters. The type of simple passive filter I have in mind is 2
> capacitors and one inductor. I would suspect there might be a simple
> program somewhere but I cant find one.
>
> This is the filter described in"QRP Classics" page 67
>
> Can anyone help?
>
> Jim
> jbasi@cfw.com
>
>
>
>

4420. WTD:Motorola SM50 Ham Software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 04:03:20 UTC
From: FM <radiovintage@hotmail.com>
Message-ID: <caTK9.1797$jN4.195510@newsread2.prod.itd.earthlink.net>
Source record: 39334
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I picked up a Motorola SM50 UHF rig today at a police surplus auction and wondered if there is a ham version of the software available for programming this to use in the 440 band.

4421. Re: ARRL Freq Msmt Test revisited

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 04:06:21 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <1dTK9.24832$a8.8316@news4.srv.hcvlny.cv.net>
Source record: 39335

Hi,

I got:

3,579,334.6 Hz
7,046,882.5 Hz
14,049,083.2 Hz
21,069,675.4 Hz

Setup was a couple of receivers on each frequency and a sound card on each receiver. Everything was locked to a free running Rubidium. Even on ground wave there was significant spreading. I'd have to go back and look but I think it was something in the 1/2 Hertz range on all frequencies.

I was a bit surprised that I could copy W1AW better on 2 meters than on 15 meters. Antennas and propagation can be weird.

Bob Camp
KB8TQ
Redding CT

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:atefka$4dr$1@slb9.atl.mindspring.net...
> Tom:
>
> [snip]
> > WWV, around sun-up or sun-down, often splits into two distinct peaks
> > here, presumably one for WWV and one for WWVH. Like Dan, I've seen
> > shifts of 1Hz and greater on 10 and 15MHz.
> >
> > Cheers,
> > Tom
> [snip]
>
> I presume those shifts can only b due to Doppler spreading caused by
motion
> of the ionoshpere at that time. Are the amounts of shift plausible?
>
> --
> Peter K1PO
> Indialantic By-the-Sea, FL
>
>

4422. LCD display backlight gone dark

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 04:18:05 UTC
From: Tom Coates <tecoates@comcast.net>
Message-ID: <VuycnbwdCNznn2GgXTWcpA@comcast.com>
Source record: 39336

OT, but I'm sure someone here can help me with this.

The frequency display in my 10-year-old car radio is unreadable at night because the backlight quit.

Is it worth extracting and dissecting the radio - is the backlight a replaceable part?

The radio is a Toyota brand from 1991, otherwise adequate.

Any ideas would be welcome.

Thanks,

Tom, N3IJ

4423. Re: WTD:Motorola SM50 Ham Software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 05:46:04 UTC
From: Bruce Lane <SpammersAreVermin@dev.null>
Message-ID: <MPG.1865b6f653b8f703989a92@news.drizzle.com>
Source record: 39337
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

In article <caTK9.1797$jN4.195510@newsread2.prod.itd.earthlink.net>,
radiovintage@hotmail.com says...

> I picked up a Motorola SM50 UHF rig today at a police surplus auction and
> wondered if there is a ham version of the software available for programming
> this to use in the 440 band.

If the unit's bandspread will allow it to tune there without
degradation, then I may be able to program it for you (need to check and
see if I have the right cable).

You -really- don't want to go chasing copies of Motorola RSS
without buying it. Their licensing agreement is positively Draconian (I
know... I had to sign it to get my stuff started!), and their legal
eagles can and will make an example of anyone who they think is
trafficking in pirated RSS.

Anyway... http://www.bluefeathertech.com/rf.html -- Let me know via
E-mail if you want me to try programming that beastie.

Keep the peace(es).

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

4424. pi section harmonic filter software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 06:07:57 UTC
From: Jim <jbasi@cfw.com>
Message-ID: <PrQK9.12427$K5.9553@fe01>
Source record: 39331

I need to design low pass filters to filter unwanted harmonics in very low power tranmitters. The type of simple passive filter I have in mind is 2 capacitors and one inductor. I would suspect there might be a simple program somewhere but I cant find one.

This is the filter described in"QRP Classics" page 67

Can anyone help?

Jim
jbasi@cfw.com

4425. Frankie lee willian sanborn--------FRAUD----------

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 06:11:51 UTC
From: dennis <wt1078@charter.net>
Message-ID: <uvo75lr1l7s3dd@corp.supernews.com>
Source record: 39338

Frankie lee willian sanborn
424 nick street
newark delaware 19702

302-836-7998
all about radio sending and no radio?????

dennis kb7wfv wt1078@charter.net

4426. Wanted 1GHZ PLL Evaluation Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 06:35:02 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3DFC2296.89229A10@nettally.com>
Source record: 39339

Hi I am looking for a 1.000 GHz frequency source to drive a
downconverter project. The source needs to be low noise and be
referenced to an external 10 Mhz reference. It doesn't need modulation
and channel spacing is not important. What I am looking for is a board
with parallel address lines which can be either DIP switch or jumper
programmable. I know that Z-Comm has an eval board that looks promising
but it requires a PC to load the data into a latch. It looks volatile. I
don't want to complicate the project with a PIC just to load the
frequency which will always be the same.

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

4427. Re: pi section harmonic filter software

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 11:54:56 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <20021215115456.05218bfa.Xnospam@oceanfree.net>
Source record: 39340

On Sun, 15 Dec 2002 01:07:57 -0500
"Jim" <jbasi@cfw.com> wrote:

> I need to design low pass filters to filter unwanted harmonics in very low
> power tranmitters. The type of simple passive filter I have in mind is 2
> capacitors and one inductor. I would suspect there might be a simple
> program somewhere but I cant find one.

See the Chebyshev LPF PI-Configuration table in most
(all?) recent editions of the ARRL Handbook.

Component values for a 3 element Chebyshev, 0.1dB ripple
LPF with component values normalised for 1MHz/50 Ohms.

C1, C2 = 3283.6 pF

L1 = 9.131 microHenries.

RFSim is a freeware program with some nice filter design tools.
You can get it at:
http://sharon.esrac.ele.tue.nl/pub/funk2001/Etronik/rfsim/RFSIM99.EXE

73, Ed. EI9GQ.

--
Remove 'X' to reply via e-mail.
http://homepage.eircom.net/~ei9gq
Linux 2.4.20

4428. Re: Wanted 1GHZ PLL Evaluation Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 12:05:55 UTC
From: nospam_ronayling@hotmail.com
Message-ID: <3dfc6d82.11074421@news.freeserve.co.uk>
Source record: 39341

The serial data isn't anything to do with the eval board?
you are actually programming the device, if you use any
of those devices you will need to get data into them
Why 10mhz? why not a 300mhz tripler, wouldn't be that
noisy? say a balanced ring with a couple of Schottky dodes?

On Sun, 15 Dec 2002 01:35:02 -0500, Joe Leikhim
<jleikhim@nettally.com> wrote:

>Hi I am looking for a 1.000 GHz frequency source to drive a
>downconverter project. The source needs to be low noise and be
>referenced to an external 10 Mhz reference. It doesn't need modulation
>and channel spacing is not important. What I am looking for is a board
>with parallel address lines which can be either DIP switch or jumper
>programmable. I know that Z-Comm has an eval board that looks promising
>but it requires a PC to load the data into a latch. It looks volatile. I
>don't want to complicate the project with a PIC just to load the
>frequency which will always be the same.

4429. Voice frequency bandwidth and optimun TX SSB Audio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 13:57:10 UTC
From: ablight@alphalink.com.au
Message-ID: <1fc7b362.0212150557.576601e3@posting.google.com>
Source record: 39343

Maybe someone ahs already done this, and can supply a reference. My query is in response to on air comments tonight after a break of many years from HF operating - a junkyard TS440 I fixed as an exercise, an old junkbox CB mike wired to it. Received audio reports were OK, ie Q5, But "harsh" - obviously an unknown microphone, my voice is fairly deep, resulting in non optimum transmit audio.

Is it possible with simple test gear to
1. Plot the bandwidth/frequency response of ones voice
2. Tailor the microphone output response to match this curve.

Any comments appreciated.

73 de VK3BFA Andrew

4430. Re: Kenwood TS-130S

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 14:54:41 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uvp6ect3mrc019@corp.supernews.com>
Source record: 39344

That would certainly cause the sorts of oscillations I mentioned.

..

"Keith Piercey" <salmo@nf.sympatico.ca> wrote in message
news:4iLK9.5697$cN6.201959@ursa-nb00s0.nbnet.nb.ca...
> Here's a solution I was sent....
>
> "It's a bad earth problem-very common on these sets. You need to open it
up
> and make sure all internal screws in the PA and driver area are seated
> properly, so that there is good connection to the chassis of the set. You
> will probably find one or two loose!"
>
>
> de Keith VO1AE

4431. Re: LCD display backlight gone dark

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 15:03:14 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uvp71bs591jle8@corp.supernews.com>
Source record: 39345

Usually these backlights are integral to the LCD, so not replaceable.
However, the integral backlights are almost always LED, so wouldn't go dark
all of a sudden. If it's an LED, I would expect the problem to be in some
regulator or current limiter external to the LCD itself.

Sometimes they are backlit with an electroluminescent film. These are
replaceable, but relatively expensive. Once again, though, I would look for
an external part to be the culprit.

Of course, it is possible that the LCD is lit with incandescent bulbs, in
which case a replacement is pretty feasible. Most likely you could tell
from the color the backlight used to be whether it's LED (green or yellow),
electroluminescent (blue or cold white), or incandescent (warmer white).

Since you probably don't have a schematic, it may be cheaper, and a lot less
hassle, to run down to K-Mart and pick up another radio. The main problem
with that approach is that the features on the $500 flavor are going to be
awfully tempting!

..

"Tom Coates" <tecoates@comcast.net> wrote in message
news:VuycnbwdCNznn2GgXTWcpA@comcast.com...
> OT, but I'm sure someone here can help me with this.
>
> The frequency display in my 10-year-old car radio is unreadable at night
> because the backlight quit.
>
> Is it worth extracting and dissecting the radio - is the backlight a
> replaceable part?
>
> The radio is a Toyota brand from 1991, otherwise adequate.
>
> Any ideas would be welcome.
>
> Thanks,
>
> Tom, N3IJ
>
>

4432. Re: Voice frequency bandwidth and optimun TX SSB Audio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 15:32:40 UTC
From: AC6V <ac6v@amsat.org>
Message-ID: <sg1L9.69730$r4.5932335@news1.west.cox.net>
Source record: 39346

For Microphone equalization -- see URL:
http://w2ihy.com/audiodemos.asp

--
I Doubt, Therefore I Might Be
73 From AC6V, Rod In Oceanside, CA
http://ac6v.com
"Andrew VK3BFA" <ablight@alphalink.com.au> wrote in message
news:1fc7b362.0212150557.576601e3@posting.google.com...
> Maybe someone ahs already done this, and can supply a reference. My
> query is in response to on air comments tonight after a break of many
> years from HF operating - a junkyard TS440 I fixed as an exercise, an
> old junkbox CB mike wired to it. Received audio reports were OK, ie
> Q5, But "harsh" - obviously an unknown microphone, my voice is fairly
> deep, resulting in non optimum transmit audio.
>
> Is it possible with simple test gear to
> 1. Plot the bandwidth/frequency response of ones voice
> 2. Tailor the microphone output response to match this curve.
>
> Any comments appreciated.
>
> 73 de VK3BFA Andrew

4433. Re: LCD display backlight gone dark

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 16:43:59 UTC
From: Idontwantspam@net
Message-ID: <3dfcb017.14363974@news.bellatlantic.net>
Source record: 39347

On Sun, 15 Dec 2002 10:03:14 -0500, "xpyttl"
<xpyttl_nospam@earthling.net> wrote:

>"Tom Coates" <tecoates@comcast.net> wrote in message
>news:VuycnbwdCNznn2GgXTWcpA@comcast.com...
>> OT, but I'm sure someone here can help me with this.
>>
>> The frequency display in my 10-year-old car radio is unreadable at night
>> because the backlight quit.
>>
>> Is it worth extracting and dissecting the radio - is the backlight a
>> replaceable part?
>>
>> The radio is a Toyota brand from 1991, otherwise adequate.
>>
>> Any ideas would be welcome.
>>
>Usually these backlights are integral to the LCD, so not replaceable.
>However, the integral backlights are almost always LED, so wouldn't go dark
>all of a sudden. If it's an LED, I would expect the problem to be in some
>regulator or current limiter external to the LCD itself.
>
That vintage, I think electrolumenescient is unlikely.

The big problem you will run into is the classic "$1 part, $100 labor
problem". The part will take a bit of effort to get to. A Toyota would
be my first stop on this, if nothing else, they may have a manual you
could look at or a mechanic who could size up the job from having done
it before.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4434. Re: RF output power transistor recommendation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 17:05:33 UTC
From: lagagnon@fakesprint.ca
Message-ID: <3dfcb5b5.237286@news.sprint.ca>
Source record: 39348

On Sat, 14 Dec 2002 15:10:58 +0000, Paul Burridge
<pb@notthisbitosiris1.co.uk> wrote:

>
>Hi,
>
>Can anyone suggest a suitable commonly-available device that would
>provide around 5W output at 40MHZ? I was thinking of maybe one of the
>CB types that would extend to this frequency perhaps?

2SC1971 would do the job very well. I have the datasheet if you want
me to email it to you...

Larry VE6MK
****
to send direct email remove "fake" from address

4435. Re: Wanted 1GHZ PLL Evaluation Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 20:20:17 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3DFCE401.17968EF3@nettally.com>
Source record: 39349

Ron wrote:

> The serial data isn't anything to do with the eval board?
> you are actually programming the device, if you use any
> of those devices you will need to get data into them
>

Are you saying once I program their (Z-COMM's) PLL with their PC based loader I can remove power from the circuit and it will retain the frequency data? If so it will work.

> Why 10mhz? why not a 300mhz tripler, wouldn't be that
> noisy? say a balanced ring with a couple of Schottky dodes?
>

I guess I could do that but I want the LO to be locked to the 10 MHz reference of the host equipment. So 1000/10 is a lot of multiplication and possible spurs.

>
> On Sun, 15 Dec 2002 01:35:02 -0500, Joe Leikhim
> <jleikhim@nettally.com> wrote:
>
> >Hi I am looking for a 1.000 GHz frequency source to drive a
> >downconverter project. The source needs to be low noise and be
> >referenced to an external 10 Mhz reference. It doesn't need modulation
> >and channel spacing is not important. What I am looking for is a board
> >with parallel address lines which can be either DIP switch or jumper
> >programmable. I know that Z-Comm has an eval board that looks promising
> >but it requires a PC to load the data into a latch. It looks volatile. I
> >don't want to complicate the project with a PIC just to load the
> >frequency which will always be the same.

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

4436. Re: LCD display backlight gone dark

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 20:20:38 UTC
From: "Alexander S. Wood" <alec_wood@dont.spam.me.ntlworld.com>
Message-ID: <0u6L9.2067$me3.97718@newsfep1-gui.server.ntli.net>
Source record: 39351

Mostly they use incandescent bulbs because they are very cheap. Rip the top
off the radio and see what's in there. You'll never know unless you look.

Alec Wood M1BNK
Teesside UK

"Tom Coates" <tecoates@comcast.net> wrote in message
news:VuycnbwdCNznn2GgXTWcpA@comcast.com...
> OT, but I'm sure someone here can help me with this.
>
> The frequency display in my 10-year-old car radio is unreadable at night
> because the backlight quit.
>
> Is it worth extracting and dissecting the radio - is the backlight a
> replaceable part?
>
> The radio is a Toyota brand from 1991, otherwise adequate.
>
> Any ideas would be welcome.
>
> Thanks,
>
> Tom, N3IJ
>
>

4437. Re: Wanted 1GHZ PLL Evaluation Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 20:40:08 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0212151240.530a4d6a@posting.google.com>
Source record: 39350

Joe Leikhim <jleikhim@nettally.com> wrote in message
news:<3DFC2296.89229A10@nettally.com>...

> Hi I am looking for a 1.000 GHz frequency source to drive a

> downconverter project. The source needs to be low noise and be

> referenced to an external 10 Mhz reference. It doesn't need modulation

> and channel spacing is not important. What I am looking for is a board

> with parallel address lines which can be either DIP switch or jumper

> programmable. I know that Z-Comm has an eval board that looks promising

> but it requires a PC to load the data into a latch. It looks volatile. I

> don't want to complicate the project with a PIC just to load the

> frequency which will always be the same.

How about one of the Qualcomm synthesizer boards? Are
any still around?

The PLL chip runs warm, but they're idiot proof...

Laura Halliday VE7LDH ï¿½ ï¿½ "Que les nuages soient notre
Grid: CN89lg ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½pied a terre..."
ICBM: 49 16.57 N 123 0.24 W ï¿½ ï¿½ ï¿½ ï¿½- Hospital/Shafte

4438. Re: LCD display backlight gone dark

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 21:50:36 UTC
From: Gary Tait <taitg@hurontel.on.ca>
Message-ID: <j5upvug7nq4tfoi052adu26u51l12p4iar@4ax.com>
Source record: 39352

On Sat, 14 Dec 2002 23:18:05 -0500, "Tom Coates"
<tecoates@comcast.net> wrote:

>OT, but I'm sure someone here can help me with this.
>
>The frequency display in my 10-year-old car radio is unreadable at night
>because the backlight quit.
>
>Is it worth extracting and dissecting the radio - is the backlight a
>replaceable part?
>
>The radio is a Toyota brand from 1991, otherwise adequate.
>
>Any ideas would be welcome.
>
>Thanks,
>
>Tom, N3IJ
>

The backlight is usually a grain of wheat incandescent bulb guided
into a light pipe (big chunk o' clear plastic). The is probably 4-6 of
them that light the whole front panel of the radio.

4439. Re: Wanted 1GHZ PLL Evaluation Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 21:53:52 UTC
From: Gary Tait <taitg@hurontel.on.ca>
Message-ID: <sbupvus45ec148jm3p34f1jvmqsj7kckk0@4ax.com>
Source record: 39353

On Sun, 15 Dec 2002 01:35:02 -0500, Joe Leikhim
<jleikhim@nettally.com> wrote:

>It looks volatile. I
>don't want to complicate the project with a PIC just to load the
>frequency which will always be the same.

You can probably get by with a BS-1 (Basic stamp). If you can ensure
power, you could use a PC.

Other options would be to use a parallel to serial bit loader, or
replace the serial PLL chip will a parall load one.

4440. Unknown SAW filters F10448 T3G2

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 22:16:29 UTC
From: la8ak.xnd@online.no
Message-ID: <3dfcfd6c.16720545@news.online.no>
Source record: 39354

Found some SAW filters, they are marked T3G2 F10448 and T2J F1048B,
they are also marked Japan.
Wonder if somebody have any ideas about data and if information is
available?

73,
Jan-Martin
LA8AK
--
remove ,xnd to reply

4441. Re: Wanted 1GHZ PLL Evaluation Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 22:20:25 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <ativ7c$6ia$1@slb9.atl.mindspring.net>
Source record: 39355

Pretty much all of the "one chip" pll devices these days will require serial programming whenever you apply power.

However, for a fixed frequency synthesizer there are quite a lot of simple ways to program it. A basic stamp would do nicely or even a 555 chip feeding an EEPROM to clock the data out to the synthesizer.

Using a 555 to clock a serial EEPROM is about as simple as it gets, and it should work nicely. Something like the 93c56 serial EEPROM.

==========

However, the question of phase noise is a different problem. Most PLL synthesizers at 1 GHz don't have great phase noise. Another question is, how quiet is the 10 MHz external signal you want to use as a reference ?

Depending on what's more important in your design, phase noise or ease of circuitry, you have two major choices.

Personally, I'd be tempted to make a 100 MHz VCXO that is multiplied to make 1 GHz.

True, multiplier feedthru and such can be troublesome, but if you start with a balanced doubler, you can get 200 MHz and suppress the 100 MHz and 300 MHz undesired.

So then an X5 and the nearest undesired outputs are 200 MHz either side of the 1 GHz signal.

You can, of course, make a fairly simple phase lock for the 100 MHz to the external 10 MHz. If you use a narrow loop filter, it'll clean up the signal from the external 10 MHz.

Admitted, this is extra parts for the design, but it is a much lower phase noise approach than using a PLL board and locking a 1 GHz VCO to 10 MHz.

Jim Pennell
N6BIU

4442. WTD: 1.000 MHz Xtal

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-15 22:30:26 UTC
From: w1ksz@tiac.net
Message-ID: <3dfd023e.4234744@news.tiac.net>
Source record: 39356

Looking for a small 1.000 MHz Xtal
for a clock for TT Pad.
Anyone have one ?

Tnx, Dick, W1KSZ

4443. FSK on an SST QRP rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-16 02:37:51 UTC
From: canyon <kloc@commspeed.net>
Message-ID: <1040007005.681878@news.commspeed.net>
Source record: 39357

Has anyone done FSK on an SST QRP rig?

Thanks,

WA4MNT

4444. Re: Wanted 1GHZ PLL Evaluation Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-16 04:53:29 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3dfc7aad$0$11227@echo-01.iinet.net.au>
Source record: 39342

You could look at

http://www.qsl.net/ke5fx/

The DDS/PLL board may be a bit of an overkill, but you could omit the DDS
and simply drive the PLL with a reference.
Most if not all PLL chips will need some programming to get them going and
most will be serial.
I think Hugh VA3TO was looking at getting some boards made up.
If you want best phase noise performance it might be better to multiply up a
crystal source using doublers/triplers

Richard

Joe Leikhim <jleikhim@nettally.com> wrote in message
news:3DFC2296.89229A10@nettally.com...
> Hi I am looking for a 1.000 GHz frequency source to drive a
> downconverter project. The source needs to be low noise and be
> referenced to an external 10 Mhz reference. It doesn't need modulation
> and channel spacing is not important. What I am looking for is a board
> with parallel address lines which can be either DIP switch or jumper
> programmable. I know that Z-Comm has an eval board that looks promising
> but it requires a PC to load the data into a latch. It looks volatile. I
> don't want to complicate the project with a PIC just to load the
> frequency which will always be the same.
>
> --
> Joe Leikhim K4SAT
> Jleikhim@nettally.com
>
> "Jazz is not dead. It just smells funny." -F.Z.
>
>

4445. Re: 1.000 MHz Xtal

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-16 11:09:00 UTC
From: "Thomas C. Sefranek" <WA1RHP@ARRL.net>
Message-ID: <gviL9.110$C%5.24508@newsread1.prod.itd.earthlink.net>
Source record: 39358

I'm not sure what you mean by "small" it's a pretty nebulous term in the
days of surface mount...
If you want a HC-25 size, I have plenty.
http://hamradio.cmcorp.com/inventory/CRYSTALS/HC_25.html

Richard Solomon <w1ksz@tiac.net> wrote in message
news:3dfd023e.4234744@news.tiac.net...
> Looking for a small 1.000 MHz Xtal
> for a clock for TT Pad.
> Anyone have one ?
>
> Tnx, Dick, W1KSZ

--
*
| __O Thomas C. Sefranek WA1RHP@ARRL.net
|_-\<,_ Amateur Radio Operator: WA1RHP
(*)/ (*) Bicycle mobile on 145.41, 448.625 MHz

http://hamradio.cmcorp.com/inventory/Inventory.html
http://www.harvardrepeater.org

4446. Re: RF output power transistor recommendation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-16 17:11:28 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3DFE0940.58235A93@northwest.com>
Source record: 39359

You could try looking at the "gain vs Freq" charts, provided in the
databook (at least in my Motorola book).
Often a chart of "Max Gain vs Freq" is included.

An MRF134 is good from 2mHz to over 400mHz, at 5W Po.

==========

Paul Burridge wrote:

> On Sat, 14 Dec 2002 22:22:34 GMT, "Brian Griffey"
> <briangriffey@worldnet.att.net> opined thusly:
>
> >FET or bipolar?
>
> Good question. BTW, I'm going to act on Larry's kind offer of the
> datasheet and suggestion of the 2SC device.
> One thing I've noticed is - at least in my databook - no figure is
> given for transition frequency for any FET. How then, is one supposed
> to choose a suitable FET for RF purposes?
>
> --
>
> "What is now proved was once only imagin'd"
> - William Blake, 1793

4447. Re: Wanted 1GHZ PLL Evaluation Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-16 18:14:36 UTC
From: nospam_ronayling@hotmail.com
Message-ID: <3dfe147f.21249964@news.freeserve.co.uk>
Source record: 39360

Well I've tried it and it wasn't that simple, I don't know the
93c56 but I've used the 24c16 to do a similar job and that
required a series of codes before it would clock out.
also this has got to operate at switch on, again my experiance
found that it was quite tricky to reset everything and get it
to clock in reliably every time, not saying it can't be done
but I don't think it will be a breeze..
I agree about the noise, unless this is a VERY special sort
of application I can't see the VXO/xtal generator not being
suitable
Also there other eval boards, Maxim-IC do some.......

> Pretty much all of the "one chip" pll devices these days will require
>serial programming whenever you apply power.
>
> However, for a fixed frequency synthesizer there are quite a lot of
>simple ways to program it. A basic stamp would do nicely or even a 555
>chip feeding an EEPROM to clock the data out to the synthesizer.
>
> Using a 555 to clock a serial EEPROM is about as simple as it gets, and
>it should work nicely. Something like the 93c56 serial EEPROM.
>
>============================
>

4448. Wanted: MC13022A AM Stereo Decoder IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-16 18:59:58 UTC
From: N4RT@arrl.net
Message-ID: <d9e10a32.0212161059.731ccce1@posting.google.com>
Source record: 39361

I'm looking for a couple MC13022A AM Stereo decoder chips for an AM synchronous detector project. Anybody got any or know where some can be found?

4449. Homebrew HV Feed Through Capacitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-16 20:14:10 UTC
From: GeeOne <robert@g1zjp.freeserve.co.uk>
Message-ID: <atlc5jumq1@news5.svr.pol.co.uk>
Source record: 39362

Looking for help, please, on the above.
I believe that there have been a few articles on it including an older one in RadCom's Technical Topics column and some American publications.
I need to build one for a GS35b amplifier that I am constructing. Does anybody have a copy of an article on it please? Hopefully to include dimensions?
A scan will be excellent, thanks
73
Bob
G1ZJP

4450. Re: Wanted 1GHZ PLL Evaluation Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-16 20:36:40 UTC
From: averyfineman@aol.com
Message-ID: <20021216153640.08991.00000047@mb-ct.aol.com>
Source record: 39363

In article <3DFC2296.89229A10@nettally.com>, Joe Leikhim
<jleikhim@nettally.com> writes:

>Hi I am looking for a 1.000 GHz frequency source to drive a
>downconverter project. The source needs to be low noise and be
>referenced to an external 10 Mhz reference. It doesn't need modulation
>and channel spacing is not important. What I am looking for is a board
>with parallel address lines which can be either DIP switch or jumper
>programmable. I know that Z-Comm has an eval board that looks promising
>but it requires a PC to load the data into a latch. It looks volatile. I
>don't want to complicate the project with a PIC just to load the
>frequency which will always be the same.

While I've seen some good suggestions from others, here's
an alternative that does not require programming. With just
one frequency at all times that is an exact decimal multiple
of a reference, a solution can be all in hardware, most of it
using DIP ICs:

1. A VCO at 1 GHz (such as available from Mini-Circuits)
with a splitter for output to the converter and to a digital
divider chain. The divider chain would be -
2. A 1 GHz-capable divide-by-10 that would output 100 MHz
to another divide-by-10 that used high-speed Schottky or
equivalent internals (ACT, FAST, etc. families) whose
output would be 10 MHz to -
3. Three CMOS logic divide-by-10 ICs in series to result in
10 KHz to input to a phase-frequency detector IC.
4. Another trio of divide-by-10 ICs to achieve the 10 KHz
phase-frequency detector reference input from the
external 10 MHz standard.
5. The phase-frequency detector can be an integral IC such
as the now-rare Motorola MC4044 or made from three
NAND gate ICs connected in the same configuration.
See Ham Radio magazine, September 1982, "Inside A
Phase-Frequency Detector" for the gate configuration and
waveforms at each PFD gate output.
6. The Loop Filter from PFD output to the VCO is straight-
forward, one frequency and one tuning rate (of the VCO)
and may be calculated by formulas found in many PLL
references and application notes. It is passive. From
typical Mini-Circuits VCO tuning rate specifications, the
PFD output voltage swing with 5 VDC supply rail should
be compatible and not need level shifting with an op-amp.
[check that before calculating the Loop Filter values]

A phase-frequency detector has intrinsic limits of its output such that if the signal input is well away from the reference, its output will remain in a limited swing to force the VCO back to proper frequency. Since only one frequency is to be locked, the location of possible spurs is known ahead of time...the PFD detector inputs could also be 100 KHz to reduce the divider chains yet would have only a minor effect on PFD output voltage-versus-phase characteristics compared to 10 KHz.

There still exist some dual divide-by-10 ICs that accept 10 MHz inputs. Using those would reduce the can count.

About the only foreseeable problem possibility would be the 1 GHz split and its strength to drive the very-high-speed decade divider without "skipping" count states. A small buffer amplifier might be needed. If the buffer amplifier has a differential output, each output could be made to inputs of a dual 2-input NAND connected as a set-reset flip-flop; that would insure the FF output is squared off and to acceptible digital levels required of the very-high-speed divide-by-10 (commonly used as a "prescaler" in TV PLL tuners).

None of the above is as elegant as a single-IC System On a Chip ("SOC") with everything in one package. It does avoid any need for fussing with a serial data input to the SOC in order to set the single locked frequency. It's an alternative wired-in configuration not needing programming.

Len Anderson
retired (from regular hours) electronic engineer person

4451. Re: Wanted 1GHZ PLL Evaluation Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-16 21:52:31 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <atlhuv$im6$1@freenet9.carleton.ca>
Source record: 39364

Avery Fineman (averyfineman@aol.com) writes:
> [lots deleted]
> 2. A 1 GHz-capable divide-by-10 that would output 100 MHz
> to another divide-by-10 that used high-speed Schottky or
> equivalent internals (ACT, FAST, etc. families) whose
> output would be 10 MHz to -

People made PLL's with your solution before programmable ICs, and
the concept is still as valid.

What I'd add is that maybe there are better choices than a decade
divider at the front. We'd see those common in the days of frequency
counter articles, but they seem fairly invisible nowadays.

More common are some power of two divider. It would require some
shift in the rest of the counters, but these might be more available.

I haven't kept track of frequency limits so maybe some or all of
these suggestions are invalid, but here are a few places I'd check.

Digitally tuned TVs and cable converters (and VCRs) would have prescalers
that would probably drop the input frequency by quite a bit more than
a decade. I suspect, though, that these would be pushing their upper
limit at 1GHz.

Older cellphones (older because they have more recognizable parts and
probably larger parts) would have prescalers, which might work to 1GHz.

If those don't pan out, I suspect still that finding something that
divides by 32 or 64 might be more available than a divide by 10 at
this point.

If the original poster could get by with a 500MHz signal that is
doubled, either of the above sources would likely supply a suitable
prescaler.

Michael VE2BVW

4452. Re: 1.000 MHz Xtal

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-16 22:28:12 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <uvskterse1om4e@corp.supernews.com>
Source record: 39365

Grab 'em up.

1 MHz isn't a real common frequency. DigiKey has 'em, but they want $17.88 for a 1 MHz crystal in and HC49, $0.64 if you want 4 MHz, same specs, manufacturer. DigiKey has crystals from a half-dozen manufacturers and only one has a 1 MHz flavor. All the others have a gap between 149 KHz and 4 MHz in the smaller (C) sizes, 3.979 MHz in the larger (HC) sizes.

As Dick points out, "smaller" is a relative term. The big old FT-243's are pretty hard to come by these days. HC49's and HC25's are the sort of crystals you will find in HT's and the like, about 5 x 11 x 14 mm. The C-2 or C-301 size is a teeny cylinder with very fragile leads. They are a lot smaller than the HC units (3mm diameter by 9mm long), but you need to be pretty careful with them. There are also a passel of surface mount sizes, but most of them are similar in size, or even larger, than the C types.

Of course if Dick wants twenty bucks for them, maybe you want to have International make you one. When you get into that neighborhood might as well go to the experts and have them make exactly what you want.

Personally, I would divide down a 4 MHz rock if I had the flexibility.

..

"Thomas C. Sefranek" <WA1RHP@ARRL.net> wrote in message
news:gviL9.110$C%5.24508@newsread1.prod.itd.earthlink.net...
> I'm not sure what you mean by "small" it's a pretty nebulous term in the
> days of surface mount...
> If you want a HC-25 size, I have plenty.
> http://hamradio.cmcorp.com/inventory/CRYSTALS/HC_25.html
>
> Richard Solomon <w1ksz@tiac.net> wrote in message
> news:3dfd023e.4234744@news.tiac.net...
> > Looking for a small 1.000 MHz Xtal
> > for a clock for TT Pad.
> > Anyone have one ?
> >
> > Tnx, Dick, W1KSZ
>
>
> --
> *
> | __O Thomas C. Sefranek WA1RHP@ARRL.net
> |_-\<,_ Amateur Radio Operator: WA1RHP
> (*)/ (*) Bicycle mobile on 145.41, 448.625 MHz
>

> http://hamradio.cmcorp.com/inventory/Inventory.html
> http://www.harvardrepeater.org
>
>

4453. Re: Wanted 1GHZ PLL Evaluation Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-16 22:29:38 UTC
From: nospam_ronayling@hotmail.com
Message-ID: <3dfe52be.37187411@news.freeserve.co.uk>
Source record: 39366

Hate to be the practicle damper on this but been there and most
of these old prescalers are unreliable at 1g and the only way to
get round the problem is more volts and then they get hot!!
not only that but the layout and pcb around the chip become
critical, again can be done but not easy....

>Avery Fineman (averyfineman@aol.com) writes:
>> [lots deleted]
>> 2. A 1 GHz-capable divide-by-10 that would output 100 MHz
>> to another divide-by-10 that used high-speed Schottky or
>> equivalent internals (ACT, FAST, etc. families) whose
>> output would be 10 MHz to -
>
>People made PLL's with your solution before programmable ICs, and
>the concept is still as valid.
>
>What I'd add is that maybe there are better choices than a decade
>divider at the front. We'd see those common in the days of frequency
>counter articles, but they seem fairly invisible nowadays.
>
>More common are some power of two divider. It would require some
>shift in the rest of the counters, but these might be more available.
>
>I haven't kept track of frequency limits so maybe some or all of
>these suggestions are invalid, but here are a few places I'd check.
>
>Digitally tuned TVs and cable converters (and VCRs) would have prescalers
>that would probably drop the input frequency by quite a bit more than
>a decade. I suspect, though, that these would be pushing their upper
>limit at 1GHz.
>
>Older cellphones (older because they have more recognizable parts and
>probably larger parts) would have prescalers, which might work to 1GHz.
>
>If those don't pan out, I suspect still that finding something that
>divides by 32 or 64 might be more available than a divide by 10 at
>this point.
>
>If the original poster could get by with a 500MHz signal that is
>doubled, either of the above sources would likely supply a suitable
>prescaler.
>
> Michael VE2BVW
>

4454. Capacitor ESR meter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-16 23:30:25 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <uvsogn51mm3a7a@corp.supernews.com>
Source record: 39367

Has anyone used the ESR meters by Dick Smith for $50.00 in kit form or the CapacitorWizard at $160.00 vs using a sig. gen. and a scope? Is the CW worth the extra money for casual testing of incircuit ESR of electrolytics and possibly larger value paper capacitors?
This site has an excellent comparison:
http://www.anatekcorp.com/testequipment/esrcompar.htm

but I'd like some user non-commercial opinions. Do they really find the bad capacitors that cause the equipment to malfunction or do they lead you to replace a bunch of marginal capacitors that are probably OK in that particular circuit. I've got several pieces of bad test eqpt that I'm sure have bad and marginal caps but I don't want to waste my time replacing marginal caps. In some cases I would be shooting in the dark using an ESR meter at times as I don't have schematics on some of the equipment and some schematics take a long time to find at a reasonable price.

tnx
hank wd5jfr

4455. Re: Capacitor ESR meter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-17 01:50:09 UTC
From: Bill Higdon <w.higdon@attbi.com>
Message-ID: <3DFE840C.6020709@attbi.com>
Source record: 39368

Henry,
The Dick Smith kit looks good,
if your a scrounger check out the ESR meter on this page
http://www.albany.net/~gwoods/
Bill Higdon
Henry Kolesnik wrote:
> Has anyone used the ESR meters by Dick Smith for $50.00 in kit form or the
> CapacitorWizard at $160.00 vs using a sig. gen. and a scope? Is the CW
> worth the extra money for casual testing of incircuit ESR of electrolytics
> and possibly larger value paper capacitors?
> This site has an excellent comparison:
> http://www.anatekcorp.com/testequipment/esrcompar.htm
>
> but I'd like some user non-commercial opinions. Do they really find the bad
> capacitors that cause the equipment to malfunction or do they lead you to
> replace a bunch of marginal capacitors that are probably OK in that
> particular circuit. I've got several pieces of bad test eqpt that I'm sure
> have bad and marginal caps but I don't want to waste my time replacing
> marginal caps. In some cases I would be shooting in the dark using an ESR
> meter at times as I don't have schematics on some of the equipment and some
> schematics take a long time to find at a reasonable price.
>
> tnx
> hank wd5jfr
>
>

4456. Re: RF output power transistor recommendation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-17 02:03:35 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <XBvL9.65373$hK4.5433738@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39369

FYI, there are many FETs that would serve your purpose...

--
||||||||||||||||||||||||||||||||||||||||
Brian Griffey
http://home.att.net/~briangriffey/Index.html
||||||||||||||||||||||||||||||||||||||||

"Paul Burridge" <pb@notthisbitosiris1.co.uk> wrote in message
news:h6grvukul3s83q21l2ub8caq5301en69jn@4ax.com...
> On Sat, 14 Dec 2002 22:22:34 GMT, "Brian Griffey"
> <briangriffey@worldnet.att.net> opined thusly:
>
> >FET or bipolar?
>
> Good question. BTW, I'm going to act on Larry's kind offer of the
> datasheet and suggestion of the 2SC device.
> One thing I've noticed is - at least in my databook - no figure is
> given for transition frequency for any FET. How then, is one supposed
> to choose a suitable FET for RF purposes?

4457. Hallicrafters HT-5B

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-17 03:12:40 UTC
From: Sparks W4EAS <sparksw4eas@mindspring.com>
Message-ID: <3DFE9628.34D9@mindspring.com>
Source record: 39370

Need a schematic for the Hallicrafters speach preamp for the BC-610 transmitter. Have looked in all the regular places. 73 Sparks W4EAS

4458. Re: Wanted: MC13022A AM Stereo Decoder IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-17 05:36:00 UTC
From: "Michael A. Terrell" <terrell@mfi.net>
Message-ID: <3DFEB7C0.3FD8E0CD@mfi.net>
Source record: 39371

Ron Thomas wrote:
>
> I'm looking for a couple MC13022A AM Stereo decoder chips for an AM
> synchronous detector project. Anybody got any or know where some can
> be found?

http://209.15.35.110/userweb/actives/ics.htm
--

Michael A. Terrell
Central Florida

4459. Re: Capacitor ESR meter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-17 09:44:42 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3DFEF209.3010708@ay.com.au>
Source record: 39372

I hunt for dead caps with a square wave generator, CRO and a 10K
resistor. If the cap can't shunt most of the signal, it's stuffed.
Marginal cases are where more thought is required, it depends on what
the device is actually doing in the circuit.

Electros are cheap, I usually just replace any that are suspect, it
doesn't take long, you only need to turn the board over twice and do
them all in one hit.

If it is swollen, replace it, no matter how good it tests.

Henry Kolesnik wrote:
> Has anyone used the ESR meters by Dick Smith for $50.00 in kit form or the
> CapacitorWizard at $160.00 vs using a sig. gen. and a scope? Is the CW
> worth the extra money for casual testing of incircuit ESR of electrolytics
> and possibly larger value paper capacitors?
> This site has an excellent comparison:
> http://www.anatekcorp.com/testequipment/esrcompar.htm
>
> but I'd like some user non-commercial opinions. Do they really find the bad
> capacitors that cause the equipment to malfunction or do they lead you to
> replace a bunch of marginal capacitors that are probably OK in that
> particular circuit. I've got several pieces of bad test eqpt that I'm sure
> have bad and marginal caps but I don't want to waste my time replacing
> marginal caps. In some cases I would be shooting in the dark using an ESR
> meter at times as I don't have schematics on some of the equipment and some
> schematics take a long time to find at a reasonable price.
>
> tnx
> hank wd5jfr
>
>

--
Alan Yates
http://www.vk2zay.net/
The Moon is Waxing Gibbous (94% of Full)

4460. Re: Capacitor ESR meter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-17 11:16:49 UTC
From: Keith Piercey <salmo@nf.sympatico.ca>
Message-ID: <BIDL9.1303$A17.52434@ursa-nb00s0.nbnet.nb.ca>
Source record: 39373

I bought and assembled a Dick Smith ESR kit and was fully satisfied with the performance. I went through my capacitors and found a number that appeared to be ok on a Fluke meter (i.e. getting a capacitance reading) but were out of whack on the ESR.

As well, the help I got from the inventor/designer after was super.

it works and I don't regret buying it. Instructions are clear and assembly skills require normal soldering skill.

de Keith VO1AE

4461. Re: Kenwood TS-130S

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-17 11:40:59 UTC
From: Ray Goff <raygoff@ntlworld.com>
Message-ID: <D0EL9.64$ki6.16247@newsfep3-gui.server.ntli.net>
Source record: 39374

Take a look at www.mod.dk where there are some details from Kenwood on
fixing the problem,

73 Ray, g4fon

"Keith Piercey" <salmo@nf.sympatico.ca> wrote in message
news:mfHK9.5599$cN6.188838@ursa-nb00s0.nbnet.nb.ca...
> I have a TS-130S that a friend asked me to sell. It works fine on all
bands
> on a dummy load and 80 & 40 meters when I switch to an antenna -but when I
> go to 15 and above the needles on a dual meter ping to the top and no
> adjusting of an antenna tuner will get it down.
>
> I took the rig to a friend's shack near me and tried it using his
> antennas...same deal.
>
> Anyone run into this and have any suggestions?
>
>
> de Keith VO1AE
>

4462. Re: Kenwood TS-130S

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-17 11:42:48 UTC
From: "atec77(antispam)" <"atec77(antispam)"@hotmail.com>
Message-ID: <3DFF0DB8.5D80CA57@hotmail.com>
Source record: 39376

pretty much correct , the 120 was even worse . a good clean of the earthing pads and addition of a good ground strap should sort it , although you may need to tighten the alc a little also on the higher bands..

Keith Piercey wrote:
>
> Here's a solution I was sent....
>
> "It's a bad earth problem-very common on these sets. You need to open it up
> and make sure all internal screws in the PA and driver area are seated
> properly, so that there is good connection to the chassis of the set. You
> will probably find one or two loose!"
>
> de Keith VO1AE

4463. Re: Kenwood TS-130S

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-17 11:44:07 UTC
From: Ray Goff <raygoff@ntlworld.com>
Message-ID: <X2EL9.66$ki6.16247@newsfep3-gui.server.ntli.net>
Source record: 39375

That should be www.mods.dk

Sorry!

73 Ray, g4fon

"Ray Goff" <raygoff@ntlworld.com> wrote in message
news:D0EL9.64$ki6.16247@newsfep3-gui.server.ntli.net...
> Take a look at www.mod.dk where there are some details from Kenwood on
> fixing the problem,
>
> 73 Ray, g4fon
>
>
> "Keith Piercey" <salmo@nf.sympatico.ca> wrote in message
> news:mfHK9.5599$cN6.188838@ursa-nb00s0.nbnet.nb.ca...
> > I have a TS-130S that a friend asked me to sell. It works fine on all
> bands
> > on a dummy load and 80 & 40 meters when I switch to an antenna -but when
I
> > go to 15 and above the needles on a dual meter ping to the top and no
> > adjusting of an antenna tuner will get it down.
> >
> > I took the rig to a friend's shack near me and tried it using his
> > antennas...same deal.
> >
> > Anyone run into this and have any suggestions?
> >
> >
> > de Keith VO1AE
> >
>
>

4464. Re: Capacitor ESR meter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-17 16:27:41 UTC
From: Hugh Colborn <dontspamstockden@tiscali.co.uk>
Message-ID: <3dff504b_2@mk-nntp-2.news.uk.tiscali.com>
Source record: 39377

"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:uvsogn51mm3a7a@corp.supernews.com...
> Has anyone used the ESR meters by Dick Smith for $50.00 in kit form or
the
> CapacitorWizard at $160.00 vs using a sig. gen. and a scope?

Hello Hank,

I haven't used either the Capacitor Wizard or the Dick Smith meter but, having looked extensively at the options recently I ended up building one to a design published in the March and April 99 issues of the UK magazine Television. This uses 2 ICs and a handful of discretes (as well as the meter movement) for the ESR meter and a further IC to run a buzzer which sounds when the ESR is below about 1 ohm. Total cost was around $5 (the meter movement cost me ?0.50 from a flea market) and the thing seems to do as good a job as the commercial kits. If you want the circuit let me know via the Email address below (remove the don'tspam).

You might also like to look at
http://www.qsl.net/iz7ath/web/02_brew/15_lab/06_esr/index.htm

where IZ7ATH gives details of a similar low cost design.

73
Hugh, G8TMA

4465. Re: Wanted 1GHZ PLL Evaluation Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-17 17:34:51 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0212170934.283e0243@posting.google.com>
Source record: 39378

nospam_ronayling@hotmail.com (Ron) wrote in message
news:<3dfe52be.37187411@news.freeserve.co.uk>...
> Hate to be the practicle damper on this but been there and most
> of these old prescalers are unreliable at 1g and the only way to
> get round the problem is more volts and then they get hot!!
> not only that but the layout and pcb around the chip become
> critical, again can be done but not easy....

So use a new one. :-)

I typed "prescaler" in to Digi-Key's web page and got
a page full of hits, almost all useful for such a project.

The first hit was the NEC UPB1506GV, good to 3 GHz,
division by 64, 128, 256. In stock, available in onesies
and twosies for 3 bucks.

Alternatively, use one of the available microwave LO
boards, like the Downeast Microwave or G4DDK units.

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

4466. Re: Wanted 1GHZ PLL Evaluation Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-17 19:44:25 UTC
From: averyfineman@aol.com
Message-ID: <20021217144425.21558.00000264@mb-fi.aol.com>
Source record: 39379

In article <d42b5a72.0212170934.283e0243@posting.google.com>,
marsgal42@hotmail.com (Laura Halliday) writes:

>nospam_ronayling@hotmail.com (Ron) wrote in message
>news:<3dfe52be.37187411@news.freeserve.co.uk>...
>> Hate to be the practicle damper on this but been there and most
>> of these old prescalers are unreliable at 1g and the only way to
>> get round the problem is more volts and then they get hot!!
>> not only that but the layout and pcb around the chip become
>> critical, again can be done but not easy....
>
>So use a new one. :-)
>
>I typed "prescaler" in to Digi-Key's web page and got
>a page full of hits, almost all useful for such a project.
>
>The first hit was the NEC UPB1506GV, good to 3 GHz,
>division by 64, 128, 256. In stock, available in onesies
>and twosies for 3 bucks.
>
>Alternatively, use one of the available microwave LO
>boards, like the Downeast Microwave or G4DDK units.

Good suggestions, Laura. There are a number of
"prescaler" or high-speed dividers still available on the
market. The ones I'm familiar with, used, proven
successfully two decades ago are Plessey ICs which
are no longer in production. Today's choices are
oriented towards division by powers of two...which is
not a problem for a fixed divider.

The original thread started with a desired single-
frequency output at 1 GHz which was desired to be
locked to an external 10 MHz reference frequency.
There are many different ways to do that, including
some that weren't mentioned (sampling types with
auto-search on unlock, common in industry use in
1970 for microwave sources).

Some others have commented on "decade" division
but that is NOT any sort of absolute in division to
lock to a reference. All that is required is a division
of both source and reference to achieve the SAME
frequency of input to the phase detector in a PLL.
Decade division was mentioned as illustrative only,

for the purposes of explanation. The original message had a fixed 1000 MHz source and a 10 MHz reference. The ratio of those is 100:1 and the 1 GHz source need only be divided by 100 more than the reference. 100 factors to 2*2*5*5. Other dividers on both source and reference could be exactly the same binary, decade, or whatever is an integer number. From there on, the division is picked to fit a phase comparator input frequency and the loop filter values. With a single fixed source frequency the loop filter calculation is simple, no worries about fitting values to match variable division and/or non-linear VCO control voltage versus frequency curves.

PLLs are quite convenient for easy selection of increments of frequency spaced at multiples of the phase detection reference frequency. The convenience there is to fit human beans' desire to have decimal values. PLLs themselves will lock just as nicely to non-decimal increments.

The most difficult part about making a PLL at L-band or higher is layout and testing. Already-made "eval boards" have taken care of layout and manufacturers have already tested them to insure that customers can make a product work (and thus induce customers buying a large quantity). Nearly all such eval boards of today use a complex IC SOC which needs a digital data input (usually serial) to set the internal synthesizer. The task of making such a controlling device/circuit/whatever may be as hard or harder than fussing with an L-band controllable-frequency RF source by itself. If one has a microwave source but no instruments or other ways to check it out, the entire task becomes rather moot. :-)

I'm just tossing out some alternate ways on accomplishing a desired task by another. There are many ways to do the task successfully. It is helpful to get detailed suggestions for homebrewers (such as Laura's) and not some general "it won't work and the IC gets hot" non-specific remark. :-)

Len Anderson
retired (from regular hours) electronic engineer person

4467. SO2R recommendation?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-17 21:46:54 UTC
From: Robert Fanfant <fanfant1@attbi.com>
Message-ID: <iXML9.192984$pN3.16795@sccrnsc03>
Source record: 39380
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Want to run 2 HF radios at a time. Which solution is better/best, the Array Solutions or the Top Ten Devices? I've looked at eham.net and both devices were given a 5.0 rating.

-rob

4468. Small antenna for 40Mhz hand-portable

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-17 23:11:03 UTC
From: orion.osiris@virgin.net
Message-ID: <4c30c8fc.0212171511.13d7219f@posting.google.com>
Source record: 39381
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hi,

I'm getting rather poor signal reliability using an ordinary
telescopic
whip for r/c purposes. I was thinking about going in for something
tuned,
but a full half-wave dipole for example would be far too big and
cumbersome. Does anyone know how I could go about making up my own
ariel specifically for this frequency? I was thinking maybe a 'rubber
duck' or something similar
that's mostly coiled up? Anyway,
something small and compact. Any suggestions please!

Thanks
p.

4469. Re: "L-match"

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-17 23:16:31 UTC
From: orion.osiris@virgin.net
Message-ID: <4c30c8fc.0212171516.22021af8@posting.google.com>
Source record: 39382

averyfineman@aol.com (Avery Fineman) wrote in message
news:<20021214180519.01356.00000081@mb-fq.aol.com>...

> An L-Match network consists of a series reactance and a
> shunt reactance, the shunt on either source or load end
> although usually on the load end. Such a network is good
> only for a relatively narrow range of frequencies big enough
> to accomodate 30 to 40 KHz span at lower HF.

Okay, many thanks to you and Willis for the useful info.

4470. Need Schematic for RF Noise Bridge Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-17 23:48:44 UTC
From: orion.osiris@virgin.net
Message-ID: <4c30c8fc.0212171548.64c713ca@posting.google.com>
Source record: 39383
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Can anyone assist?
I just basically want to test some different ariel designs for their
characteristic impedance.
Thanks.

p.

4471. Re: RF output power transistor recommendation

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-17 23:52:56 UTC
From: orion.osiris@virgin.net
Message-ID: <4c30c8fc.0212171552.7695acf@posting.google.com>
Source record: 39384

lagagnon@fakesprint.ca (Larry Gagnon) wrote in message
> 2SC1971 would do the job very well. I have the datasheet if you want
> me to email it to you...

Thanks, Larry. It arrived earlier today.
p.

4472. Re: Kenwood TS-130S

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 00:06:47 UTC
From: Keith Piercey <salmo@nf.sympatico.ca>
Message-ID: <r_OL9.2024$A17.86386@ursa-nb00s0.nbnet.nb.ca>
Source record: 39385

Thanks everyone!!! I did the tightening up procedure and must say that some of the screws needed tightened down. I reset every one I could find and will report back with the results after I try the rig at my friends again tomorrow. I still have a couple of backups things to do, as suggested, but will try tuning the rig on antennas using the first procedure.

Here's hoping.

Keith P.

4473. Re: Hallicrafters HT-5B

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 00:56:59 UTC
From: averyfineman@aol.com
Message-ID: <20021217195659.23557.00000122@mb-ml.aol.com>
Source record: 39386

In article <3DFE9628.34D9@mindspring.com>, Sparks W4EAS
<sparksw4eas@mindspring.com> writes:

>Need a schematic for the Hallicrafters speach preamp for the BC-610
>transmitter. Have looked in all the regular places. 73 Sparks W4EAS

http://www.kg7bz.com/manuals.html

BC-614, TM 11-5054, is there for free, about 9 MB in size.

4474. Tube kit/design sought.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 01:44:18 UTC
From: Jeremy Becnel <desfox_at_sydcom.net>
Message-ID: <3dffd082_1@corp-news.newsgroups.com>
Source record: 39387

After a while of lurking, Ive decided to pipe up with a question.

I am looking to build a tube bc/sw radio that would not look out of place in the 30s or 40s. Homebuilt appearance is desired for what I am wanting to do with it. So that puts the AES kit on it's ear as it uses a mini-tube.

Ive looked on the web for kits and have come up with hardly anything worthwhile. Ebay is no good, homebrew stuff is too expensive and I want the satisfaction of building something of my very own.

A little of my background. I am a ham, no-code tech, and have been since 96. One of my hobbies, what this radio will be for, is reenacting WWII. This is one of my hobbies that I most likely cant afford, but it wouldnt be a fun hobby any other way, would it? I am in the process of restoring an S-20R, waiting on fresh tubes right now.

I work assembling cellemetery equipment, so I have a small, but growing, knowledge of electronics and have built a crystal radio, not that a semi-trained monkey could'nt, and have helped with a few other things.

Many thanks in advance,

Jeremy Becnel
KC5TEK

4475. Re: Tube kit/design sought.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 01:51:22 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <uvvl23s9amvba2@corp.supernews.com>
Source record: 39388

Jeremy Becnel wrote:
> After a while of lurking, Ive decided to pipe up with a question.
>
> I am looking to build a tube bc/sw radio that would not look out of place in
> the 30s or 40s. Homebuilt appearance is desired for what I am wanting to do
> with it. So that puts the AES kit on it's ear as it uses a mini-tube.
>
> Ive looked on the web for kits and have come up with hardly anything
> worthwhile. Ebay is no good, homebrew stuff is too expensive and I want the
> satisfaction of building something of my very own.

Jeremy,
Aha...found you here too!

Back to elaborating on my other idea....get an old junker homebrew
'radio box' from the 20s-30's and get hold of a chassis with a destroyed
or no case and rebuild the circuit into the old box. Thats kind of
halfway between a kit and a homebrew and can be done very inexpensively.

4476. Re: Wanted 1GHZ PLL Evaluation Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 02:19:58 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <vomvvu4i6943pbkkfek6dh1q1jskpqtkiv@4ax.com>
Source record: 39389

On Sun, 15 Dec 2002 01:35:02 -0500, Joe Leikhim
<jleikhim@nettally.com> wrote:

>Hi I am looking for a 1.000 GHz frequency source to drive a
>downconverter project. The source needs to be low noise and be
>referenced to an external 10 Mhz reference. It doesn't need modulation
>and channel spacing is not important. What I am looking for is a board
>with parallel address lines which can be either DIP switch or jumper
>programmable. I know that Z-Comm has an eval board that looks promising
>but it requires a PC to load the data into a latch. It looks volatile. I
>don't want to complicate the project with a PIC just to load the
>frequency which will always be the same.

I disagree with the idea of building a PLL from discrete components.
That's unnecessarily difficult and error-prone. Go to
http://wireless.national.com and spend an hour or two becoming
familiar with their parts and their design and simulation tools.
DigiKey sells the LMX23xx parts (an LMX2326 like the one my project at
http://www.qsl.net/ke5fx/synth.html uses is a reasonable choice for
1-3 GHz work), and a suitable VCO might be a Mini-Circuits ROS-1000PV
(http://www.minicircuits.com/cgi-bin/spec?cat=vco&model=ROS-1000PV&pix=ck605.gif&bv=4).
Use a narrow loop filter -- 1 kHz or less -- and you'll have no
trouble achieving the VCO's 10 kHz noise spec of -104 dBc/Hz.

A couple of hours spent at the National WEBench page *will* save you
many hours at the workbench, and you'll come away with knowledge that
will enable you to design a synthesizer with reasonable performance
for just about any common UHF/microwave application. Trust me --
don't waste your time messing with TV tuner prescalers, homebrew VCOs,
7490s and 4046s. I'd sooner use 12BA6s at this point. :)

4477. Re: Small antenna for 40Mhz hand-portable

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 02:40:10 UTC
From: N2VX <ZZZjim_cronin@juno.comZZZ>
Message-ID: <nmnvvu8jiu16mdrhqernti9eukouq7knlk@4ax.com>
Source record: 39391

On 17 Dec 2002 15:11:03 -0800, orion.osiris@virgin.net (Paul Burridge) wrote:

>Hi,
>
>I'm getting rather poor signal reliability using an ordinary
>telescopic
>whip for r/c purposes. I was thinking about going in for something
>tuned,
>but a full half-wave dipole for example would be far too big and
>cumbersome. Does anyone know how I could go about making up my own
>ariel specifically for this frequency? I was thinking maybe a 'rubber
>duck' or something similar
>that's mostly coiled up? Anyway,
>something small and compact. Any suggestions please!
>
>Thanks
>p.

A couple things: I once had the radio-to-antenna wire break
inside a R/C transmitter. The result was very short range. Is
what you're seeing recent or did it always happen?

Another trick: The antenna is 1/2 of a dipole. You can add
a dangling ground wire to act as the other half.

73,
Jim

4478. Re: Wanted 1GHZ PLL Evaluation Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 02:41:36 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <6mnvvugj51seagdb7lo5nc2li976s5ljb7@4ax.com>
Source record: 39392

On Sun, 15 Dec 2002 15:20:17 -0500, Joe Leikhim
<jleikhim@nettally.com> wrote:

>Ron wrote:
>
>> The serial data isn't anything to do with the eval board?
>> you are actually programming the device, if you use any
>> of those devices you will need to get data into them
>>
>
>Are you saying once I program their (Z-COMM's) PLL with their PC based loader
>I can remove power from the circuit and it will retain the frequency data? If
>so it will work.

I don't know of any non-volatile PLL chips, although it would be nice
if they did exist. But it's a bit irrational (I dare say) to be
afraid of PIC/Atmel-style microcontrollers. They cost next to
nothing, can still be obtained in low-pin-count DIP packages, can be
(re)programmed from your PC with $1.98 worth of hardware, and they
have tons of online support resources and example applications to rely
on. They're a lot like the all-in-one PLL chips sold by Analog and
National -- once you bite the bullet and spend a weekend climbing the
learning curve, you'll agree that it'd be ridiculous to go any other
way for most applications.

> So 1000/10 is a lot of multiplication and
>possible spurs.

You're absolutely right -- long multiplication chains are yet another
recipe for frustration. You can literally solve this problem in an
afternoon if you're willing to come up to speed on the available
technology. One 16-pin microcontroller (I think some of the PICs are
even available in 8-pin DIPs), one PLL chip, one VCO, and you're done.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

4479. Re: Tube kit/design sought.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 03:22:07 UTC
From: novatech@eskimo.com
Message-ID: <atopkvide1@eskinews.eskimo.com>
Source record: 39393

Bill M <don'tspamme-exray@caribe.net> writes:

>Jeremy Becnel wrote:
>> After a while of lurking, Ive decided to pipe up with a question.
>>
>> I am looking to build a tube bc/sw radio that would not look out of place in
>> the 30s or 40s. Homebuilt appearance is desired for what I am wanting to do
>> with it. So that puts the AES kit on it's ear as it uses a mini-tube.
>>
>> Ive looked on the web for kits and have come up with hardly anything
>> worthwhile. Ebay is no good, homebrew stuff is too expensive and I want the
>> satisfaction of building something of my very own.

>Jeremy,
>Aha...found you here too!

>Back to elaborating on my other idea....get an old junker homebrew
>'radio box' from the 20s-30's and get hold of a chassis with a destroyed
>or no case and rebuild the circuit into the old box. Thats kind of
>halfway between a kit and a homebrew and can be done very inexpensively.

Get a copy of "Radio for Millions." AES has reprinted copies and Ebay
has originals sometimes. It has a bunch of projects from Popular Science
of the war years, when parts were scarce. Some of the articles have detailed
drawings on making cases from wood or sheetmetal scraps. You can put
together a pretty cool radio for a few bucks. My favorite is a two-tube
superhet. You'll have to do some parts scrounging, but nothing is
so critical that you couldn't do a bunch of subs. You can get dead AA5s
at flea markets and garage sales for free and most of the parts you need
will be in them.

Have fun.

Steve

--
Steven D. Swift, novatech@eskimo.com, http://www.novatech-instr.com
NOVATECH INSTRUMENTS, INC. P.O. Box 55997
206.301.8986, fax 206.363.4367 Seattle, Washington 98155 USA

4480. Need cross reference for CD3581 RF transistor!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 04:12:22 UTC
From: Tony <nospam@shoveit.com>
Message-ID: <GASL9.5087$KW2.307281@twister.austin.rr.com>
Source record: 39390

Anyone have an old cross ref guide or any way of finding a replacement/cross
for CD3581 please e-mail me!

nospamn5gpi@hotmail.com

get rid of the nospam to e-mail me!

--
Sign up for Paypal and make me $5.00

https://www.paypal.com/refer/pal=WHRP8XHRMLSX4

4481. How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 07:08:28 UTC
From: jason_hsu@my-deja.com
Message-ID: <f7d9a152.0212172308.4c10bb08@posting.google.com>
Source record: 39394
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Can someone tell me how an SWR meter works? I'm looking at the SWR meter project described at:
http://www.arrl.org/members-only/tis/info/pdf/9702033.pdf

I know that an SWR meter works by detecting the differences between the forward and reflected powers. In this particular circuit, the forward and reflected powers are sent into an LM3914 chip. I am familiar with the functions of the 3914 chip. The forward power becomes a forward voltage that is used as the high reference voltage level. The reflected power becomes a reflected voltage that becomes the signal that the LM3914 chip tests.

The forward power and the reflected power look like they are fed into virtually IDENTICAL circuits. (Notice how both the forward and reflected sides are fed into a Ge diode. And the positive side faces the transmission line for both.) I know that there are couplers in this circuit, but I am having difficulty understanding what's going on. How does this circuit ensure that one part of the circuit responds only to the forward power and that the other part of the circuit only responds to the reflected power?

Jason Hsu, AG4DG
usenet@@@jasonhsu.com

4482. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 07:38:56 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <atp8vl$1ij$1@slb5.atl.mindspring.net>
Source record: 39395
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Hey Jason:

For design of the so-called SWR meter, download (yes, right first time)
program SWRMETER.

==========
Regards from Reg G4FGQ
For Free Radio Design Software
Go to http://www.g4fgq.com
==========

--
Peter K1PO
Indialantic By-the-Sea, FL

"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0212172308.4c10bb08@posting.google.com...
> Can someone tell me how an SWR meter works? I'm looking at the SWR
> meter project described at:
> http://www.arrl.org/members-only/tis/info/pdf/9702033.pdf
>
> I know that an SWR meter works by detecting the differences between
> the forward and reflected powers. In this particular circuit, the
> forward and reflected powers are sent into an LM3914 chip. I am
> familiar with the functions of the 3914 chip. The forward power
> becomes a forward voltage that is used as the high reference voltage
> level. The reflected power becomes a reflected voltage that becomes
> the signal that the LM3914 chip tests.
>
> The forward power and the reflected power look like they are fed into
> virtually IDENTICAL circuits. (Notice how both the forward and
> reflected sides are fed into a Ge diode. And the positive side faces
> the transmission line for both.) I know that there are couplers in
> this circuit, but I am having difficulty understanding what's going
> on. How does this circuit ensure that one part of the circuit
> responds only to the forward power and that the other part of the
> circuit only responds to the reflected power?
>
> Jason Hsu, AG4DG
> usenet@@@jasonhsu.com

4483. First mixer in Drake R7/TR7?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 08:10:09 UTC
From: d8lars@dtek.chalmers.se
Message-ID: <atpah1hdr1@nyheter.chalmers.se>
Source record: 39396

Hi!

Anyone who have any data on the first mixer in Drake R7/TR7. The picture
of it in the R7-manual says

VARI-L CO.
SM-759

In the list of components Drake calls it CM-1HF double balanced mixer.

Anyone who have information, a data sheet, or any idea on the data of this
mixer?

73 de Lars, sm6rpz
--
Lars E Pettersson | Chalmers University of Technology
d8lars@dtek.chalmers.se | Gothenburg, SWEDEN

4484. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 08:20:02 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E002FB2.81766848@cwis.net>
Source record: 39247
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Jason,
They are identical circuits, the 'difference' being
in which 'direction' the voltage is being measured...
'Doc

4485. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 10:36:36 UTC
From: Mike Allenson <mike@allenson.fsnet.co.uk>
Message-ID: <atpj59ugr1@newsg1.svr.pol.co.uk>
Source record: 39248
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Jason

I find it easiest to think in terms of the forward and reflected waves on the three transmission lines. On the main line we have the a forward wave and a reverse wave which are the fundamental quantities we are trying to measure. (although eventually they are combined and presented as SWR) Each has a voltage component and a current component linked by the characteristic impedance of the line.

The two coupled lines have forward and reflected waves induced in them by the proximity coupling to the main line. Their amplitudes are proportional to the amplitudes of the waves on the main line. (The ration of current to voltage on the coupled lines is determined by the characteristic impedance of the coupled lines which will be higher than the main line because of the smaller conducter dimensions)

An important peculiarity is that the coupled wave proportional to the main forward wave travels in the reverse direction to the main forward wave and like wise for the coupled reverse wave which travels in the opposite direction to the main reverse wave.

If opposite ends of the two coupled lines are terminated by resistors which can be adjusted to the coupled line characteristic impedance and a voltage detector is placed on the other the reverse wave can be nulled out on one and the voltage from the detector is proportional to the forward wave amplitude (on the main line). On the other the forward wave is nulled out and the detector output is proportional to the mainline reverse wave.

Hope this helps

Mike G3TGD
"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0212172308.4c10bb08@posting.google.com...
> Can someone tell me how an SWR meter works? I'm looking at the SWR
> meter project described at:
> http://www.arrl.org/members-only/tis/info/pdf/9702033.pdf
>
> I know that an SWR meter works by detecting the differences between
> the forward and reflected powers. In this particular circuit, the
> forward and reflected powers are sent into an LM3914 chip. I am
> familiar with the functions of the 3914 chip. The forward power
> becomes a forward voltage that is used as the high reference voltage
> level. The reflected power becomes a reflected voltage that becomes
> the signal that the LM3914 chip tests.
>

> The forward power and the reflected power look like they are fed into
> virtually IDENTICAL circuits. (Notice how both the forward and
> reflected sides are fed into a Ge diode. And the positive side faces
> the transmission line for both.) I know that there are couplers in
> this circuit, but I am having difficulty understanding what's going
> on. How does this circuit ensure that one part of the circuit
> responds only to the forward power and that the other part of the
> circuit only responds to the reflected power?
>
> Jason Hsu, AG4DG
> usenet@@@jasonhsu.com

4486. Re: Small antenna for 40Mhz hand-portable

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 11:04:00 UTC
From: Paul Burridge <pb@notthisbitosiris1.co.uk>
Message-ID: <vsk00vkik32e968aegqhhe87r9g32l902r@4ax.com>
Source record: 39249

On Tue, 17 Dec 2002 21:40:10 -0500, N2VX <ZZZjim_cronin@juno.comZZZ>
opined thusly:

>A couple things: I once had the radio-to-antenna wire break
>inside a R/C transmitter. The result was very short range. Is
>what you're seeing recent or did it always happen?

It's always been a problem. And you really *don't* want a large model
helicopter spinning out of the sky. I've been told I ought to be able
to fly it for as far as I can see it so that's what I'm aiming for for
safety's sake.

>Another trick: The antenna is 1/2 of a dipole. You can add
>a dangling ground wire to act as the other half.

Thanks, but still too long. I'm hoping to be able to rely on a coiled
design of some sort and just carefully match impedences. If anyone's
got any formula for arriving at just such a suitable ariel, I'd be
very keen to hear.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

4487. Re: Capacitor ESR meter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 12:55:16 UTC
From: Keith Piercey <salmo@nf.sympatico.ca>
Message-ID: <Ue_L9.2654$A17.109814@ursa-nb00s0.nbnet.nb.ca>
Source record: 39250

Forgot to add that the Dick Smith unit has large digital (led-based)
readout.

VO1AE

4488. Re: First mixer in Drake R7/TR7?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 13:16:54 UTC
From: Jack Smith <jsmith@mnsinc.com>
Message-ID: <5rs00vcbnerpbk1qbt4cptav1a6bpm7ppi@4ax.com>
Source record: 39251

On 18 Dec 2002 08:10:09 GMT, d8lars@dtek.chalmers.se (Lars Petterson) wrote:

>Hi!
>
>Anyone who have any data on the first mixer in Drake R7/TR7. The picture
>of it in the R7-manual says
>
>VARI-L CO.
>SM-759
>
>In the list of components Drake calls it CM-1HF double balanced mixer.
>
>Anyone who have information, a data sheet, or any idea on the data of this
>mixer?
>
>73 de Lars, sm6rpz

I checked my R7 manual and it looks like the mixer is a pin-for-pin match with MiniCircuits plug-in balanced mixers. (Others also use the same pinout.)

Drake seems to have reversed some of the nominal connections, but this is not a problem as these devices are symetrical.

The injection level is 1 volt RMS according to my R7 manual. That corresponds to 20 mW, or +13 dBm. So, a Level 13 mixer looks like a good match. These can be found at http://www.minicircuits.com/dg03-102.pdf

Jack K8ZOA

4489. Re: Small antenna for 40Mhz hand-portable

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 14:02:37 UTC
From: Dennis Kaylor <k4oxg@tampabay.rr.com>
Message-ID: <3E007FFD.8030200@tampabay.rr.com>
Source record: 39252
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

hey paul
you could make a 1/4 wave antenna it would be around 80inc or so but
still rather long for an R/C transmitter

Paul Burridge wrote:
> Hi,
>
> I'm getting rather poor signal reliability using an ordinary
> telescopic
> whip for r/c purposes. I was thinking about going in for something
> tuned,
> but a full half-wave dipole for example would be far too big and
> cumbersome. Does anyone know how I could go about making up my own
> ariel specifically for this frequency? I was thinking maybe a 'rubber
> duck' or something similar
> that's mostly coiled up? Anyway,
> something small and compact. Any suggestions please!
>
> Thanks
> p.

4490. Re: Need Schematic for RF Noise Bridge Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 14:24:25 UTC
From: "George R. Gonzalez" <grg2@attbi.com>
Message-ID: <ty%L9.19032$qF3.766@sccrnsc04>
Source record: 39253
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Look up the manual for the heathkit antenna noise bridge.

IIRC a schematic isnt quite enough to go by, the physical layout is somewhat critical.

"Paul Burridge" <orion.osiris@virgin.net> wrote in message news:4c30c8fc.0212171548.64c713ca@posting.google.com...
> Can anyone assist?
> I just basically want to test some different ariel designs for their
> characteristic impedance.
> Thanks.
>
> p.

4491. Re: Hallicrafters HT-5B

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 14:59:24 UTC
From: Sparks W4EAS <sparksw4eas@mindspring.com>
Message-ID: <3E008D4C.5D32@mindspring.com>
Source record: 39254

Roger Have the BC-614 Found the HT-5B at W7FG TNX Sparks W4EAS

4492. Re: Need Schematic for RF Noise Bridge Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 15:46:27 UTC
From: Paul Burridge <pb@notthisbitosiris1.co.uk>
Message-ID: <q1610vkmsuin82m9h1i649a5073rcsjf5b@4ax.com>
Source record: 39258
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Wed, 18 Dec 2002 10:50:42 -0500, "xpyttl"
<xpyttl_nospam@earthling.net> opined thusly:

>Remember, Google is your friend:
>
>http://www.qsl.net/wq1rp/noisebrg.htm
>http://dj4br.virtualave.net/rauschbr.htm
>http://www.arrl.org/notes/hbk-templates/rxbridge.pdf
>http://www.nzart.org.nz/nzart/branches/chch/branch05/nb-flyer.htm
>
>etc., etc., etc.

Okay, thanks, gentlemen. I'll follow the leads.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

4493. Re: Need Schematic for RF Noise Bridge Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 15:50:42 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v016be4mt41s6a@corp.supernews.com>
Source record: 39255
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

Remember, Google is your friend:

http://www.qsl.net/wq1rp/noisebrg.htm
http://dj4br.virtualave.net/rauschbr.htm
http://www.arrl.org/notes/hbk-templates/rxbridge.pdf
http://www.nzart.org.nz/nzart/branches/chch/branch05/nb-flyer.htm

etc., etc., etc.

..

"Paul Burridge" <orion.osiris@virgin.net> wrote in message
news:4c30c8fc.0212171548.64c713ca@posting.google.com...
> Can anyone assist?
> I just basically want to test some different ariel designs for their
> characteristic impedance.
> Thanks.
>
> p.

4494. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 15:52:37 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E0099C5.9040605@ieee.org>
Source record: 39256
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Jason Hsu wrote:
> Can someone tell me how an SWR meter works? I'm looking at the SWR
> meter project described at:
> http://www.arrl.org/members-only/tis/info/pdf/9702033.pdf
>
> I know that an SWR meter works by detecting the differences between
> the forward and reflected powers. In this particular circuit, the
> forward and reflected powers are sent into an LM3914 chip. I am
> familiar with the functions of the 3914 chip. The forward power
> becomes a forward voltage that is used as the high reference voltage
> level. The reflected power becomes a reflected voltage that becomes
> the signal that the LM3914 chip tests.
>
> The forward power and the reflected power look like they are fed into
> virtually IDENTICAL circuits. (Notice how both the forward and
> reflected sides are fed into a Ge diode. And the positive side faces
> the transmission line for both.) I know that there are couplers in
> this circuit, but I am having difficulty understanding what's going
> on. How does this circuit ensure that one part of the circuit
> responds only to the forward power and that the other part of the
> circuit only responds to the reflected power?

This one is very easy to understand. The two pickups on the stripline
are arranged in opposite directions. Each pickup has a 50 ohm load on
one end and a diode on the other end. The 50 ohm load dissipates the
coupled wave in one direction and the diode rectifies the coupled wave
in the other direction. Each pickup is designed to respond to a wave
traveling in only one direction. The forward sampled voltage is rectified
and the reflected sampled voltage is rectified before being presented to
the LM3914 chip, i.e. the LM3914 is working only with DC values.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4495. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 16:55:03 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v01a3g7jidvl8b@corp.supernews.com>
Source record: 39257
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

I thiink the question is why don't the sensors pick up both, and how do the sensors know which way the wave is travelling?
"OC_CAM's Razor" <Cecil.A.Moore@ieee.org> wrote in message news:3E0099C5.9040605@ieee.org...
> Jason Hsu wrote:
> > Can someone tell me how an SWR meter works? I'm looking at the SWR
> > meter project described at:
> > http://www.arrl.org/members-only/tis/info/pdf/9702033.pdf
> >
> > I know that an SWR meter works by detecting the differences between
> > the forward and reflected powers. In this particular circuit, the
> > forward and reflected powers are sent into an LM3914 chip. I am
> > familiar with the functions of the 3914 chip. The forward power
> > becomes a forward voltage that is used as the high reference voltage
> > level. The reflected power becomes a reflected voltage that becomes
> > the signal that the LM3914 chip tests.
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> > The forward power and the reflected power look like they are fed into
> > virtually IDENTICAL circuits. (Notice how both the forward and
> > reflected sides are fed into a Ge diode. And the positive side faces
> > the transmission line for both.) I know that there are couplers in
> > this circuit, but I am having difficulty understanding what's going
> > on. How does this circuit ensure that one part of the circuit
> > responds only to the forward power and that the other part of the
> > circuit only responds to the reflected power?
>
> This one is very easy to understand. The two pickups on the stripline
> are arranged in opposite directions. Each pickup has a 50 ohm load on
> one end and a diode on the other end. The 50 ohm load dissipates the
> coupled wave in one direction and the diode rectifies the coupled wave
> in the other direction. Each pickup is designed to respond to a wave
> traveling in only one direction. The forward sampled voltage is rectified
> and the reflected sampled voltage is rectified before being presented to
> the LM3914 chip, i.e. the LM3914 is working only with DC values.
> --
> cheers, CAM http://www.qsl.net/w5dxp
>
>
>
> -----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
> http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
> -----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4496. MC1648 VCO chip ...source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 18:33:07 UTC
From: gpatterson53@hotmail.com
Message-ID: <9c2b8e62.0212181033.4b6acacb@posting.google.com>
Source record: 39259

Anyone know where I can pick up a couple mc1648's

thanks
Gary
W4AF

4497. Re: MC1648 VCO chip ...source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 18:57:33 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <atqget$8rm$1@freenet9.carleton.ca>
Source record: 39260

gary (gpatterson53@hotmail.com) writes:
> Anyone know where I can pick up a couple mc1648's
>
> thanks
> Gary
> W4AF

Maybe Jim Thompson over in sci.electronics.design has a few?
Actually, I don't know if designed the MC1648, but he did design
the MC4044 phase detector.

The device is at least 30 years old. The only good reason for
using it now would be to repair something that uses it.

There really isn't much to it. The actual oscillator is relatively
simple, and could be done with discrete components. Most of the
circuitry is buffers or maybe even level shifters. Unlike some ICs
that actually were VCOs (and used RC networks for timing), it's
only an oscillator; you will need an external varicap to make it
a VCO.

I have no idea where to find them nowadays. Even when they were prime,
and showing up in ham magazine articles, I wouldn't say they were
commonly available from places that dealt with hobbyists. I had one,
once, and I got it from a commercial distributor (and promptly killed
it by putting a wrong load on it; the oscillator still worked, the
buffer was gone).

Michael VE2BVW

4498. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 19:27:44 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E00CC30.9050707@ieee.org>
Source record: 39261
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Henry Kolesnik wrote:
> I thiink the question is why don't the sensors pick up both, and how do the
> sensors know which way the wave is travelling?

I thought I explained that. With one pickup, the forward wave sees a ~50
ohm resistor and is dissipated while the reflected wave sees a diode and
is rectified, filtered, and routed to the LM3914. With the other pickup,
the forward wave sees a diode and is rectified, filtered, and routed to
the LM3914 while the reflected wave sees a ~50 ohm resistor and is dissipated.
--
cheers, CAM http://www.qsl.net/w5dxp

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4499. Re: MC1648 VCO chip ...source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 19:30:14 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <ats2qk$h4g$1@newsg2.svr.pol.co.uk>
Source record: 39278

"gary" <gpatterson53@hotmail.com> wrote in message
news:9c2b8e62.0212181033.4b6acacb@posting.google.com...
> Anyone know where I can pick up a couple mc1648's

There is a replacement for it, with a similar number. I think I found it at
On Semiconductor (was Motorola).

Probably just as hard to get hold of, though.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

4500. Re: Tube kit/design sought.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 20:13:51 UTC
From: snarflemike@yahoo.com
Message-ID: <20619edc.0212181213.221b171@posting.google.com>
Source record: 39262

"Jeremy Becnel" <desfox_at_sydcom.net> wrote in message
news:<3dffd082_1@corp-news.newsgroups.com>...
> After a while of lurking, Ive decided to pipe up with a question.
>
> I am looking to build a tube bc/sw radio that would not look out of place in
> the 30s or 40s. Homebuilt appearance is desired for what I am wanting to do
> with it. So that puts the AES kit on it's ear as it uses a mini-tube.
>
> Ive looked on the web for kits and have come up with hardly anything
> worthwhile. Ebay is no good, homebrew stuff is too expensive and I want the
> satisfaction of building something of my very own.
>
> A little of my background. I am a ham, no-code tech, and have been since
> 96. One of my hobbies, what this radio will be for, is reenacting WWII.
> This is one of my hobbies that I most likely cant afford, but it wouldnt be
> a fun hobby any other way, would it? I am in the process of restoring an
> S-20R, waiting on fresh tubes right now.

I think a good first choice would be a single-tube regen using a dual triode tube. My 7-yr-old daughter and I built one using a 6C8-G tube (tube c. 1936). This particular tube looks great (octal, ST "pear-shaped" envelope) and is easy on heater current (300 mA). We ran the heater off of 4 C batteries (D's will give twice the lifetime, but even the C's lasted many months), and the B+ came from 3 9-V batteries. You could use a "battery" tube like the 1G6 for even lower filament battery requirements, but they don't glow as nicely!

Here's a typical dual-triode regen schematic:
http://www.qsl.net/wd4nka/IMAGES/2-TUBE~2.JPG

You don't need 90-150V for such a rig. Many were run off of 22.5-45V.

You could also add a power output stage to drive a speaker. A good match to the 6C8-G would be the 6G6-G. You could even drive this combination quite respectably using batteries, using bigger heater batteries and more 9-V batteries for higher B+ (probably 90V minimum), or you could build an AC power supply using e.g. back-to-back filament transformers.

Now let me give my standard pitch for the glowbugs email reflector, where the focus is on homebrewing and operating tube ham gear. The group is quite friendly and will definitely help you with your project. Here's the list info from the radio groups FAQ:

For homebuilding transmitters and receivers using tube technology, there is the Glowbugs e-list; send an email to:

majordomo@piobaire.mines.uidaho.edu and only write:
subscribe glowbugs <your@address.here>

73,
Mike, KK6GM

4501. Re: Need Schematic for RF Noise Bridge Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 20:42:15 UTC
From: la8ak.xnd@online.no
Message-ID: <3e00dcee.85828467@news.online.no>
Source record: 39263
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Wed, 18 Dec 2002 14:24:25 GMT, "George R. Gonzalez"
<grg2@attbi.com> wrote:

>Look up the manual for the heathkit antenna noise bridge.
>
>IIRC a schematic isnt quite enough to go by, the physical layout is somewhat
>critical.
>
>
>
>"Paul Burridge" <orion.osiris@virgin.net> wrote in message
>news:4c30c8fc.0212171548.64c713ca@posting.google.com...
>> Can anyone assist?
>> I just basically want to test some different ariel designs for their
>> characteristic impedance.
>> Thanks.
>>
>> p.
>
>
got one here
FromWarmSpgs@aol.com
Send: 15. desember 2002 21:29
To: rsgb_lf_group@blacksheep.org
title: Re: LF: Measuring earth resistance

Dick Rollema's noise bridge schematic and a photo of his assembled
unit can now be downloaded from:

http://lwca.org/library/articles/pa0se/earth/

73
John Davis

--
remove ,xnd to reply

4502. solid state amp output filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 21:17:06 UTC
From: Ludo <nospam@nospam.com>
Message-ID: <mB5M9.58109$Ti2.8921@afrodite.telenet-ops.be>
Source record: 39264
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,uk.radio.amateur

Hi,

I recently bought a second hand 1kW solid state amp. The output filters are damaged, the transistors are still ok. First, the idea was to repair the filter, but after inspection, it seemed that it might be better to replace the entire filter-board. It consists of 6 low pass filters , each switched by relays. Any ideas where i can find these filters (rated at 1kW) ?

Best regards,

Ludo

4503. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 21:27:38 UTC
From: averyfineman@aol.com
Message-ID: <20021218162738.22961.00000142@mb-mp.aol.com>
Source record: 39265

In article <3E0099C5.9040605@ieee.org>, OC_CAM's Razor <Cecil.A.Moore@ieee.org>
writes:

>Jason Hsu wrote:
>> Can someone tell me how an SWR meter works? I'm looking at the SWR
>> meter project described at:
>> http://www.arrl.org/members-only/tis/info/pdf/9702033.pdf
>>
>> I know that an SWR meter works by detecting the differences between
>> the forward and reflected powers. In this particular circuit, the
>> forward and reflected powers are sent into an LM3914 chip. I am
>> familiar with the functions of the 3914 chip. The forward power
>> becomes a forward voltage that is used as the high reference voltage
>> level. The reflected power becomes a reflected voltage that becomes
>> the signal that the LM3914 chip tests.
>>
>> The forward power and the reflected power look like they are fed into
>> virtually IDENTICAL circuits. (Notice how both the forward and
>> reflected sides are fed into a Ge diode. And the positive side faces
>> the transmission line for both.) I know that there are couplers in
>> this circuit, but I am having difficulty understanding what's going
>> on. How does this circuit ensure that one part of the circuit
>> responds only to the forward power and that the other part of the
>> circuit only responds to the reflected power?
>
>This one is very easy to understand. The two pickups on the stripline
>are arranged in opposite directions. Each pickup has a 50 ohm load on
>one end and a diode on the other end. The 50 ohm load dissipates the
>coupled wave in one direction and the diode rectifies the coupled wave
>in the other direction. Each pickup is designed to respond to a wave
>traveling in only one direction. The forward sampled voltage is rectified
>and the reflected sampled voltage is rectified before being presented to
>the LM3914 chip, i.e. the LM3914 is working only with DC values.
>--
>cheers, CAM http://www.qsl.net/w5dxp

Hi Cecil, Merry Christmas!

Here's some things on couplers other than microstrip/
stripline octave-band devices, general information on them:

The "Bruene Discriminator" (or "Detector") may have started
the forward-reverse reading transmission line detectors way
back in the early 1950s as part of the Collins Radio
"Autotune" system. That is an RF current-sensing transformer

plus coupled RF line voltage double detector arrangement. There's a good write-up on it, along with current and voltage phase relationship diagrams in TM 11-806, the technical manual for the T-195 transmitter in the AN/GRC-19 military HF radio. The whole T-195 TM is 33 MB in size, available at:

http://www.kg7bz.com/manuals.html

The same TM also describes the final amplifier's automatic tuning system in both text and diagrams...in addition to the separate antenna matching tuning section.

For a good explanation of various transformers arranged as directional couplers, hybrids, and impedance changers:

http://www.mellis.net [click on Tutorials button]

Four HTML tutorials include diagrams with current/voltage relationships shown for better description. Those apply to HF all the way down to audio. There's several other things on Ellis' site which might be interesting to homebrewers.

Len Anderson
retired (from regular hours) electronics engineer person

4504. Re: MC1648 VCO chip ...source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 22:23:14 UTC
From: Don Baker <DocDB@excite.com>
Message-ID: <kC6M9.54$Hh2.28555@news.abs.net>
Source record: 39266

I bought some from Electronics Express less than 1 month ago. Their web
page is

http://www.elexp.com/

I think they were around $7.00 each.

Don

"Michael Black" <et472@FreeNet.Carleton.CA> wrote in message
news:atqget$8rm$1@freenet9.carleton.ca...
> gary (gpatterson53@hotmail.com) writes:
> > Anyone know where I can pick up a couple mc1648's
> >
> > thanks
> > Gary
> > W4AF
>
> Maybe Jim Thompson over in sci.electronics.design has a few?
> Actually, I don't know if designed the MC1648, but he did design
> the MC4044 phase detector.
>
> The device is at least 30 years old. The only good reason for
> using it now would be to repair something that uses it.
>
> There really isn't much to it. The actual oscillator is relatively
> simple, and could be done with discrete components. Most of the
> circuitry is buffers or maybe even level shifters. Unlike some ICs
> that actually were VCOs (and used RC networks for timing), it's
> only an oscillator; you will need an external varicap to make it
> a VCO.
>
> I have no idea where to find them nowadays. Even when they were prime,
> and showing up in ham magazine articles, I wouldn't say they were
> commonly available from places that dealt with hobbyists. I had one,
> once, and I got it from a commercial distributor (and promptly killed
> it by putting a wrong load on it; the oscillator still worked, the
> buffer was gone).
>
> Michael VE2BVW
>
>

4505. Re: Amplifier imput impedance circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 22:39:30 UTC
From: Chuck Reichert <kd9jq@comcast.net>
Message-ID: <ooOdnVracPHVZJ2jXTWcoQ@comcast.com>
Source record: 39267

For Grounded Grid Triode Design try
TAP 2.0 free at;

http://mywebpages.comcast.net/kd9jq/hamradio/kd9jq.html

The 3-500Z is included in the library.

Chuck KD9JQ

"gw" <gw@webhideout.com> wrote in message
news:235a74db.0211161631.204051f6@posting.google.com...
> Hello to all. I am thinking about building my first tube amp using a
> single 3-500 z. By using the info from the data sheet on this tube,
> how do i come up with the input impedance of this tube? Thanks.
>
> GW

4506. Re: MC1648 VCO chip ...source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 23:02:34 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <e87M9.68194$hK4.5660192@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39268

They show some of this obsolete part at www.usbid.com

--
||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
Check out the SkyWave Linear Amplifier at:
http://home.att.net/~briangriffey/Index.html
||||||||||||||||||||||||||||||||||||||||||||||||||

"gary" <gpatterson53@hotmail.com> wrote in message
news:9c2b8e62.0212181033.4b6acacb@posting.google.com...
> Anyone know where I can pick up a couple mc1648's
>
> thanks
> Gary
> W4AF

4507. Re: MC1648 VCO chip ...source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-18 23:43:02 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0212181543.15e0fb7d@posting.google.com>
Source record: 39270

gpatterson53@hotmail.com (gary) wrote in message
news:<9c2b8e62.0212181033.4b6acacb@posting.google.com>...

> Anyone know where I can pick up a couple mc1648's

Not being particularly bright, I played dumb, typed
"mc1648" in to Google and found two suppliers in under
a minute.

You'll want to be sitting down when you see what they
want for them. This reflects the price for a part
that has been obsolete for eons and whose supply is
starting to dry up. Any project that specifies this
part should be retired.

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

4508. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 01:06:28 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <atr62l$70i$1@slb9.atl.mindspring.net>
Source record: 39271
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Cecil:

[snip]
"> I thought I explained that. With one pickup, the forward wave sees a ~50
> ohm resistor and is dissipated while the reflected wave sees a diode and
> is rectified, filtered, and routed to the LM3914. With the other pickup,
> the forward wave sees a diode and is rectified, filtered, and routed to
> the LM3914 while the reflected wave sees a ~50 ohm resistor and is
dissipated.
> --
> cheers, CAM http://www.qsl.net/w5dxp
[snip]

No you didn't!

You just explained what it does, not how or why it senses the direction of
the waves.

Sigh!

--
Peter K1PO
Indialantic By-the-Sea, FL

4509. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 01:41:09 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <Us9M9.391310$%m4.123574@rwcrnsc52.ops.asp.att.net>
Source record: 39272
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Yes he did. Read it again (several times if necessary).
"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:atr62l$70i$1@slb9.atl.mindspring.net...
> Cecil:
>
> [snip]
> "> I thought I explained that. With one pickup, the forward wave sees a
~50
> > ohm resistor and is dissipated while the reflected wave sees a diode and
> > is rectified, filtered, and routed to the LM3914. With the other pickup,
> > the forward wave sees a diode and is rectified, filtered, and routed to
> > the LM3914 while the reflected wave sees a ~50 ohm resistor and is
> dissipated.
> > --
> > cheers, CAM http://www.qsl.net/w5dxp
> [snip]
>
> No you didn't!
>
> You just explained what it does, not how or why it senses the direction of
> the waves.
>
> Sigh!
>
> --
> Peter K1PO
> Indialantic By-the-Sea, FL
>
>

4510. Re: MC1648 VCO chip ...source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 02:25:22 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E012E12.3A0391CB@northwest.com>
Source record: 39273

...and what is your position regarding tubes?

==========

Laura Halliday wrote:

> gpatterson53@hotmail.com (gary) wrote in message
news:<9c2b8e62.0212181033.4b6acacb@posting.google.com>...
>
> > Anyone know where I can pick up a couple mc1648's
>
> Not being particularly bright, I played dumb, typed
> "mc1648" in to Google and found two suppliers in under
> a minute.
>
> You'll want to be sitting down when you see what they
> want for them. This reflects the price for a part
> that has been obsolete for eons and whose supply is
> starting to dry up. Any project that specifies this
> part should be retired.
>
> Laura Halliday VE7LDH "Que les nuages soient notre
> Grid: CN89lg pied a terre..."
> ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

4511. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 04:09:10 UTC
From: "Joe S." <joe@schlatter.org>
Message-ID: <atrh5q02vu4@enews4.newsguy.com>
Source record: 39275
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

How do the couplers work?

The coupler consists of a piece of transmission line with the outer shield removed running from the input jack to the output jack with some form of conductor coupled closely to the transmission line to act as a pickup. The pickup device is either a toroid with several turns of wire around it slid over the transmission line, or, a piece of wire -- usually heavy gauge -- running parallel to the transmission line inside the meter.

As the RF from the transmitter travels along the transmission line to the antenna, an magnetic field is set up around the transmission line -- remember, RF is AC and alternating current passing through a conductor causes a magnetic field to form around the conductor.

As the magnetic field rises and collapses, it passes through the pickup device, which is itself a conductor. As a magnetic field cuts through a conductor, it induces an AC current in the conductor -- in this case, the pickup device.

A diode runs from each end of the device -- this diode rectifies the AC into DC and connects the DC current to a measuring circuit.

Power running from the transmitter to the antenna causes current to flow in one direction, power running from the antenna to the transmitter causes current to flow in the other direction. The diodes pick up the voltage in the two directions and pass that current to the measuring circuit where you select whether to measure forward power or reflected power.

--

Regards,
Joe S.

"Jason Hsu" <jason_hsu@my-deja.com> wrote in message
news:f7d9a152.0212172308.4c10bb08@posting.google.com...
> Can someone tell me how an SWR meter works? I'm looking at the SWR
> meter project described at:
> http://www.arrl.org/members-only/tis/info/pdf/9702033.pdf
>
> I know that an SWR meter works by detecting the differences between
> the forward and reflected powers. In this particular circuit, the
> forward and reflected powers are sent into an LM3914 chip. I am
> familiar with the functions of the 3914 chip. The forward power
> becomes a forward voltage that is used as the high reference voltage
> level. The reflected power becomes a reflected voltage that becomes

> the signal that the LM3914 chip tests.
>
> The forward power and the reflected power look like they are fed into
> virtually IDENTICAL circuits. (Notice how both the forward and
> reflected sides are fed into a Ge diode. And the positive side faces
> the transmission line for both.) I know that there are couplers in
> this circuit, but I am having difficulty understanding what's going
> on. How does this circuit ensure that one part of the circuit
> responds only to the forward power and that the other part of the
> circuit only responds to the reflected power?
>
> Jason Hsu, AG4DG
> usenet@@@jasonhsu.com

4512. Re: Tube kit/design sought.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 04:27:06 UTC
From: Tom Coates <tecoates@comcast.net>
Message-ID: <FymdncoYcME415yjXTWcog@comcast.com>
Source record: 39274

Useful websites:

http://www.lindsaybks.com/bks3/34sw/index.html and
http://www.lindsaybks.com/bks2/joneshb/index.html have collections of
construction articles.

www.angela.com and www.fairradio.com are sources of tubes and sockets.

www.oselectronics has coil forms and variable capacitors.

I believe I would begin with a list of inexpensively available tubes and
look for suitable circuits to use them in.

Have fun!

Tom, N3IJ

"Jeremy Becnel" <desfox_at_sydcom.net> wrote in message
news:3dffd082_1@corp-news.newsgroups.com...
> After a while of lurking, Ive decided to pipe up with a question.
>
> I am looking to build a tube bc/sw radio that would not look out of place
in
> the 30s or 40s. Homebuilt appearance is desired for what I am wanting to
do
> with it. So that puts the AES kit on it's ear as it uses a mini-tube.
>
> Ive looked on the web for kits and have come up with hardly anything
> worthwhile. Ebay is no good, homebrew stuff is too expensive and I want
the
> satisfaction of building something of my very own.
>
> A little of my background. I am a ham, no-code tech, and have been since
> 96. One of my hobbies, what this radio will be for, is reenacting WWII.
> This is one of my hobbies that I most likely cant afford, but it wouldnt
be
> a fun hobby any other way, would it? I am in the process of restoring an
> S-20R, waiting on fresh tubes right now.
>
> I work assembling cellemetery equipment, so I have a small, but growing,
> knowledge of electronics and have built a crystal radio, not that a
> semi-trained monkey could'nt, and have helped with a few other things.
>
> Many thanks in advance,
>
> Jeremy Becnel

> KC5TEK
>
>
>

4513. Re: MC1648 VCO chip ...source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 05:29:42 UTC
From: averyfineman@aol.com
Message-ID: <20021219002942.15952.00000187@mb-mj.aol.com>
Source record: 39276

In article <kC6M9.54$Hh2.28555@news.abs.net>, "Don Baker" <DocDB@excite.com>
writes:

>I bought some from Electronics Express less than 1 month ago. Their web
>page is
>
>http://www.elexp.com/
>
>I think they were around $7.00 each.

I just looked this afternoon. $6.95 on their listing of linear ICs.
New catalog on-line, too.

For a datasheet:

http://wwww.ges.cz/sheet/m/

While that is a Czechoslovakian site, it belongs to an
electronics parts distributor and has a number of
datasheets for various ICs in-production, second-sourced,
or perhaps cancelled recently. [replace the "m" in slant
bars with another letter for other part numbers] The
MC1648 datasheet is dated 1997 but Motorola dropped
most of their old linear ICs as well as "legacy" digital IC
glue parts relatively recently.

Len Anderson
retired (from regular hours) electronic engineer person

4514. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 07:33:15 UTC
From: k7itm@aol.com
Message-ID: <3200347.0212182333.69a71dd8@posting.google.com>
Source record: 39277
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

If you do a Google search of the archive of this group, you'll find some really good explanations about how directional couplers work. I wrote one or two that people years later told me were useful to them, but I know that others may well have explained them better, too. As others in this thread have said, it's that the difference between forward and reverse power is the direction of the current for a given voltage. For each wave, the voltage and current are related by v=Zo*i.

Cheers,
Tom

jason_hsu@my-deja.com (Jason Hsu) wrote in message news:<f7d9a152.0212172308.4c10bb08@posting.google.com>...
> Can someone tell me how an SWR meter works? I'm looking at the SWR
> meter project described at:
> http://www.arrl.org/members-only/tis/info/pdf/9702033.pdf
>
> I know that an SWR meter works by detecting the differences between
> the forward and reflected powers. In this particular circuit, the
> forward and reflected powers are sent into an LM3914 chip. I am
> familiar with the functions of the 3914 chip. The forward power
> becomes a forward voltage that is used as the high reference voltage
> level. The reflected power becomes a reflected voltage that becomes
> the signal that the LM3914 chip tests.
>
> The forward power and the reflected power look like they are fed into
> virtually IDENTICAL circuits. (Notice how both the forward and
> reflected sides are fed into a Ge diode. And the positive side faces
> the transmission line for both.) I know that there are couplers in
> this circuit, but I am having difficulty understanding what's going
> on. How does this circuit ensure that one part of the circuit
> responds only to the forward power and that the other part of the
> circuit only responds to the reflected power?
>
> Jason Hsu, AG4DG
> usenet@@@jasonhsu.com

4515. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 10:55:31 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <ats8j4$v77$1@slb9.atl.mindspring.net>
Source record: 39279
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Tom:

[snip]
"> others in this thread have said, it's that the difference between
> forward and reverse power is the direction of the current for a given
> voltage. For each wave, the voltage and current are related by
> v=Zo*i.
>
> Cheers,
> Tom
[snip]

So this must mean that some of the charges/Couloumbs [as represented by
electrons I presume]
are moving in one direction, say to the left, while others, are
simultaneously moving to the right.

Can this true?

I was always taught that like charges attract and unlike charges repel,
positive charges always
tend to move from positive to negative potentials and negative charges
always tend to move
from negative to positive potentials and so *all* of the charges of the
same kind, clearly
these are electrons in RG-58, must all be moving in more or less the same
direction. What?

Heh, heh...

I can just see two electrons passing each other going in opposite
directions, one says to the other,
"Where the heck do you think you are going? The positive direction is down
this way, you'r not
going in the *positive* direction, get with the program!"

I often ask myself, "If I were an electron, which way would I be going now,
and why?"

Thoughts, comments?

--
Peter K1PO
Indialantic By-the-Sea, FL

4516. Re: solid state amp output filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 12:46:09 UTC
From: Andy Cowley <andy.cowley@uwe.ac.uk>
Message-ID: <3E01BF90.D05F720F@uwe.ac.uk>
Source record: 39280
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,uk.radio.amateur

Ludo wrote:
>
> I recently bought a second hand 1kW solid state amp. The output filters
> are damaged, the transistors are still ok. First, the idea was to repair
> the filter, but after inspection, it seemed that it might be better to
> replace the entire filter-board. It consists of 6 low pass filters , each
> switched by relays. Any ideas where i can find these filters (rated at
> 1kW) ?
>

Inductors can be made with silver plated wire - Scientific Wire Co
or Hobbycraft. Capacitors from the usual suspects. High voltage
relays are harder to source, can you re-use what you already have
or find them from the original source?

vy 73

Andy, M3ABC

4517. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 13:41:13 UTC
From: Jeroen Belleman <Jeroen.Belleman@cern.ch>
Message-ID: <3E01CC79.C5474E78@cern.ch>
Source record: 39281
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

"Peter O. Brackett" wrote:
>
> Tom:
>
> [snip]
> "> others in this thread have said, it's that the difference between
> > forward and reverse power is the direction of the current for a given
> > voltage. For each wave, the voltage and current are related by
> > v=Zo*i.
> >
> > Cheers,
> > Tom
> [snip]
>
> So this must mean that some of the charges/Couloumbs [as represented by
> electrons I presume]
> are moving in one direction, say to the left, while others, are
> simultaneously moving to the right.
>
> Can this true?

Come one Peter, quit pulling the fellow's leg. He's the only
one who responded something that makes sense to those used to
think in volts and amperes.

Jeroen

4518. Re: Wanted 1GHZ PLL Evaluation Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 13:55:06 UTC
From: nospam_ronayling@hotmail.com
Message-ID: <3e01cea8.11180154@news.freeserve.co.uk>
Source record: 39282

So much for a simple 1g source
talk about verbal diarrhoea.......

> The original thread started with a desired single-
> frequency output at 1 GHz which was desired to be
> locked to an external 10 MHz reference frequency.
> There are many different ways to do that, including
> some that weren't mentioned (sampling types with
> auto-search on unlock, common in industry use in
> 1970 for microwave sources).
>
> Some others have commented on "decade" division
> but that is NOT any sort of absolute in division to
> lock to a reference. All that is required is a division
> of both source and reference to achieve the SAME
> frequency of input to the phase detector in a PLL.
> Decade division was mentioned as illustrative only,
> for the purposes of explanation. The original message
> had a fixed 1000 MHz source and a 10 MHz reference.
> The ratio of those is 100:1 and the 1 GHz source need
> only be divided by 100 more than the reference. 100
> factors to 2*2*5*5. Other dividers on both source and
> reference could be exactly the same binary, decade, or
> whatever is an integer number. From there on, the
> division is picked to fit a phase comparator input
> frequency and the loop filter values. With a single fixed
> source frequency the loop filter calculation is simple,
> no worries about fitting values to match variable division
> and/or non-linear VCO control voltage versus frequency
> curves.
>
> PLLs are quite convenient for easy selection of increments
> of frequency spaced at multiples of the phase detection
> reference frequency. The convenience there is to fit human
> beans' desire to have decimal values. PLLs themselves
> will lock just as nicely to non-decimal increments.
>
> The most difficult part about making a PLL at L-band
> or higher is layout and testing. Already-made "eval boards"
> have taken care of layout and manufacturers have already
> tested them to insure that customers can make a product
> work (and thus induce customers buying a large quantity).
> Nearly all such eval boards of today use a complex IC
> SOC which needs a digital data input (usually serial) to

> set the internal synthesizer. The task of making such a
> controlling device/circuit/whatever may be as hard or
> harder than fussing with an L-band controllable-frequency
> RF source by itself. If one has a microwave source but
> no instruments or other ways to check it out, the entire
> task becomes rather moot. :-)
>
> I'm just tossing out some alternate ways on accomplishing
> a desired task by another. There are many ways to do the
> task successfully. It is helpful to get detailed suggestions
> for homebrewers (such as Laura's) and not some general
> "it won't work and the IC gets hot" non-specific remark. :-)
>
> Len Anderson
> retired (from regular hours) electronic engineer person

4519. Auto tuner phase detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 14:00:39 UTC
From: jgboyles@aol.com
Message-ID: <20021219090039.27014.00000230@mb-dh.aol.com>
Source record: 39283

Hi,
Anyone got any ideas on a phase detector for a remote automatic antenna tuner I am thinking of building. The tuner portion wil consist of motor driven variable inductor and capacitor in a switchable "L" network. The rf for the tuning process will be supplied from an MFJ-259B back at the operating position.
I measured the output of the mfj into 50 ohms and got 1 volt rms at 20 ma. I am afraid this is not enough for a standard diode phase detector even using germaniums. I suppose I could use zero bias Schottky diodes, but don't have any at the moment and don't know where to get them. Also need ideas on ratio detector so the tuner knows the voltage and current ratio is 50 ohms.
Also the only time rf will be present in the phase detector is during "tune". otherwise the detector circuits will be bypassed. I plan on running a kilowatt from time to time and don't want to fry the detectors.
Thanks for any ideas.
73 Gary N4AST

4520. DSP Noise Kit ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 14:42:18 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <RZkM9.50396$lj.1225221@read1.cgocable.net>
Source record: 39284

Has anyone seen a Circuit or Kit that one can build to make a DSP Noise
Reduction Assembly to put with a speaker for HF Mobile Operation?
Tnx for looking...Norm VE3CZI

4521. Re: Wanted 1GHZ PLL Evaluation Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 15:39:34 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3e01069a$0$16813@echo-01.iinet.net.au>
Source record: 39269

Further to this post
The board artwork is available (Protel Autotrax) at the Website below
The PLL chips are small (SSOP) but can be soldered by hand with care
and the hard work of layout is done
Once you have mastered the PLL design from the National website (you dont
need a lot of math for this), you then have to work through proramming the
chip from a suitable source.
Using a micro is probably the best solution. While this is quite of bit of
work to master, it is becoming easier with all the tools available now and
programming is quite cheap and easy from a PC. Once you have mastered this
and have a working microcontroller system (I would use Atmel - mainly
because I already have a board that works), you have a powerful solution for
all sorts of RF and other control problems and the work will be definitely
worthwhile.

I agree with John Miles - you will spend a lot of time trying to
troubleshoot a discrete design using various legacy chips with no guarantee
of success. You will need a good set of test gear including suitable signal
generators and a spectrum analyser
In the end you will not be able to extend the design for other projects.

Richard

See my site http://www.iinet.net.au/~richardh/VK6BRO.htm for some micro
driven RF projects
Richard Hosking <richardh@iinet.net.au> wrote in message
news:3dfc7aad$0$11227@echo-01.iinet.net.au...
> You could look at
>
> http://www.qsl.net/ke5fx/
>
> The DDS/PLL board may be a bit of an overkill, but you could omit the DDS
> and simply drive the PLL with a reference.
> Most if not all PLL chips will need some programming to get them going and
> most will be serial.
> I think Hugh VA3TO was looking at getting some boards made up.
> If you want best phase noise performance it might be better to multiply up
a
> crystal source using doublers/triplers
>
> Richard
>
>
> Joe Leikhim <jleikhim@nettally.com> wrote in message
> news:3DFC2296.89229A10@nettally.com...

> > Hi I am looking for a 1.000 GHz frequency source to drive a
> > downconverter project. The source needs to be low noise and be
> > referenced to an external 10 Mhz reference. It doesn't need modulation
> > and channel spacing is not important. What I am looking for is a board
> > with parallel address lines which can be either DIP switch or jumper
> > programmable. I know that Z-Comm has an eval board that looks promising
> > but it requires a PC to load the data into a latch. It looks volatile. I
> > don't want to complicate the project with a PIC just to load the
> > frequency which will always be the same.
> >
> > --
> > Joe Leikhim K4SAT
> > Jleikhim@nettally.com
> >
> > "Jazz is not dead. It just smells funny." -F.Z.
> >
> >
>
>

4522. Re: DSP Noise Kit ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 16:01:23 UTC
From: Keith Piercey <salmo@nf.sympatico.ca>
Message-ID: <n3mM9.3293$A17.170202@ursa-nb00s0.nbnet.nb.ca>
Source record: 39285

If you read about how DSP works it would scare you (well, it did me) :O) I tried a Rat Shack one a while back but it wasn't that good. It went between the rig and speaker. I believe the DSP units in rigs are in the circuitry and because of that can be more effective.

Clean audio is always nice with some filters giving better results than others. Just this morning I was re-organizing a bit and decided to put a Bencher audio filter between rig and speaker. It worked for SSB and was better on CW, but nothing outstanding. The filtering in my TS-850S does just as well. Think I'll part with the Bencher. This afternoon I'm going to put my Autek QF-1 in and see how that compares. I used to use it with the old TS-820 and it did a pretty good job.

I mean, both work...just that the QF-1 is better.

Good luck with your search...I'll be interested to see what's out there.

de Keith VO1AE

4523. Re: solid state amp output filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 16:09:23 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <OEzQwdDz8eA+Ewg7@fslife.co.uk>
Source record: 39287
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,uk.radio.amateur

Ludo,

>I recently bought a second hand 1kW solid state amp. The output filters
>are damaged, the transistors are still ok. First, the idea was to repair
>the filter, but after inspection, it seemed that it might be better to
>replace the entire filter-board. It consists of 6 low pass filters , each
>switched by relays. Any ideas where i can find these filters (rated at
>1kW) ?
I have the mobile model by the same company.

Sounds like your amplifier has seen a high VSWR and smoked some of the
capacitors.

These are high voltage ceramics and are easily replaced.

I do not have a schematic of your amplifier but I imagine the chebychev
filter network is very similar to my amp.

Let me know if I can be of further help.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

4524. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 16:10:35 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E01EF7B.9060306@ieee.org>
Source record: 39286
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Peter O. Brackett wrote:

> Tom:
>> others in this thread have said, it's that the difference between
>>forward and reverse power is the direction of the current for a given
>>voltage. For each wave, the voltage and current are related by
>>v=Zo*i.
>>
> So this must mean that some of the charges/Couloumbs [as represented by
> electrons I presume]
> are moving in one direction, say to the left, while others, are
> simultaneously moving to the right.
>
> Can this true?

The waves in water are not the water molecules. The waves in the free electrons in a wire are not the electrons. The waves in both instances are the energy, not the particles.

If I put a steel bar to your head and hit it with a hammer, do you really think a steel molecule has moved from one end of the bar to the other?

If you anchor a rope at one end and then pop the other end, is the wave moving down the rope causing rope molecules to move from one end of the rope to the other?

> I often ask myself, "If I were an electron, which way would I be going now,
> and why?"

Electrons in a wire move in the direction set by the total emf which is either positive, negative, or zero, but they certainly don't move at the speed of light. We are discussing wave energy not physical movement of electrons. Just as water molecules carry wave energy without moving very much, electrons carry wave energy without moving very much.

Which way would you move? Knowing how ornery you are, you would probably choose a fractal pattern of movement. :-)
--
cheers, CAM http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

4525. QST April 1959

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 16:35:52 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v03tbkqvlce219@corp.supernews.com>
Source record: 39288

Has anyone got a copy of the article by Brune on SWR? in the subject issue
that can be emailed?
tnx
hank wd5jfr

4526. Re: QST April 1959 updated

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 16:40:08 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v03tjh5oclg8b@corp.supernews.com>
Source record: 39289

Has anyone got a copy of the article by Bruene on Directional Wattmeters in
the subject issue starting page 24 that can be emailed?
tnx
hank wd5jfr
"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:v03tbkqvlce219@corp.supernews.com...
> Has anyone got a copy of the article by Brune on SWR? in the subject issue
> that can be emailed?
> tnx
> hank wd5jfr
>
>

4527. Re: MC1648 VCO chip ...source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 16:44:22 UTC
From: marsgal42@hotmail.com
Message-ID: <d42b5a72.0212190844.73ebd4e9@posting.google.com>
Source record: 39290

L Caracciolo <larryc@northwest.com> wrote in message
news:<3E012E12.3A0391CB@northwest.com>...

> ...and what is your position regarding tubes?

Unlike obsolete solid state devices, which tend to
disappear, there is a plentiful supply of NOS tubes.

I prefer to use the available supply to maintain tube-
era equipment, like my Collins 51J-4. I'm baffled at
new construction with tubes. Whatever turns your crank,
I suppose; tube construction doesn't turn mine.

Laura Halliday VE7LDH "Que les nuages soient notre
Grid: CN89lg pied a terre..."
ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

4528. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 16:44:49 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <atst23$t8i$1@slb9.atl.mindspring.net>
Source record: 39291
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Cecil:

[snip]
> Electrons in a wire move in the direction set by the total emf which is
> either positive, negative, or zero, but they certainly don't move at the
> speed of light. We are discussing wave energy not physical movement of
> electrons. Just as water molecules carry wave energy without moving very
> much, electrons carry wave energy without moving very much.
>
> Which way would you move? Knowing how ornery you are, you would probably
> choose a fractal pattern of movement. :-)
> --
> cheers, CAM http://www.qsl.net/w5dxp
[snip]

Heh, heh... Me? Ornery? :-) Hey I never said electrons move at the speed
of light!

You are putting words in my mouth. Where or when did I ever say that?

Heh, heh...

As my favorite President used to say, "There you go again."

Attempting to change the subject to avoid the issue. Well Cec that just
won't work!

As I am sure you know, electrons move at the drift velocity which is
substantially
less than the speed of light.

This is analogous to the speed of the water molecules in a water pipe
[slow], and the
energy transmitted by those water molecules [fast]. The energy always moves
a hell of
a lot faster than the drift velocity of the particles that "carry" it.

The "energy" being transmitted by the slowly moving electrons in a metallic
conductor
often moves at close to the speed of light, but the electrons themselves
often move
at only a few meters per second. [It all depends on the density of the free
electrons.
You have to understand moles, molar measures, Avagodadro's Number and the
metal's density to compute the actual density of free electrons and their
velocity

given the value of the current.] But then Cecil I know that you already knew
all of that, and... BTW...

What the hell does the electron velocity have to do with this discussion anyway?

It was/is the electron's *direction* that we were discussing not their speed!

Jeeesh! ;-)

Happy Holidays,

--
Peter K1PO
Indialantic By-the-Sea, FL

4529. FS: Some neat stuff for Builders & collectors w/pics>> Happy Holidays!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 17:26:06 UTC
From: rlucch2098@aol.com
Message-ID: <20021219122606.15165.00000306@mb-fe.aol.com>
Source record: 39292

Hi Guys;
I have for Sale:
1)- 4 Ceramic couplings.
Price is $15.00ppd>>
http://www.myradioroom.com/4couplings.jpg
2)- US Army Audio filters NEW, Marked FL-5C
Price is $13.00ppd>>
http://www.myradioroom.com/armyfilter1.jpg
http://www.myradioroom.com/armyfilter2.jpg
http://www.myradioroom.com/armyfilter3.jpg
3) Johnson LP filter for 72 ohm w/box.
Price is $20.00PPD>>
http://www.myradioroom.com/johnsonlp.jpg
4)- Yaesu 2-meter converter board for FR-101 SW receiver, these are super hard to find.
Price is $50.00ppd>>
http://www.myradioroom.com/fr101-2mtr.jpg
5- Bogen Desk mike, by astatic & looks like Drake model but better, has switchable impedence, excellent!
Price is $50.00 ppd>>
http://www.myradioroom.com/bogen1.jpg
http://www.myradioroom.com/bogen2.jpg
6)- Hallicrafters HA-26 VFO for 6 & 2mtrs for thier AM rigs, in original box w/papers, like new & hard to find.
Price is $60.00ppd>>
http://www.myradioroom.com/hallivfo1.jpg
http://www.myradioroom.com/hallivfo2.jpg
http://www.myradioroom.com/hallivfo3.jpg
7)- Three Hi-Quality VU meters, all Brand new, 2 are simpsons.
Price is $50.00ppd>>
http://www.myradioroom.com/3vumeters.jpg
8)- Johnson Ranger II reliminary assembly instructions, new in original mailer,
Price is $20.00ppd>>
http://www.myradioroom.com/rangermanual.jpg
Thanks & 73,
Rich WA2RQY(1961)
WEB-PAGE http://members.aol.com/rlucch2098/index.html

4530. Re: QST April 1959

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 17:49:37 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v041ls205lg4f4@corp.supernews.com>
Source record: 39293

scratch the request, just got a copy...
"Henry Kolesnik" <wd5jfr@oklahoma.net> wrote in message
news:v03tbkqvlce219@corp.supernews.com...
> Has anyone got a copy of the article by Brune on SWR? in the subject issue
> that can be emailed?
> tnx
> hank wd5jfr
>
>

4531. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 18:06:45 UTC
From: OC_CAM's Razor <Cecil.A.Moore@ieee.org>
Message-ID: <3E020AB5.6000301@ieee.org>
Source record: 39294
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Peter O. Brackett wrote:
> What the hell does the electron velocity have to do with this discussion
> anyway?
>
> It was/is the electron's *direction* that we were discussing not their
> speed!

How can you decide direction without also deciding speed?
Going north or south at zero speed is the same thing.
--
cheers, CAM http://www.qsl.net/w5dxp

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http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
-----== Over 80,000 Newsgroups - 16 Different Servers! =-----

4532. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 18:40:46 UTC
From: k7itm@aol.com
Message-ID: <3200347.0212191040.43f7509b@posting.google.com>
Source record: 39295
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Soooo, Pete, do you believe the transmission line is a linear system

Cheers,
Tom
"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:<ats8j4$v77$1@slb9.atl.mindspring.net>...
> Tom:
>
> [snip]
> "> others in this thread have said, it's that the difference between
> > forward and reverse power is the direction of the current for a given
> > voltage. For each wave, the voltage and current are related by
> > v=Zo*i.
> >
> > Cheers,
> > Tom
> [snip]
>
> So this must mean that some of the charges/Couloumbs [as represented by
> electrons I presume]
> are moving in one direction, say to the left, while others, are
> simultaneously moving to the right.
>
> Can this true?
>
> I was always taught that like charges attract and unlike charges repel,
> positive charges always
> tend to move from positive to negative potentials and negative charges
> always tend to move
> from negative to positive potentials and so *all* of the charges of the
> same kind, clearly
> these are electrons in RG-58, must all be moving in more or less the same
> direction. What?
>
> Heh, heh...
>
> I can just see two electrons passing each other going in opposite
> directions, one says to the other,
> "Where the heck do you think you are going? The positive direction is down
> this way, you'r not
> going in the *positive* direction, get with the program!"
>
> I often ask myself, "If I were an electron, which way would I be going now,

> and why?"
>
> Thoughts, comments?

4533. Power Supply Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 18:51:48 UTC
From: Beowulf <beowulf@middlearth.net>
Message-ID: <r3540v0o126mtqblju9hnt1m9deraqn8ra@4ax.com>
Source record: 39296

I am not a amateur radio operator but I do have a lot of low power devices that I run off of a box full of wall warts.

Anyway, a 40 buck Radio Shack power supply that runs the CB radio and my SW radio went south on me. I was thinking that what I needed was at least one good well regulated well filtered bench supply that could run any one of my devices on it in a pinch and would have a long service life.

I was thinking of getting a Astron VS-20M linear power supply-variable from 2-15 volts with a continuous rating of 16 amps. I know it would be over-kill as far as my power requirements but that wouldn't be all bad either.

What do you think? Would such a PS work well?
Beowulf

4534. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 19:41:09 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <att7cnmjn1@slb0.atl.mindspring.net>
Source record: 39197
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Cecil:

[snip]
> How can you decide direction without also deciding speed?
> Going north or south at zero speed is the same thing.
> --
> cheers, CAM http://www.qsl.net/w5dxp
[snip]

Hey don't you remember your calculus and the theory of limits?

It all depends upon from which speed you approach stationarity.

If you approach zero speed from a positive speed, in the limit you get zero speed.

If you approach zero speed from a negative speed, in the limit you get zilch speed.

North and South have nothing to do with it because its a guided system.

--
Peter K1PO
Indialantic By-the-Sea, FL

4535. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 20:09:22 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v049rmdsm19iad@corp.supernews.com>
Source record: 39198
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Come guys, it's not what you say it's how you say it...
Your face could stop a clock... We know what that means but it's not nice!
Time stands still when I see you. Not as direct but we get the meaning!

Another axiom: If you can't explain something to others so that most of them can understand you probably don't understand if yourself!

So lets see if I meet line!

Since I've gotten older (62) I don't remember some things as well and to refresh my memory I got a copy of Bruene's 59 QST article and re-read parts Walt Maxwell's book Reflections.

The question was, how does a sensor for an SWR meter work as it seems like the diodes aren't smart enough to know forward from reverse! Walt explains that in the forward wave the voltage and current are in phase. However when a wave is reflected, the current is 180 degrees out of phase, (page 3-6 or 3-7 depending on issue) and that is because the current has changed direction to come back to its source. Bruene goes a little further saying that voltage and current on a line can be considered to have 2 components, a forward and reverse and explains that with phasor diagrams. So remember that current is moving forward to the load and any mismatch causes a reflected current coming back to the source. The returning current is 180 degrees out of phase (as it must be) and is real true power in that it can be used to heat a resistor. Walt points out that some writers have furthered the misunderstanding of reflected power by saying that is not real power because they have incorrectly assumed that the current is 90 degrees out of phase. And if you recall P=ExI for DC and P=ExIx cos. (phase angle), the cosine of 90 is zero but the cos. of 180 is ONE.

OK, now lets put a leg of the transmission line thru a few of turns of wire (transformer) and connect each end to the cathode of a diode, each diode going to a microammeter that is grounded. We also need a dc ground return for the transformer so lets connect a 100 ohm resistor to each end of the transformer.

Now here comes that part that should explain what happens. The forward current will induce a current in the transformer according to the right hand rule and only one of the diodes will conduct giving us a relative indication of the forward current. The other diode can't conduct from the forward current because it's biased off. But as soon as there's reflected current it will turn on, start conducting and send a relative amount of current to the other meter while the other diode is biased off.. I've left out the capacitors and rf chokes for simplification. This is hard to do without a blackboard but lets see if this helps.

73
hank wd5jfr.

"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0212191040.43f7509b@posting.google.com...
> Soooo, Pete, do you believe the transmission line is a linear system
>
> Cheers,
> Tom
> "Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:<ats8j4$v77$1@slb9.atl.mindspring.net>...
> > Tom:
> >
> > [snip]
> > "> others in this thread have said, it's that the difference between
> > > forward and reverse power is the direction of the current for a given
> > > voltage. For each wave, the voltage and current are related by
> > > v=Zo*i.
> > >
> > > Cheers,
> > > Tom
> > [snip]
> >
> > So this must mean that some of the charges/Couloumbs [as represented by
> > electrons I presume]
> > are moving in one direction, say to the left, while others, are
> > simultaneously moving to the right.
> >
> > Can this true?
> >
> > I was always taught that like charges attract and unlike charges repel,
> > positive charges always
> > tend to move from positive to negative potentials and negative charges
> > always tend to move
> > from negative to positive potentials and so *all* of the charges of the
> > same kind, clearly
> > these are electrons in RG-58, must all be moving in more or less the
same
> > direction. What?
> >
> > Heh, heh...
> >
> > I can just see two electrons passing each other going in opposite
> > directions, one says to the other,
> > "Where the heck do you think you are going? The positive direction is
down
> > this way, you'r not
> > going in the *positive* direction, get with the program!"
> >
> > I often ask myself, "If I were an electron, which way would I be going

now,
> > and why?"
> >
> > Thoughts, comments?

4536. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 20:23:14 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <att9rk$e8p$1@slb1.atl.mindspring.net>
Source record: 39199
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Hey Tom:

[snip]
"Tom Bruhns" <k7itm@aol.com> wrote in message
news:3200347.0212191040.43f7509b@posting.google.com...
> Soooo, Pete, do you believe the transmission line is a linear system
[snip]

Yep, the transmission line, the one we are all discussing, is a linear
system.

And furthermore all of the accompanying force fields are considered to be
conservative.

The mathematics is all very clear, at least to me, heh, heh...

Here, I'll recap.
--
The "voltage wave" variables are labeled A and B, the "circuit" variables
are labeled V [Volts] and I [Amps]. Of course one could work with
current wave variables or even normalized dimensionless wave variables,
but it really doesn't matter since, mathematically at least, the wave
variables
are nothing more than simple linear combinations of the electrical
variables.

The "reflected voltage wave" at the plane in question is: B = V - RI
and the "forward voltage wave" at the plane in question is: A = V + RI.

In matrix notation: Waves = [Matrix] x Electricals, where matrix is:

|1 -R |
|1 +R|

The "waves" are simply related by the linear reflection coefficient rho.

rho = B/A = (V - RI)/(V + RI)

The VSWR, and the ISWR since the system is linear, would indicate
the ratio of the largest to the smallest voltage on the media if the media
had any length, but it also holds for an infinitesimal lenght and is defined
in terms of rho as:

VSWR = (1 + |rho|)/(1 - |rho|)

Where V is the voltage across the reference plane, independent of the
path taken in the evaluation of the line integral which defines V, and I is

the current flowing in the positive direction perpendicular to the plane.
R is a function of the reference media and because of linearity this
reference impedance [characteristic impedance] is equal to the
ratio of voltage to current in that media, R=V/I.

The so-called SWR meter is just an analog computer which measures
V and I and then computes B = V - RI to give an indication of reflected
voltage [cfr. Reg Edwards TLI!]. To make the mathematical division
operation simple, most simple VSWR meters then force or assume
a nominal unit value for the forward "wave" i.e. letting, A = 1.0, or else
they utilize a nomographic analog divider [crossed needles indicating
A and B on separate meter needles] thus providing an indication of
VSWR.

And so... in simple terms, a VSWR meter is an analog computer with
analog sensors which measure V and I at a point/plane and then compute
VSWR according to the above mathematics for display.

Such a meter if it DC coupld and is well designed can provide an
appropriate indication over all frequency ranges down to and including
DC, whether or not there is an actual transmission line present, or whether
or not, say in the case of DC there is an actual standing wave present.
--
See, I know all that mathematical stuff!

But wow... all that being said, I understand the mathematics, but I still
don't understand in a physical sense how the sensor detects which
direction a wave is going! What the OP wanted was a simple
physical explanation. How difficult can it be?

A = V + RI goes one way and B = V -RI goes the other, but...

What the heck are A and B? What are they made of? [Both
volts and amps in linear combination.] What do they look like?
[On a scope they would be voltage sine waves or simple DC
values for DC "waves".]

But that's not satisfying enought for me...

You know, I want a physical explanation, not a mathematical one!

What does the forward wave A actually look like and what does
the reflected wave B actually look like, and how can I tell
one is going West when the other is going East? And are the
electrons in A going in the opposite directions to the ones in B?
Or are all the electrons going the same way in I?

Inquiring minds want to know!

Happy Holidays,

--
Peter K1PO
Indialantic By-the-Sea, FL

4537. Re: Power Supply Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 21:07:39 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v04d9otktoofc4@corp.supernews.com>
Source record: 39200

I suspect that most of the devices run off 13.8 or close to it, certainly the CB and if the SW radio was using the same supply, well. More than likely many (but probably not all) of the wall warts are also somewhere between 12 and 15 volts.

Personally, I'd find it real annoying to shut off the radio so I could turn the power supply down to power the drill, or whatever, so I think I would just be inclined to go with a single voltage supply, something like an RS-25, say. Although you can never have enough amps, so think hard about something like an RS-50 ... the price differential isn't all that great.

Now about Astron linear supplies in particular ... plan to reinforce the desk, those things are heavy! BUT, it sure is nice to have that RS-35M sitting in the corner pumping out 13.8 volts, rain or shine, year after year, never asking for attention or making a sound...

If you are in the basement AND have some ventilation, you might consider a car battery and charger. Modern microprocessor controlled chargers are pretty bright about keeping the battery topped up, and you can probably get a pretty hefty battery and a charger for about half the price of the Astron. But you would like a concrete floor in case of a spill and a drafty place where you aren't going to collect hydrogen. Has the added advantage of continuing to operate when a thunderstorm takes out the lights.

..

"Beowulf" <beowulf@middlearth.net> wrote in message
news:r3540v0o126mtqblju9hnt1m9deraqn8ra@4ax.com...
> I am not a amateur radio operator but I do have a lot of low power
> devices that I run off of a box full of wall warts.
>
> Anyway, a 40 buck Radio Shack power supply that runs the CB radio and
> my SW radio went south on me. I was thinking that what I needed was at
> least one good well regulated well filtered bench supply that could
> run any one of my devices on it in a pinch and would have a long
> service life.
>
> I was thinking of getting a Astron VS-20M linear power supply-variable
> from 2-15 volts with a continuous rating of 16 amps. I know it would
> be over-kill as far as my power requirements but that wouldn't be all
> bad either.
>
>
> What do you think? Would such a PS work well?
> Beowulf

4538. Valiant II reduction drive wanted...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 21:12:59 UTC
From: John Martin <jwmartin@pronetisp.net>
Message-ID: <3E02365B.F3C0C679@pronetisp.net>
Source record: 39201

Hello gang,

I'm looking for the brass reduction drive for the VFO.

The flexible shaft coupling would be a plus, if also available.

Email to jwmartin@pronetisp.net.

Thanks and 73,
John
K3OWZ
exW4KYL '64-'02
ex K3OWZ '61-'64

--
http://www.paynoincometax.com

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4539. Re: Power Supply Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 22:29:57 UTC
From: scott <acepilot@bloomer.net>
Message-ID: <3E024865.76B71F20@bloomer.net>
Source record: 39202

I've had great luck with my Astron VS-50M. Zero trouble. Would be overkill for you, but it would be there for any future expansion, such as if you ever DO get into ham radio...most HF rigs running 100 Watts need at least a 20 Amp supply....something to think about.

Scott
N0EDV

Beowulf wrote:

> I am not a amateur radio operator but I do have a lot of low power
> devices that I run off of a box full of wall warts.
>
> Anyway, a 40 buck Radio Shack power supply that runs the CB radio and
> my SW radio went south on me. I was thinking that what I needed was at
> least one good well regulated well filtered bench supply that could
> run any one of my devices on it in a pinch and would have a long
> service life.
>
> I was thinking of getting a Astron VS-20M linear power supply-variable
> from 2-15 volts with a continuous rating of 16 amps. I know it would
> be over-kill as far as my power requirements but that wouldn't be all
> bad either.
>
> What do you think? Would such a PS work well?
> Beowulf

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

4540. Re: Tube kit/design sought.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 23:00:18 UTC
From: Allodoxaphobia <nobody@jonz.net>
Message-ID: <slrnb04jrv.6fh.nobody@animas.frontier.net>
Source record: 39203

On Tue, 17 Dec 2002 19:44:18 -0600, Jeremy Becnel hath writ:
> After a while of lurking, Ive decided to pipe up with a question.
>
> I am looking to build a tube bc/sw radio that would not look out of place in
> the 30s or 40s. Homebuilt appearance is desired for what I am wanting to do
> with it. So that puts the AES kit on it's ear as it uses a mini-tube.
>
> Ive looked on the web for kits and have come up with hardly anything
> worthwhile. Ebay is no good, homebrew stuff is too expensive and I want the
> satisfaction of building something of my very own.
>
> A little of my background. I am a ham, no-code tech, and have been since
> 96. One of my hobbies, what this radio will be for, is reenacting WWII.
> This is one of my hobbies that I most likely cant afford, but it wouldnt be
> a fun hobby any other way, would it? I am in the process of restoring an
> S-20R, waiting on fresh tubes right now.
>
> I work assembling cellemetery equipment, so I have a small, but growing,
> knowledge of electronics and have built a crystal radio, not that a
> semi-trained monkey could'nt, and have helped with a few other things.
>
> Many thanks in advance,
>
> Jeremy Becnel
> KC5TEK
>
>
>

--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

4541. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-19 23:19:33 UTC
From: 'Doc <w5lz@cwis.net>
Message-ID: <3E025405.76E45262@cwis.net>
Source record: 39204
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Here we go 'round the mulberry bush...
'Doc

4542. Re: Power Supply Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 00:13:29 UTC
From: Beowulf <beowulf@middlearth.net>
Message-ID: <o6n40v00dhbqcurt54i9rp26t7i9t8cj73@4ax.com>
Source record: 39205

On Thu, 19 Dec 2002 16:07:39 -0500, "xpyttl"
<xpyttl_nospam@earthling.net> wrote:

>I suspect that most of the devices run off 13.8 or close to it, certainly
>the CB and if the SW radio was using the same supply, well. More than
>likely many (but probably not all) of the wall warts are also somewhere
>between 12 and 15 volts.
>
Couldn't I run two or more devices at once so long as they both have
the same voltage requirements? Wouldn't the PS see two devices, one
requiring 3 amps, and one requiring 6 amps, but both requiring 13.8
volts dc as one load of 9 amps at 13.8 volts dc? Or do I
misunderstand?

>Personally, I'd find it real annoying to shut off the radio so I could turn
>the power supply down to power the drill, or whatever, so I think I would
>just be inclined to go with a single voltage supply, something like an
>RS-25, say. Although you can never have enough amps, so think hard about
>something like an RS-50 ... the price differential isn't all that great.

For the low power devices I'm thinking of making a outlet box and each
outlet with a different voltage from 3-12 volts. Each outlet would be
controlled by a 78xx regulator and I would set the Main PS at at 13.8
volts dc and feed it into the box. Each regulator would give me about
1 amp each. Does this sound like it would work?

Thanks for your response,
Beowulf

4543. Re: DSP Noise Kit ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 00:47:19 UTC
From: Norm VE3CZI <ve3czi@arrl.net>
Message-ID: <7OtM9.37810$L47.4790001@read2.cgocable.net>
Source record: 39206

Hi Keith:
I have been playing with various Commercial Speakers...Motorola, GE, Midland etc and have found that on my TS-570, the Midland Speaker sounds the "best"...for my ears anyway. I believe every person has a different audio curve for his/her ear resulting in hearing the highs or lows at different amplitudes.

I am now trying to find a suitable speaker for the HF rig in the car...the Midland seems to filter out the QRN a bit more than the other units, although ALL are probably designed for audio response of 300 - 3000 Hz and I'm sure the location of the speaker will determine the audio response. I've been using an external GE Speaker in the Left hand corner of my Dash (closer to my ear) and the audio has a tendency to bounce up..off the window giving me reasonable audio level and a different audio response then the speaker ALONE on the bench.

I've used the QF-1 Filter, but believe it is an analog audio filter...did the job but not for this purpose.

The W9GR DSP filter, I used to have, worked really well in the Noise Position, but would be too big for this application..besides, I sold it a while back as my TS-570 has all the DSP I needed.

The DSP concept is interesting, and have been doing LOTS of searching on Internet for DSP chips/kits to buy to play with. Maybe easier to go and buy the ClearSpeech Mobile unit, but then we don't learn anything...HI!
Tnx for the response...will keep looking and adding another project to the existing List!
73...Norm VE3CZI

"Keith Piercey" <salmo@nf.sympatico.ca> wrote in message
news:n3mM9.3293$A17.170202@ursa-nb00s0.nbnet.nb.ca...
> If you read about how DSP works it would scare you (well, it did me) :O)
I
> tried a Rat Shack one a while back but it wasn't that good. It went
between
> the rig and speaker. I believe the DSP units in rigs are in the circuitry
> and because of that can be more effective.
>
> Clean audio is always nice with some filters giving better results than
> others. Just this morning I was re-organizing a bit and decided to put a
> Bencher audio filter between rig and speaker. It worked for SSB and was
> better on CW, but nothing outstanding. The filtering in my TS-850S does
just
> as well. Think I'll part with the Bencher. This afternoon I'm going to
put

> my Autek QF-1 in and see how that compares. I used to use it with the old
> TS-820 and it did a pretty good job.
>
> I mean, both work...just that the QF-1 is better.
>
> Good luck with your search...I'll be interested to see what's out there.
>
> de Keith VO1AE
>
>

4544. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 01:32:05 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <attrum$gi5$1@slb2.atl.mindspring.net>
Source record: 39207
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Doc:

Heh, heh...

[snip]
"'Doc" <w5lz@cwis.net> wrote in message news:3E025405.76E45262@cwis.net...
> Here we go 'round the mulberry bush...
> 'Doc
[snip]

Whenever the technology jocks in this group go around the mulberry bush, as they
often do, I am reminded of what Humpty said in Alice's Wonderland.

--
"When I use a word", Humpty Dumpty said, in a rather scornful tone,
"it means just what I choose it to mean, neither more nor less."

"The question is", said Alice, "whether you can make words mean so many different things."

"The question is", said Humpty Dumpty, "Who is to be master: - that's all."

--Lewis Carol, "Alice in Wonderland - The Turtle soup"
--

I wonder who is the Master of Reflections? Heh, heh...

--
Peter K1PO
Indialantic By-the-Sea, FL

4545. Re: Power Supply Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 01:49:08 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <WDOdnYnVSZUfGJ-jXTWcpQ@ctc.net>
Source record: 39213

> my SW radio went south on me. I was thinking that what I needed was at
> least one good well regulated well filtered bench supply that could
> run any one of my devices on it in a pinch and would have a long
> service life.
>
> I was thinking of getting a Astron VS-20M linear power supply-variable
> from 2-15 volts with a continuous rating of 16 amps. I know it would
> be over-kill as far as my power requirements but that wouldn't be all
> bad either.

The Astrons are very good supplies. I have used them for over 20 years in various applications. The only problem that I have found with them is they can be gliched if the 110 volt AC power goes off andback on very fast, like the lights blinking in a thunder storm. The over voltage protection circuit will activate. You then have to shut it off for a a few seconds , then turn it back on. I have a 50 amp Astron powering several of my ham transceivers at the same time now. It loafs along as about the most I pull is 30 amps at one time.

4546. Re: Power Supply Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 02:05:01 UTC
From: Brian Griffey <briangriffey@worldnet.att.net>
Message-ID: <hVuM9.4963$p_6.386235@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39209

I personally like Astron products... good bang-for-the-buck.

--
||||||||||||||||||||||||||||||||||||||||||||||||||
Brian Griffey
Check out the SkyWave Linear Amplifier at:
http://home.att.net/~briangriffey/Index.html
||||||||||||||||||||||||||||||||||||||||||||||||||

"Beowulf" <beowulf@middlearth.net> wrote in message
news:r3540v0o126mtqblju9hnt1m9deraqn8ra@4ax.com...
> I am not a amateur radio operator but I do have a lot of low power
> devices that I run off of a box full of wall warts.
>
> Anyway, a 40 buck Radio Shack power supply that runs the CB radio and
> my SW radio went south on me. I was thinking that what I needed was at
> least one good well regulated well filtered bench supply that could
> run any one of my devices on it in a pinch and would have a long
> service life.
>
> I was thinking of getting a Astron VS-20M linear power supply-variable
> from 2-15 volts with a continuous rating of 16 amps. I know it would
> be over-kill as far as my power requirements but that wouldn't be all
> bad either.
>
>
> What do you think? Would such a PS work well?
> Beowulf

4547. Re: Power Supply Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 02:11:34 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v04v3pkvenf938@corp.supernews.com>
Source record: 39210

"Beowulf" <beowulf@middlearth.net> wrote in message
news:o6n40v00dhbqcurt54i9rp26t7i9t8cj73@4ax.com...

> Couldn't I run two or more devices at once so long as
> they both have the same voltage requirements? Wouldn't
> the PS see two devices, one requiring 3 amps, and one
> requiring 6 amps, but both requiring 13.8 volts dc as
> one load of 9 amps at 13.8 volts dc?

Yes, exactly. I was assuming that you wanted a variable voltage supply
because you had a variety of different voltage wall warts.

> For the low power devices I'm thinking of making a outlet
> box and each outlet with a different voltage from 3-12
> volts. Each outlet would be controlled by a 78xx regulator
> and I would set the Main PS at at 13.8 volts dc and feed it
> into the box. Each regulator would give me about 1 amp
> each. Does this sound like it would work?

That would make good sense. The only thing I would be a little careful
about is to measure the voltage out of the wall warts with the device turned
on. Most wall warts are unregulated, and a 15 volt wall wart may very well
deliver 8 or 9 volts under load. Since they typically come with the device,
but are often supplied by a third party, it could very well be that 15 volts
could toast the device even though that's what it says it needs on the wall
wart.

The other little gotcha is that sometimes it works the other way. Most "12
volt" devices actually expect 13.8 volts and will often run just fine at 15,
so they will have a 15 volt wall wart. Most often, these devices will run
just fine off 13.8. However, sometimes, especially when they are used to
charge internal batteries, they will actually need the full 15 volts.

..

4548. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 02:17:19 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v04velo4gs7602@corp.supernews.com>
Source record: 39211
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

C'mon, Doc. Let the poor guy in on it. We all know it's witchcraft.

..

"'Doc" <w5lz@cwis.net> wrote in message news:3E025405.76E45262@cwis.net...
>
>
> Here we go 'round the mulberry bush...
> 'Doc

4549. Experiences with LC meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 02:20:58 UTC
From: k9sqg@aol.com
Message-ID: <20021219212058.29498.00000154@mb-ma.aol.com>
Source record: 39212

I'm considering buying an LC meter, mainly for the inductance measuring capability. I don't need a lab quality bridge, just a simple hand-held device will be ok. Just trying to find out people's experiences with various brands and the pro and con of each.

Thanks for reading the posting and hope you have an enjoyable holiday season.

Evan

4550. Re: Experiences with LC meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 03:58:39 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3E02956F.50C20A94@nettally.com>
Source record: 39214

I have an AADE (Almost All Digital Electronics) LC Metr II/B. I found it easy to build (kit), looks great and works great. Very repeatable results.

Joe

K9SQG wrote:

> I'm considering buying an LC meter, mainly for the inductance measuring
> capability. I don't need a lab quality bridge, just a simple hand-held device
> will be ok. Just trying to find out people's experiences with various brands
> and the pro and con of each.
>
> Thanks for reading the posting and hope you have an enjoyable holiday season.
>
> Evan

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

4551. Re: Experiences with LC meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 03:59:12 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3E029590.AFD77AA0@nettally.com>
Source record: 39215

I have an Almost All Digital Electronics (AADE) LC Meter II/B. I found it easy to build (kit), looks great and works great. Very repeatable results.

Joe

K9SQG wrote:

> I'm considering buying an LC meter, mainly for the inductance measuring
> capability. I don't need a lab quality bridge, just a simple hand-held device
> will be ok. Just trying to find out people's experiences with various brands
> and the pro and con of each.
>
> Thanks for reading the posting and hope you have an enjoyable holiday season.
>
> Evan

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

4552. Re: Wanted 1GHZ PLL Evaluation Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 04:21:23 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3E029AC3.4CAE29BE@nettally.com>
Source record: 39216

OK!
I can't believe all the responses to this question! All of this was appreciated.
My original post was for a PLL board which was programmable by parallel data so that the dividers could be hardwired, eliminating the need for any processor circuitry.

There was a firm selling such a board a few years ago. The sold prototype boards for TO-5 RF amplifiers and VCO's. I since lost track of them.

Here is what I have learned:

Don't try to do direct synthesis at 1 GHz too much phase noise.
Multiply from a crystal.
Use a narrow loop filter -- 1 kHz or less -- and you'll have no trouble achieving the VCO's 10 kHz noise spec of -104 dBc/Hz.
Etc.

I have decided to resurrect an old GLB synthesizer board (80's vintage with a Motorola 1414x?? chip) and strip off the on board VCO and substitute a prescaler in its place. An outboard minicircuits VCO will do the heavy hauling. I will have to rejig the dividers to work with the prescaler and external 10 MHz reference. The loop will be another task because I am not sure the GLB has the voltage swing or fioltering required. Of course I will need a active filter to provide low noise VCO supply voltage.

I am building a converter to allow a 0-1 GHz spectrum analyser/tracking generator work up to 2 GHz. A 2 GHz LO would get me to 3 GHz, so I am also looking into making the PLL work with a second VCO for that range.

Joe Leikhim wrote:

> Ron wrote:
>
> > The serial data isn't anything to do with the eval board?
> > you are actually programming the device, if you use any
> > of those devices you will need to get data into them
> >
>
> Are you saying once I program their (Z-COMM's) PLL with their PC based loader
> I can remove power from the circuit and it will retain the frequency data? If
> so it will work.
>
> > Why 10mhz? why not a 300mhz tripler, wouldn't be that
> > noisy? say a balanced ring with a couple of Schottky dodes?
> >
>

> I guess I could do that but I want the LO to be locked to the 10 MHz
> reference of the host equipment. So 1000/10 is a lot of multiplication and
> possible spurs.
>
> >
> > On Sun, 15 Dec 2002 01:35:02 -0500, Joe Leikhim
> > <jleikhim@nettally.com> wrote:
> >
> > >Hi I am looking for a 1.000 GHz frequency source to drive a
> > >downconverter project. The source needs to be low noise and be
> > >referenced to an external 10 Mhz reference. It doesn't need modulation
> > >and channel spacing is not important. What I am looking for is a board
> > >with parallel address lines which can be either DIP switch or jumper
> > >programmable. I know that Z-Comm has an eval board that looks promising
> > >but it requires a PC to load the data into a latch. It looks volatile. I
> > >don't want to complicate the project with a PIC just to load the
> > >frequency which will always be the same.
>
> --
> Joe Leikhim K4SAT
> Jleikhim@nettally.com
>
> "Jazz is not dead. It just smells funny." -F.Z.

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

4553. Re: Experiences with LC meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 04:24:56 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <N-6dnaCBpfQ6Bp-jXTWcog@comcast.com>
Source record: 39217

The Heath impedance bridge goes for about $20 or less on EBay -- it isn't a Genrad or HP, but nicely acurate for the money. Only drawback is that you need a pair of 9 volt batteries.

I am not fond of the little add-on kit sold by Jameco.

Jack

"K9SQG" <k9sqg@aol.com> wrote in message news:20021219212058.29498.00000154@mb-ma.aol.com...
> I'm considering buying an LC meter, mainly for the inductance measuring
> capability. I don't need a lab quality bridge, just a simple hand-held device
> will be ok. Just trying to find out people's experiences with various brands
> and the pro and con of each.
>
> Thanks for reading the posting and hope you have an enjoyable holiday season.
>
> Evan

4554. Re: MC1648 VCO chip ...source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 04:50:30 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <v04tm5n3llhsec@corp.supernews.com>
Source record: 39208

Kind of strange, but I have 4 or 5 of them in my parts box. I think
I bought them for a project that I was experimenting with that
was similar to a project I saw in Wes H's solid state design book
years ago. I still have a circuit board left over I was using to
play with the chip on.

N4IJ

Laura Halliday <marsgal42@hotmail.com> wrote in message
news:d42b5a72.0212190844.73ebd4e9@posting.google.com...
> L Caracciolo <larryc@northwest.com> wrote in message
news:<3E012E12.3A0391CB@northwest.com>...
>
> > ...and what is your position regarding tubes?
>
> Unlike obsolete solid state devices, which tend to
> disappear, there is a plentiful supply of NOS tubes.
>
> I prefer to use the available supply to maintain tube-
> era equipment, like my Collins 51J-4. I'm baffled at
> new construction with tubes. Whatever turns your crank,
> I suppose; tube construction doesn't turn mine.
>
> Laura Halliday VE7LDH "Que les nuages soient notre
> Grid: CN89lg pied a terre..."
> ICBM: 49 16.57 N 123 0.24 W - Hospital/Shafte

4555. Looking for circuit for 6m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 04:57:04 UTC
From: KC8PMX <kc8pmx@NOSPAMdiamondcs.net>
Message-ID: <atv9qi414v2@enews2.newsguy.com>
Source record: 39226

I am looking for a circuit schematic for a simple 6 meter SSB (Upper SB)
single frequency reciever (reciever only) to monitor 50.125Mhz.

Thanks,

--
Ryan, KC8PMX
FF/MFR
REMOVE "NOSPAM" in email address to reply.

4556. Re: Experiences with LC meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 06:48:05 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <F2zM9.70414$hK4.5820369@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39218

I also have that AADE meter; it is a good unit. It operates at approximately 750kHz, so there is enough inductance reactance even with small value inductors to make relatively precise measurements. He also has a good filter design program. Not quite Eagleware, but good bang for the buck.

Pete

4557. Re: Power Supply Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 07:52:35 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <a9f50vskhtujurfvci53ldv957v2j41dp6@4ax.com>
Source record: 39219

On Thu, 19 Dec 2002 12:51:48 -0600, Beowulf <beowulf@middlearth.net>
wrote:

>I am not a amateur radio operator but I do have a lot of low power
>devices that I run off of a box full of wall warts.

There is one nice thing about these wall warts, they provide an
isolated power supply to only a single device. This can become
important, if actual load devices are connected together with e.g.
audio cables, since all kind of ground loop problems can occur.

Some devices might have positive grounding, thus a floating power is
nice if you intend to connect devices together.

Also some devices, such as battery charges, may expect a quite high
power supply impedance to limit the charge current.

Some wall warts are actually transformers, feeding AC to the device
and the devices may generate positive and negative voltages
internally.

>Anyway, a 40 buck Radio Shack power supply that runs the CB radio and
>my SW radio went south on me. I was thinking that what I needed was at
>least one good well regulated well filtered bench supply that could
>run any one of my devices on it in a pinch and would have a long
>service life.
>
>I was thinking of getting a Astron VS-20M linear power supply-variable
>from 2-15 volts with a continuous rating of 16 amps. I know it would
>be over-kill as far as my power requirements but that wouldn't be all
>bad either.

If you run all devices from the high current power supply, it is a
good idea to install fuses to the individual DC power lines, since the
small power cables might melt, if a large 15-30 A short circuit
current would flow if the load device failed.

The wall warts have quite different output voltages, so if you want to
run different devices simultaneously, you might have a problem. A
better solution would be to have a high power 13.8 V orlarger power
supply and use individual 78xx regulators for each load device. Even
if one load device would be short circuited, only that device is taken
out by the current limitation of the 78xx, 78Lxx etc. regulators.

Paul OH3LWR

4558. Re: First mixer in Drake R7/TR7?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 08:49:41 UTC
From: d8lars@dtek.chalmers.se
Message-ID: <atulj5$62f$1@nyheter.chalmers.se>
Source record: 39220

Hi!

In article <5rs00vcbnerpbk1qbt4cptav1a6bpm7ppi@4ax.com>,
Jack Smith <jsmith@mnsinc.com> wrote:
>I checked my R7 manual and it looks like the mixer is a pin-for-pin
>match with MiniCircuits plug-in balanced mixers. (Others also use the
>same pinout.)
>
>Drake seems to have reversed some of the nominal connections, but this
>is not a problem as these devices are symetrical.
>
>The injection level is 1 volt RMS according to my R7 manual. That
>corresponds to 20 mW, or +13 dBm. So, a Level 13 mixer looks like a
>good match. These can be found at
>http://www.minicircuits.com/dg03-102.pdf
>
>
>Jack K8ZOA

Ok, thanks Jack. I have heard about people who have redesigned their TR7's
to get higher IP3. This mod involves changes to the first mixer. I have been
thinking about doing this myself but wanted to know a bit more about the
original circuit.

I got to the same conclusion as you, i.e. that the original is a level-13-
mixer, but was a bit unsure, so better ask :-)

I have a SRA-1H, a level 17 mixer, that might be a good candidate for the
mod. But I need to make a redesign of the LO amplifier also, to reach this
level, +17 dBm. Perhaps I will try to get hold of a SRA-3H instead, it has
a 0.05-200 MHz RF port, SRA-1H has 0.5-200 MHz which may not be good in
an R7.

I see that Minicircuits also have Level 23 and 27 mixers... might perhaps
be something to try... :-)

73 de Lars, sm6rpz
--
Lars E Pettersson | Chalmers University of Technology
d8lars@dtek.chalmers.se | Gothenburg, SWEDEN

4559. Re: solid state amp output filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 09:31:29 UTC
From: Ludo <nospam@nospam.com>
Message-ID: <RrBM9.61726$Ti2.9406@afrodite.telenet-ops.be>
Source record: 39221
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,uk.radio.amateur

Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk> wrote in
news:OEzQwdDz8eA+Ewg7@fslife.co.uk:

> Ludo,
>
>>I recently bought a second hand 1kW solid state amp. The output filters
>>are damaged, the transistors are still ok. First, the idea was to repair
>>the filter, but after inspection, it seemed that it might be better to
>>replace the entire filter-board. It consists of 6 low pass filters , each
>>switched by relays. Any ideas where i can find these filters (rated at
>>1kW) ?
> I have the mobile model by the same company.
>
> Sounds like your amplifier has seen a high VSWR and smoked some of the
> capacitors.
>
> These are high voltage ceramics and are easily replaced.
>
> I do not have a schematic of your amplifier but I imagine the chebychev
> filter network is very similar to my amp.
>
> Let me know if I can be of further help.

Hi,

Thanks for taking the time to read my post.
Actually the core material is burned, the capacitors seem to be ok.

L.

4560. QST articles on solid state amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 09:42:59 UTC
From: Johan <nospam@nospam.com>
Message-ID: <DCBM9.61741$Ti2.9306@afrodite.telenet-ops.be>
Source record: 39222

Hi,

I'm looking for articles published in QST on solid state amps.
I think the first article appeared around '81, the other one around '91 or '92. Can anyone send me a copy of these articles please ? Cheapest way is via email.. Anyone ?

Johan, ON7DU (you can find my email on www.qrz.com)

4561. Re: solid state amp output filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 10:14:50 UTC
From: Philip de Cadenet <Philstheboss@thebbc.fslife.co.uk>
Message-ID: <4lZNYvEa2uA+EwlN@fslife.co.uk>
Source record: 39223
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,uk.radio.amateur

Ho Ludo,

>Thanks for taking the time to read my post.
>Actually the core material is burned, the capacitors seem to be ok.

SMOKING

I've just checked my 'Metron' amp manual and the part numbers or
description of the filter inductors do not in any way tell you what
brand or type of ferrite core is used.

IMHO Type 43 offers the best overall performance from 160-10m.

However I've just found the business card from my last point of contact
at Datron who it seems are now part of Titan Systems Corp.

You may wish to contact David Bradley who's e-mail is;

dbradley@titan.com

You'll receive my consultancy invoice at the end of the month:-)

Happy Christmas.
--
Philip de Cadenet G4ZOW
Transmitters 'R' Us
http://www.transmittersrus.com

4562. Re: WANT Active Dual SWR Power Meter or schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 12:55:21 UTC
From: restamp@hotmail.com
Message-ID: <ZqEM9.88$Vo5.353893@twister.columbus.rr.com>
Source record: 39224
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.radio.amateur

In article <3DFA5F1D.69FA154F@flex.com>,
frazier@flex.com <frazier@flex.com> wrote:
>I've got a SignalCrafter model 30 SWR Power meter and would like to find
>another in working condition, or another SWR/Power meter with similar
>features.
>
>The SignalCrafter Model 30 has two meters. The lefthand one displays
>Power in three ranges, 20W, 200W, and 2000W. The righthand meter
>displays SWR, and under the SWR scale is something they called
>reflection coefficient. It also provides the ability to switch between
>three antennas and a dummy load. I don't care about the switching for
>antennas, as I only use mine for a SWR/Power meter, and use a different
>custom switching array for my antenna switches.
>
>The SignalCrafter Model 30 was made in the early 80's and is an ACTIVE
>SWR meter. There is no "set" knob or need to mess around with anything
>other than the switches that select the power level. It's operation is
>very similar to the dual panel meters that are built into the JW Miller
>AT2500 Antenna Tuner of similar vintage.
>
>Does anyone know of the availability of a SignalCrafter Model 30 or
>similar unit, or have a schematic that could be used to modify (add
>circuitry) to the existing cross needle swr meters in my MFJ
>Differential T Tuners? I really dislike the cross needle meters that
>require you to interpret the swr by reading a red line where the needles
>cross. I can pretty easily make a new dial scale if I can get a
>schematic to build the active circuitry to drive the meters.

Except for the fact that the meters are reversed, and there is
no Reflection Coefficient scale, I believe the Autek Research
WM1 Deluxe Computing SWR/Wattmeter would fit your bill. I have
one and like it, and an added bonus is that it can read Avg Pwr
or PEP:

<http://www.autekresearch.com/wm1.htm>

Rob

4563. Helically-Wound Antennas for Hand Portables

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 14:39:22 UTC
From: Paul Burridge <pb@notthisbitosiris1.co.uk>
Message-ID: <9ha60vsjc88rnq5ajdec5mpfro30ferf3p@4ax.com>
Source record: 39227
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Hi,

Can anyone point me to any sources of information on design
considerations/construction of the 'rubber duck' type of antenna?

Thanks.

p.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

4564. Re: QST articles on solid state amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 14:40:58 UTC
From: jgboyles@aol.com
Message-ID: <20021220094058.22331.00000366@mb-md.aol.com>
Source record: 39225

>I'm looking for articles published in QST on solid state amps.

Hi Johan,
I suggest you go to the communication concepts webpage
www.communication-concepts.com
and download the Motorola application notes on solid state Amps. These were written by Granberg (SK). The articles he wrote in QST are based on these application notes.
I just built an amp using 2 of the EB104 type boards (8-MFR 150 FETs) for about 1200 watts pep output. Got all the components for the rf deck from Comm concepts.
73 Gary N4AST

4565. Re: Looking for circuit for 6m

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 17:47:33 UTC
From: Allodoxaphobia <nobody@jonz.net>
Message-ID: <slrnb06ltl.p57.nobody@animas.frontier.net>
Source record: 39228

On Thu, 19 Dec 2002 23:57:04 -0500, KC8PMX hath writ:
> I am looking for a circuit schematic for a simple 6 meter SSB (Upper SB)
> single frequency reciever (reciever only) to monitor 50.125Mhz.

What I did for a long time was simply use a FM-only scanner on
50.125. If the squelch ripped open with sigs and modulation, then
I'd go down to the shack and see "wazz up".

Now-a-days I use a VOX'd FRS walkie-talkie hanging in front of
the speaker in the shack -- with with a scanner or two, and another
FRS W/T monitoring the FRS channel -- sprinkled about the house
and garage.

I don't use an All-Eggs-In-One-Basket rig: I have an IC-551
for Six, IC-251 for 2M, and a TS-520 for HF. So, I can monitor
6M continuously -- without 'upsetting' any other activity. Maybe
that's the 'wrinkle' you're trying to overcome...

73
Jonesy W3DHJ
--
| Marvin L Jones | jonz | W3DHJ | OS/2
| Gunnison, Colorado | @ | Jonesy | linux __
| 7,703' -- 2,345m | frontier.net | DM68mn SK

4566. Re: MC1648 VCO chip ...source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 17:57:10 UTC
From: osteven@akrobiz.com
Message-ID: <86dacd49.0212200957.4d5a8ded@posting.google.com>
Source record: 39229

Motorola replaced it with a part number something like mc121648

in their eclips ecl line.

faster more capable chip, same circuitry, different pinout

Steve Roberts

4567. Re: First mixer in Drake R7/TR7?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 18:10:40 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E035D1F.5BCAA841@northwest.com>
Source record: 39230

LO strength is one factor, cleanliness of the LO signal would need to be considered as well. When the rig first came out, some friends bought them up...only to find the LO signal looking less than desirable. With no antenna (just a dummy load), the ten meter band sounded full of weak signals. Drake promised to address the matter with field updates, then came out with the outboard VFO (someone correct me on that, if I'm wrong). And, don;t forget about proper termination of the IF and LO ports.

==========
Lars Petterson wrote:

> Hi!
>
> In article <5rs00vcbnerpbk1qbt4cptav1a6bpm7ppi@4ax.com>,
> Jack Smith <jsmith@mnsinc.com> wrote:
> >I checked my R7 manual and it looks like the mixer is a pin-for-pin
> >match with MiniCircuits plug-in balanced mixers. (Others also use the
> >same pinout.)
> >
> >Drake seems to have reversed some of the nominal connections, but this
> >is not a problem as these devices are symetrical.
> >
> >The injection level is 1 volt RMS according to my R7 manual. That
> >corresponds to 20 mW, or +13 dBm. So, a Level 13 mixer looks like a
> >good match. These can be found at
> >http://www.minicircuits.com/dg03-102.pdf
> >
> >
> >Jack K8ZOA
>
> Ok, thanks Jack. I have heard about people who have redesigned their TR7's
> to get higher IP3. This mod involves changes to the first mixer. I have been
> thinking about doing this myself but wanted to know a bit more about the
> original circuit.
>
> I got to the same conclusion as you, i.e. that the original is a level-13-
> mixer, but was a bit unsure, so better ask :-)
>
> I have a SRA-1H, a level 17 mixer, that might be a good candidate for the
> mod. But I need to make a redesign of the LO amplifier also, to reach this
> level, +17 dBm. Perhaps I will try to get hold of a SRA-3H instead, it has
> a 0.05-200 MHz RF port, SRA-1H has 0.5-200 MHz which may not be good in
> an R7.
>
> I see that Minicircuits also have Level 23 and 27 mixers... might perhaps

> be something to try... :-)
>
> 73 de Lars, sm6rpz
> --
> Lars E Pettersson | Chalmers University of Technology
> d8lars@dtek.chalmers.se | Gothenburg, SWEDEN

4568. Re: Helically-Wound Antennas for Hand Portables

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 19:06:23 UTC
From: Dominic <dominic@NOSPAM.derbycounty.co.uk>
Message-ID: <atvpn6$c8v$1$8300dec7@news.demon.co.uk>
Source record: 39231
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

"Paul Burridge" <pb@notthisbitosiris1.co.uk> wrote in message
news:9ha60vsjc88rnq5ajdec5mpfro30ferf3p@4ax.com...
>
> Hi,
>
> Can anyone point me to any sources of information on design
> considerations/construction of the 'rubber duck' type of antenna?
>
> Thanks.
>
> p.
> --
>
> "What is now proved was once only imagin'd"
> - William Blake, 1793

I have seen a simple design in the Chris Lorek

2-WAY RADIO CONVERSION HANDBOOK.

This was for a simple short UHF helical using the lid of a Berol Pen....as
the former...

Hope this helps...

Dominic (G7NPW)

4569. Re: QST articles on solid state amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 20:46:14 UTC
From: Johan <nospam@nospam.com>
Message-ID: <qkLM9.62526$Ti2.9247@afrodite.telenet-ops.be>
Source record: 39232

jgboyles@aol.com (JGBOYLES) wrote in news:20021220094058.22331.00000366@mb-md.aol.com:

> www.communication-concepts.com

Hi,

Thanks for the reply.
Is this a 160 to 10 meter amp you have made ?
What filters did you use ?

Johan

4570. Re: First mixer in Drake R7/TR7?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 21:16:07 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <rMLM9.6414$p_6.473786@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39234

One other thing that can be done to improve the 7 series is to replace the 2nd mixer and Translation Mixer diodes with quad matched sets of 1N5711 Hot Carrier diodes. For some reason, Drake chose to use 1N4148s.

Pete

4571. Iambic paddles?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 21:21:28 UTC
From: "Ron P." <rpackerii@neo.rr.com>
Message-ID: <sRLM9.4129$%3.585104@twister.neo.rr.com>
Source record: 39233

Does anyone know where I can get/download plans for an inexpensive Iambic paddle? (Twin paddles preffered, but a single I can live with). Thanks!

Ron - kc8ulu

4572. Re: Iambic paddles?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 21:49:25 UTC
From: Adam 9A4QV <alicajic.adam@pu.hinet.hr>
Message-ID: <au036v$ei8g$1@as201.hinet.hr>
Source record: 39236

Check the March 2000 QST issue, article "The NB6M qrp Paddles.

"Ron P." <rpackerii@neo.rr.com> wrote in message
news:sRLM9.4129$%3.585104@twister.neo.rr.com...
> Does anyone know where I can get/download plans for an inexpensive Iambic
> paddle? (Twin paddles preffered, but a single I can live with). Thanks!
>
> Ron - kc8ulu
>
>

4573. Re: Iambic paddles?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 21:51:33 UTC
From: Adam 9A4QV <alicajic.adam@pu.hinet.hr>
Message-ID: <au03av$f10k$1@as201.hinet.hr>
Source record: 39237

Sorry, check: http://www.fix.net/~jparker/norcal/paddle/nb6m.htm

"Ron P." <rpackerii@neo.rr.com> wrote in message
news:sRLM9.4129$%3.585104@twister.neo.rr.com...
> Does anyone know where I can get/download plans for an inexpensive Iambic
> paddle? (Twin paddles preffered, but a single I can live with). Thanks!
>
> Ron - kc8ulu
>
>

4574. Re: QST articles on solid state amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-20 21:53:10 UTC
From: jgboyles@aol.com
Message-ID: <20021220165310.15375.00000191@mb-ms.aol.com>
Source record: 39235

>Is this a 160 to 10 meter amp you have made ?
>What filters did you use ?

Right now I have 160m-40m filters. I used the 5-element Chebyshev Low-Pass L in/out. I tapped the inductors and added a bandswitch so I can change bands easily. I also had to make a power splitter and power combiner to combine the 2-600 watt boards to get the 1200 watts.
The power supply was difficult. You need 50v at about 40 amps peak. I scrounged up enough volt-amps worth of tranformers at the right voltage to barely make it.
Also had to build ALC circuits. The amp can be driven to full output with 10 watts drive. 100 watts will seriously overdrive it.
As I stated before, this amp is along the same lines as the ones published in QST.
According to my crude instruments, when driven with 10 watts the amp has 20db power gain. When switching from my 100 watt barefoot rig to the amp I can realize 10-11db gain.

73 Gary N4AST

4575. Re: WANT Active Dual SWR Power Meter or schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 00:34:20 UTC
From: la8ak.xnd@online.no
Message-ID: <3e03ac25.269975509@news.online.no>
Source record: 39238
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.antenna,alt.radio.amateur

On Fri, 20 Dec 2002 12:55:21 GMT, restamp@hotmail.com (Rob Stampfli)
wrote:

>In article <3DFA5F1D.69FA154F@flex.com>,
>frazier@flex.com <frazier@flex.com> wrote:
>>I've got a SignalCrafter model 30 SWR Power meter and would like to find
>>another in working condition, or another SWR/Power meter with similar
>>features.
>>
>>The SignalCrafter Model 30 has two meters. The lefthand one displays
>>Power in three ranges, 20W, 200W, and 2000W. The righthand meter
>>displays SWR, and under the SWR scale is something they called
>>reflection coefficient. It also provides the ability to switch between
>>three antennas and a dummy load. I don't care about the switching for
>>antennas, as I only use mine for a SWR/Power meter, and use a different
>>custom switching array for my antenna switches.
>>
>>The SignalCrafter Model 30 was made in the early 80's and is an ACTIVE
>>SWR meter. There is no "set" knob or need to mess around with anything
>>other than the switches that select the power level. It's operation is
>>very similar to the dual panel meters that are built into the JW Miller
>>AT2500 Antenna Tuner of similar vintage.
>>
>>Does anyone know of the availability of a SignalCrafter Model 30 or
>>similar unit, or have a schematic that could be used to modify (add
>>circuitry) to the existing cross needle swr meters in my MFJ
>>Differential T Tuners? I really dislike the cross needle meters that
>>require you to interpret the swr by reading a red line where the needles
>>cross. I can pretty easily make a new dial scale if I can get a
>>schematic to build the active circuitry to drive the meters.
>
>Except for the fact that the meters are reversed, and there is
>no Reflection Coefficient scale, I believe the Autek Research
>WM1 Deluxe Computing SWR/Wattmeter would fit your bill. I have
>one and like it, and an added bonus is that it can read Avg Pwr
>or PEP:
>
> <http://www.autekresearch.com/wm1.htm>
>
>Rob

could send you the schematic for NYE VIKING power meter (believe it is
part of a tuner), it uses 5 op-amps (an LM324 and an LM358) - it is
not too expensive to make, don't know about the accuracy, but the

problem is to find a frequency independent probe which works - to many amateur constructions aren't too easy to copy with the promissed performance.

73
LA8AK
--
remove ,xnd to reply

4576. Re: First mixer in Drake R7/TR7?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 00:34:20 UTC
From: la8ak.xnd@online.no
Message-ID: <3e03addf.270417629@news.online.no>
Source record: 39239

On Fri, 20 Dec 2002 10:10:40 -0800, L Caracciolo
<larryc@northwest.com> wrote:

>LO strength is one factor, cleanliness of the LO signal would need to be
>considered as well. When the rig first came out, some friends bought them
>up...only to find the LO signal looking less than desirable. With no antenna
>(just a dummy load), the ten meter band sounded full of weak signals. Drake
>promised to address the matter with field updates, then came out with the
>outboard VFO (someone correct me on that, if I'm wrong). And, don;t forget about
>proper termination of the IF and LO ports.
>
>==========
LA6LCA got a Kenwood TS-130, it had lots of spurrs in 10m segment, but
he slowed down the PLL so much that it still locked but only so, then
all the spurrs on 10m dissappeared. I asked him if we could note down
the mods, but he could not remember - he said. 10m band was important
as he converted it to 2m transceiver and removed the HF output section

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

4577. Re: Experiences with LC meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 01:04:42 UTC
From: la8ak.xnd@online.no
Message-ID: <3e03b7c7.272954166@news.online.no>
Source record: 39240

On 20 Dec 2002 02:20:58 GMT, k9sqg@aol.com (K9SQG) wrote:

>I'm considering buying an LC meter, mainly for the inductance measuring
>capability. I don't need a lab quality bridge, just a simple hand-held device
>will be ok. Just trying to find out people's experiences with various brands
>and the pro and con of each.
>
>Thanks for reading the posting and hope you have an enjoyable holiday season.
>
>Evan

Have two different, the old Radiometer MM1e measures down below 50nH,
and the modern digital type I am not certain how accurate is.

It is easy to misunderstand the value of measuring the coils. Started
using similar homebrew instrument in 1962 instead of GDM, and often
couldn't resonate coils because the total capacitance and stray was
much different from what I thought, so still I use the GDM - have two:
Philips GM3121 and a japanese which is not much reliable but doesn't
black out the TV's in the area. Also use Q-meters, but some coils are
difficult to check, so you must find the inductance before trying to
check it with the Q-meter. Have Heathkit QM-1 and Radiometer QM

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

4578. Re: QST articles on solid state amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 01:33:41 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E03C4F5.9F86DDED@northwest.com>
Source record: 39241

what is the IMD performance on SSB?
======

JGBOYLES wrote:

> >Is this a 160 to 10 meter amp you have made ?
> >What filters did you use ?
>
> Right now I have 160m-40m filters. I used the 5-element Chebyshev Low-Pass L
> in/out. I tapped the inductors and added a bandswitch so I can change bands
> easily. I also had to make a power splitter and power combiner to combine the
> 2-600 watt boards to get the 1200 watts.
> The power supply was difficult. You need 50v at about 40 amps peak. I
> scrounged up enough volt-amps worth of tranformers at the right voltage to
> barely make it.
> Also had to build ALC circuits. The amp can be driven to full output with 10
> watts drive. 100 watts will seriously overdrive it.
> As I stated before, this amp is along the same lines as the ones published in
> QST.
> According to my crude instruments, when driven with 10 watts the amp has 20db
> power gain. When switching from my 100 watt barefoot rig to the amp I can
> realize 10-11db gain.
>
> 73 Gary N4AST

4579. Re: QST articles on solid state amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 01:36:01 UTC
From: Johan <nospam@nospam.com>
Message-ID: <5APM9.62748$Ti2.9287@afrodite.telenet-ops.be>
Source record: 39242

jgboyles@aol.com (JGBOYLES) wrote in
news:20021220165310.15375.00000191@mb-ms.aol.com:

>>Is this a 160 to 10 meter amp you have made ?
>>What filters did you use ?
>
> Right now I have 160m-40m filters. I used the 5-element Chebyshev
> Low-Pass L in/out. I tapped the inductors and added a bandswitch so I
> can change bands easily. I also had to make a power splitter and
> power combiner to combine the 2-600 watt boards to get the 1200 watts.
>
> The power supply was difficult. You need 50v at about 40 amps peak.
> I
> scrounged up enough volt-amps worth of tranformers at the right
> voltage to barely make it.
> Also had to build ALC circuits. The amp can be driven to full
> output with 10
> watts drive. 100 watts will seriously overdrive it.
> As I stated before, this amp is along the same lines as the ones
> published in
> QST.
> According to my crude instruments, when driven with 10 watts the amp
> has 20db power gain. When switching from my 100 watt barefoot rig to
> the amp I can realize 10-11db gain.
>
> 73 Gary N4AST

So you're also using the filters made by CCI ?

4580. HP 4815A vs HP 8405A ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 01:49:01 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v07i4fnpnra8bb@corp.supernews.com>
Source record: 39243

Aside from the difference in frequency coverage what are the pros and cons
of each for ham antenna work?
tnx
hank wd5jfr

4581. NE1 HAVE A NO-TUNE VCO FOR THE FM BROADCAST BAND? (i. e.: POS-150)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 03:08:50 UTC
From: radio913@aol.com
Message-ID: <1d15af91.0212201908.68cbc18e@posting.google.com>
Source record: 39244
Cross-posted to: rec.radio.amateur.homebrew,alt.engineering.electrical,alt.ham-radio.vhf-uhf

Greetings all,

Most PLL circuits i have seen have some sort of Colpitts
oscillator that needs to have a slug inductor retuned depending on the
frequency. Basically adjusting the inductor so the tuning voltage is
within a certain range (so the MHz/Volt is within a certain range
too).

Then there are the No-tune designs like the FRB PLL that uses a
Mini-circuits POS-150. This design works very well with no inductor
tuning needed (the whole VCO is hermetically(?) sealed anyhow), from
86-110 MHz.

Does anyone know what is inside one of these rather expensive
POS-150s? I've heard that they probably use a hyper-abrupt varactor
of some sort. Does anyone have a cheaper VCO circuit that mimicks the
same no-tune performance? With minimum parts count if possible.

Slick

4582. Re: Auto tuner phase detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 03:18:25 UTC
From: Rick Karlquist <richard@karlquist.remove.this.com>
Message-ID: <54RM9.291352$GR5.96003@rwcrnsc51.ops.asp.att.net>
Source record: 39245

There are standard designs of phase/magnitude detectors
in the literature, which are very similar to power meter
designs. They consist of a toroid around the center
conductor of a through-line coax fixture and some
Schottky diodes. They are normally used with a lot
more power than the 259B puts out (namely the
transmitter provides the tune power). I suggest
looking at the manuals for some auto-tuners currently
on the market for specific circuits you can copy.
You will probably find they are all basically the same.

To work at lower power levels, you need to bias
the diodes on, so that they will be more sensitive.
This is a standard technique for diode detectors.
There are excellent application notes by Ray Waugh
on the Agilent Technologies web site that explain
this. You can get zero bias Schottky's from distributors that sell
Agilent components.

Rick N6RK

"JGBOYLES" <jgboyles@aol.com> wrote in message
news:20021219090039.27014.00000230@mb-dh.aol.com...
> Hi,
> Anyone got any ideas on a phase detector for a remote automatic antenna
tuner
> I am thinking of building. The tuner portion wil consist of motor driven
> variable inductor and capacitor in a switchable "L" network. The rf for
the
> tuning process will be supplied from an MFJ-259B back at the operating
> position.
> I measured the output of the mfj into 50 ohms and got 1 volt rms at 20
ma. I
> am afraid this is not enough for a standard diode phase detector even
using
> germaniums. I suppose I could use zero bias Schottky diodes, but don't
have
> any at the moment and don't know where to get them. Also need ideas on
ratio
> detector so the tuner knows the voltage and current ratio is 50 ohms.
> Also the only time rf will be present in the phase detector is during
"tune".
> otherwise the detector circuits will be bypassed. I plan on running a
kilowatt
> from time to time and don't want to fry the detectors.

> Thanks for any ideas.
> 73 Gary N4AST

4583. Installation in Vehicles... for the bemused.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 03:52:26 UTC
From: "Paul R. Bennett" <rffox@gru.net>
Message-ID: <3E03E599.4412115C@gru.net>
Source record: 39246

Good day.
Now here is the situation.
My previous vehicle was a '74 Dodge Powerwagon... I bought new.
Obviously lacking in all the mod coms. I had installed lots of radios
in her... up to, and including a Swan 500C.
That was then... This is now...
Most recently I replaced my dear old truck... had to, like it or not.
She went to her rest.
And I have a new vehicle and need to install my radios. But, now I am
dealing with computers and all kinda fancy gizmo's... difficult for
someone whose idea of advanced computing is a slide rule... heheh....
and tubes rule :>
Well, I now have a '95' Ford Escort LX Station Wagon... with airbags...

And I am concerned. I am not putting the Swan 500C in her... but.
My intended installs are:
HF: The Heathkit version of the Yaesu FT-747
VHF: Radio Shack HTX-212
6 Meter, 10 Watt Aziden
And I have been accumulating the appropriate, or so I hope, stuff. Most
recently I had some footage of Belden 9913 delivered... I am planning on
using that for the HF side of things.... Between the beldfoil and the
woven shield...
Now I have absolutely no desire to key down and:
Have the Air Bags explode in my face (Not a good idea)
Have the Brakes Lock(ABS is great... sometimes)
Everything just totally die... when the computer does.
Okay...
Is there a website out there, or a source of information on resources
for installing radios in modern vehicles for us bemused who have been
dwelling in the distant ages of the mobile hamming age. And who still
worship before the "Mighty Vacuum Tube"? :>
A website would be nice
Or pointers....
Whatever...
Thank you kindly for your assistance.

Paul R. Bennett
N4EGO

4584. Re: Installation in Vehicles... for the bemused.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 07:22:39 UTC
From: Bruce Lane <SpammersAreVermin@dev.null>
Message-ID: <MPG.186db69557660e10989a9e@news.drizzle.com>
Source record: 39147

In article <3E03E599.4412115C@gru.net>, rffox@gru.net says...

> Good day.

Hey, Paul...

<snippety-one>

I ran into the same situation when the 'Blue Beast,' an '86 Ford Bronco II that had served me well for many moons, was put to rest about a year and 1/2 ago, to be replaced by a 2000 Dodge Grand Caravan SE (a retired rental from Hertz).

> And I am concerned. I am not putting the Swan 500C in her... but.
> My intended installs are:
> HF: The Heathkit version of the Yaesu FT-747
> VHF: Radio Shack HTX-212
> 6 Meter, 10 Watt Aziden

<snippety-two>

> Now I have absolutely no desire to key down and:
> Have the Air Bags explode in my face (Not a good idea)
> Have the Brakes Lock(ABS is great... sometimes)
> Everything just totally die... when the computer does.

I can say, from direct experience, that neither is likely to happen as long as you follow good installation practices. Some suggestions:

--Install a separate secondary battery, and appropriate charging isolator, to run the radio gear. Not only will this provide some degree of protection for both your car and your radios, it will also cut down on alternator whine. I've had excellent results with the isolator made by Hellroaring Technologies (no, that's no joke -- it's their actual name!) at http://www.hellroaring.com

--Ground EVERYTHING! Make sure all your grounds tie back to the chassis of the vehicle, and use good-quality lugs and hardware to do so. Do NOT use glass-mount antennas! Use real Larsen/Radiall NMO-series through-hole mounts.

If you don't want to punch holes in the car's roof, do what I did; Get some 19" rack panels, mount the antennas to them, then mount the panels suspended between the roof cargo rack's cross-beams using Adel clamps. For grounding, bond the panels together with 6-8 gauge stranded copper wire, and tie the lot to any convenient screw that bites into the car body (one of the cargo rack's screws should do it).

--DC Power distribution: Entirely up to you. What I did with the van was to take a fiberglass-filled plastic NEMA enclosure, mount a bunch of aircraft-type circuit breakers in it, and wire it up for DC distribution. Works like a champ, and the breakers can often be found through aircraft scrap dealers.

No one has reported any alternator noise whatsoever on my signals, and the ones I've received have very little (from my vehicle) on them. As you might imagine, a year-2000 vehicle like the Caravan has all kinds of onboard controller computers, and airbags. I've not seen any evidence whatsoever of any RFI.

I will soon be putting up a web page detailing the installation I did on the van. Drop me an E-mail as a reminder, and I'll send you the link for it.

Keep the peace(es).

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to what I have now..." (Taki Kogoma)

4585. Re: QST articles on solid state amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 09:08:52 UTC
From: jgboyles@aol.com
Message-ID: <20021221040852.08111.00000219@mb-fw.aol.com>
Source record: 39149

>So you're also using the filters made by CCI ?
> I used the 5-element Chebyshev
>> Low-Pass L in/out. I tapped the inductors and added a bandswitch so I
>> can change bands easily.

No, homebrew. I used T-200-2 cores and standard value mica capacitors. Got the values out of the ARRL Handbook. The 160-40 filter uses three tapped inductors and six caps plus a bandswitch. I used the T-200 because thats what I had on hand. I terminated the filters with a 50 ohm resistor and swept them with an MFJ 259b to check the response and input impedance.
The only things I got from CCI was 2 circuit boards and the components to populate them. I got 4 MRF150s from CCI and I got the other 4 off a surplus MRI circuit board I got at Dayton for $35. This board had 10 MRF150s on it! I estimate I spent $250 US dollars on the whole amp, including power supply.
73 Gary N4AST

4586. Re: QST articles on solid state amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 09:25:20 UTC
From: jgboyles@aol.com
Message-ID: <20021221042520.08111.00000220@mb-fw.aol.com>
Source record: 39150

>what is the IMD performance on SSB?

Good!
Well, actually I haven't checked it with a spectrum analyzer. I have a homebrew analyzer that I need to get out of mothballs. I was pretty careful with the filter design, I swept them with an MFJ analyzer and they were up to FCC requirements. I didn't record the data, so I can't be more specific. Also I was careful setting the bias on the 8 mosfets so hope I am ok. On the air reports have been good, signal is clean, and is a real improvment over 100 watts.
73 Gary N4AST

4587. Re: Auto tuner phase detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 09:57:28 UTC
From: jgboyles@aol.com
Message-ID: <20021221045728.08344.00000221@mb-fw.aol.com>
Source record: 39151

>They are normally used with a lot
>more power than the 259B puts out

Hi Rick,
The low power design constraint I have imposed seems to be the problem. I want to use the MFJ as an rf source because I currently use it when I adjust my manual tuner. Works great in this application, tune for 50 ohm match on the MFJ, switch to rig, start talking.
I have aquired some Schottky diodes. Over the Holidays I have some time off so will experiment.
>To work at lower power levels, you need to bias
>the diodes on, so that they will be more sensitive.

>To work at lower power levels, you need to bias
>the diodes on, so that they will be more sensitive.

I briefly tried this with germanium diodes, but the results were not what I wanted. I assume my bias design needs tweeking.
>There are excellent application notes by Ray Waugh
>on the Agilent Technologies web site that explain
>this. You can get zero bias Schottky's from distributors that sell
>Agilent components.

Thanks, I will have a look.
73 Gary N4AST

4588. Re: Helically-Wound Antennas for Hand Portables

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 13:20:29 UTC
From: Paul Burridge <pb@notthisbitosiris1.co.uk>
Message-ID: <fkq80v41j0rqg20mr81kk88i7k78hg9dui@4ax.com>
Source record: 39154
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

On Sat, 21 Dec 2002 08:18:49 -0600, "Chuck/KE4ETH"
<chuck_hawks@hotmailNOSPAMORAMA.com> opined thusly:

>Paul,
>
>Try this PDF link at ARRL for roll your own HT Ducks.
>
>http://www.arrl.org/tis/info/pdf/9803037.pdf.
>
>Hope this helps

It has, thanks, Chuck.

--

"What is now proved was once only imagin'd"
- William Blake, 1793

4589. Re: Helically-Wound Antennas for Hand Portables

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 14:18:49 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <1u_M9.9311$0v3.9234@news.bellsouth.net>
Source record: 39152
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Paul,

Try this PDF link at ARRL for roll your own HT Ducks.

http://www.arrl.org/tis/info/pdf/9803037.pdf.

Hope this helps

--
73,
Chuck
KE4ETH
USA-NA
Remove the obvious from Email.

"Paul Burridge" <pb@notthisbitosiris1.co.uk> wrote in message
news:9ha60vsjc88rnq5ajdec5mpfro30ferf3p@4ax.com...
>
> Hi,
>
> Can anyone point me to any sources of information on design
> considerations/construction of the 'rubber duck' type of antenna?
>
> Thanks.
>
> p.
> --
>
> "What is now proved was once only imagin'd"
> - William Blake, 1793

4590. Re: Installation in Vehicles... for the bemused.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 14:21:43 UTC
From: "Bob Lewis (AA4PB)" <rlewis@staffnet.com>
Message-ID: <v08u8m49o3d780@corp.supernews.com>
Source record: 39153

There is certainly nothing wrong with using a separate battery for the radios, but from my experience it is not necessary to eliminate alternator whine or other problems. It's primary advantage is that if you run down your "radio" battery you can still start the vehicle. My only problem with alternator whine was caused by multiple grounds on a 2M rig that had a poor internal grounding system. It was fixed by providing a good direct ground to the case rather than depending on the ground lead provided at the power connector. With a 100 watt HF rig and a 50 watt 2M rig I have not experienced any problems with air bags or other electronics in the vehicle. I would recommend that you avoid bundling the coax cables along with the harnesses to the air bag and other vehicle controllers.

4591. Palomar Loop Ant. ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 16:10:39 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v094k261dvu8f8@corp.supernews.com>
Source record: 39155

I just got a Palomar Loop Amplifier and Palomar Loop Antenna for 160/80 meters. I'd like to wind antennas for BCB, VLF, and maybe other bands. I wonder if anyone has wound any loopsticks for this box with any success. Looks like there's a 2N2222, and 2 MPF 102 in the amp. Any help with a schematic or antenna info appreciated.
tnx
hank wd5jfr

4592. Re: Experiences with LC meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 16:16:15 UTC
From: Uncle Peter <radioconnectionNO@cox.netSPAM>
Message-ID: <jt0N9.17222$I23.1459031@news1.east.cox.net>
Source record: 39156

"Joe Leikhim" <jleikhim@nettally.com> wrote in message
news:3E02956F.50C20A94@nettally.com...
> I have an AADE (Almost All Digital Electronics) LC Metr II/B. I found it
easy to
> build (kit), looks great and works great. Very repeatable results.
>
> Joe
>
>

I second the AADE kit. Very nice, good price.

Pete

4593. Re: QST articles on solid state amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 18:50:51 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E04B80B.6BB5A03@northwest.com>
Source record: 39157

FCC rqmts are... -30dBc?

a strong signal is great...but a clean signal 20kc or even 50kc away from the carrier is even more remarkable.
========

JGBOYLES wrote:

> >what is the IMD performance on SSB?
>
> Good!
> Well, actually I haven't checked it with a spectrum analyzer. I have a
> homebrew analyzer that I need to get out of mothballs. I was pretty careful
> with the filter design, I swept them with an MFJ analyzer and they were up to
> FCC requirements. I didn't record the data, so I can't be more specific. Also
> I was careful setting the bias on the 8 mosfets so hope I am ok. On the air
> reports have been good, signal is clean, and is a real improvment over 100
> watts.
> 73 Gary N4AST

4594. HP8920B ROM Cards

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 19:10:12 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3E04BC94.AEA72B88@nettally.com>
Source record: 39158

Has anyone any source for useful utility programs for the HP8920B like the one LVL_METER, cable tester, etc. I can't seem to find any out there.

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

4595. Re: Palomar Loop Ant. ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 21:38:47 UTC
From: la8ak.xnd@online.no
Message-ID: <3e04cf46.344515603@news.online.no>
Source record: 39159

On Sat, 21 Dec 2002 10:10:39 -0600, "Henry Kolesnik"
<wd5jfr@oklahoma.net> wrote:

>I just got a Palomar Loop Amplifier and Palomar Loop Antenna for 160/80
>meters. I'd like to wind antennas for BCB, VLF, and maybe other bands. I
>wonder if anyone has wound any loopsticks for this box with any success.
>Looks like there's a 2N2222, and 2 MPF 102 in the amp. Any help with a
>schematic or antenna info appreciated.
>tnx
>hank wd5jfr
>
>
Oh dear! Is it still more of such nonsense about using an amplifier?
Again, you don't need an amplifier if you use a coupling loop with
area of 1/100 of the frame antenna and connect this to 50 or 75 ohm
cable.

Tested such antennas on 136kHz as well as 80 and 160m, somebody
recommended BFT66 or BFR91 low noise amplifier, but background noise
peaks up when antenna is tuned, and this applies to frequencies up to
4MHz, maybe an amplifier will improve receiption on higher frequencies

I did a lot of work constructing different amplifiers on different
loop antennas, only to experience that it was only waste of time, and
no god idea to use high impedance connection to the loop.

My 80m loop didn't have much bandwidth, but without remote tuning it
proved very useful for most part of the 3.5-3.8MHz band (it was tuned
to 3550kHz for the CW segment). It was very useful to avoid electric
noise from the open supply wires, but this is now history and no
problem to use the trap dipole for listening.

Have not tried remote tuning for HF, only for 136kHz band, and it is
over 25dB attenuation when my antenna is tuned to 139 instead of
136kHz, the Q-value is 150.

73
LA8AK
--
remove ,xnd to reply

4596. Re: Installation in Vehicles... for the bemused.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-21 22:43:20 UTC
From: "Paul R. Bennett" <rffox@gru.net>
Message-ID: <3E04EEAB.3C5D18FD@gru.net>
Source record: 39160

Thanks All
There were several responses and all helpful.
Tomorrow I will be doing some cable pulling straight to the battery... both leads fused. I have gotten some Belden 9913 for HF.
A bit of an overdo on the shielding I admit.
But still... thanks all.
I admit to having a devil of a time trying to figure how to route the cable, until I found that feed through.
Now all I have to do is figure how to actually mount the rigs...
Thanks again.
Paul
N4EGO

4597. Re: Voice frequency bandwidth and optimun TX SSB Audio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-22 00:17:56 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3e04231a$0$19644@echo-01.iinet.net.au>
Source record: 39148

If it is "harsh" is something being overdriven?
Alternatively if the audio has too much treble, try adjusting the relevant carrier oscillator frequency. This will probably be a crystal oscillator with a trimmer capacitor to vary the frequency slightly. If the crystal filter passband is not correct relative to the oscillator, you will get an odd audio response.

Richard

Andrew VK3BFA <ablight@alphalink.com.au> wrote in message news:1fc7b362.0212150557.576601e3@posting.google.com...
> Maybe someone ahs already done this, and can supply a reference. My
> query is in response to on air comments tonight after a break of many
> years from HF operating - a junkyard TS440 I fixed as an exercise, an
> old junkbox CB mike wired to it. Received audio reports were OK, ie
> Q5, But "harsh" - obviously an unknown microphone, my voice is fairly
> deep, resulting in non optimum transmit audio.
>
> Is it possible with simple test gear to
> 1. Plot the bandwidth/frequency response of ones voice
> 2. Tailor the microphone output response to match this curve.
>
> Any comments appreciated.
>
> 73 de VK3BFA Andrew

4598. Re: Experiences with LC meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-22 01:26:13 UTC
From: N2VX <ZZZjim_cronin@juno.comZZZ>
Message-ID: <h55a0vk2upaobp6u44m2uivb8thapdomma@4ax.com>
Source record: 39161

Another handy one is the MFJ-259/269 antenna analyzers. You
can measure inductance at the frequency you are using the device
at (or capacitance).

73,
Jim

On Thu, 19 Dec 2002 23:24:56 -0500, "john walton"
<jdwalton@comcast.net> wrote:

>The Heath impedance bridge goes for about $20 or less on EBay -- it isn't a
>Genrad or HP, but nicely acurate for the money. Only drawback is that you
>need a pair of 9 volt batteries.
>
>I am not fond of the little add-on kit sold by Jameco.
>
>Jack
>
>"K9SQG" <k9sqg@aol.com> wrote in message
>news:20021219212058.29498.00000154@mb-ma.aol.com...
>> I'm considering buying an LC meter, mainly for the inductance measuring
>> capability. I don't need a lab quality bridge, just a simple hand-held
>device
>> will be ok. Just trying to find out people's experiences with various
>brands
>> and the pro and con of each.
>>
>> Thanks for reading the posting and hope you have an enjoyable holiday
>season.
>>
>> Evan
>

4599. Technics SA-80 scheme wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-22 08:55:34 UTC
From: 2N 2369 <albamarr@tiscali.it>
Message-ID: <au52mg$2vs$1@lacerta.tiscalinet.it>
Source record: 39167

My receiver FM-AM technics SA-80 is out of order . The damage is very
serious . I need his electronic scheme , I looked for it so much for many
search engines (google altavista etc.) but I found nothing .
Can anybody help me to get it ? Thanks in advance
albamarr@tiscali.it

4600. Re: Experiences with LC meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-22 09:26:30 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <au486t$o3r$2@newsg4.svr.pol.co.uk>
Source record: 39162

"K9SQG" <k9sqg@aol.com> wrote in message
news:20021219212058.29498.00000154@mb-ma.aol.com...
> I'm considering buying an LC meter, mainly for the inductance measuring
> capability. I don't need a lab quality bridge, just a simple hand-held
device
> will be ok. Just trying to find out people's experiences with various
brands
> and the pro and con of each.

If you have a signal generator you can use that to measure the resonant
frequency with a known capacitor.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

4601. Hi-Fi FM decoder internals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-22 14:54:27 UTC
From: RF <listaco@terra.es>
Message-ID: <au4lat$7l0$1@nsnmpen2-gest.nuria.telefonica-data.net>
Source record: 39164

I have seen that some FM hifi receivers specs shows more than 90dB SNR, and 80dB FM channel separation. But I have not found any IC FM decoder with such high levels of SNR and channel separation. (The higher I have found is LM4500A with 88dB SNR and 55dB Channel separation).

ï¿½Which type of FM decoder uses hi-fi receivers? ï¿½quadrature demodulator, peak detector, slope detector, ... ?

4602. Re: Iambic paddles?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-22 15:10:07 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <3E05D5CF.F9FEF5D4@one.net>
Source record: 39163

Ron:

I don't have a design to show you, but I'd like to note that something that works is easy to cobble together. I made a set years ago out of plexiglas, and I've seen comparable sets made with PC board. Just picture two paddles (strips of plexiglas or PC board) mounted above an ordinary wood board, with an ordinary bolt or screw in between them as a ground contact. The spring action isn't as good as you'll find with a Bencher or other commercial model, but it's not bad. I used my plexiglas set for several years before splurging on a (used) Bencher.

Note that you'll need two paddles for iambic operation. You can't do it with a single paddle.

... Rich, W2RG

"Ron P." wrote:
>
> Does anyone know where I can get/download plans for an inexpensive Iambic
> paddle? (Twin paddles preffered, but a single I can live with). Thanks!
>
> Ron - kc8ulu

4603. Re: Kenwood TS-130S

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-22 15:59:30 UTC
From: Keith Piercey <salmo@nf.sympatico.ca>
Message-ID: <CjIN9.4665$A17.319819@ursa-nb00s0.nbnet.nb.ca>
Source record: 39165

TS-130 now working to perfection. Oscillation due to poor grounding (screw tightening) solved the problem.

Thanks everyone.

de Keith VO1AE

4604. Re: Installation in Vehicles... for the bemused.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-22 17:21:51 UTC
From: Bruce Lane <SpammersAreVermin@dev.null>
Message-ID: <MPG.186f948ceca73efb989aa0@news.drizzle.com>
Source record: 39166

In article <3E04EEAB.3C5D18FD@gru.net>, rffox@gru.net says...

> Thanks All
> There were several responses and all helpful.
> Tomorrow I will be doing some cable pulling straight to the battery... both
> leads fused. I have gotten some Belden 9913 for HF.

<snip>

Be EXTREMELY careful drilling through the firewall!!!

Check your site for the proposed hole front and back VERY
carefully!

Slip an aluminum spacer or similar sleeve over the drill bit to
limit its penetration to, say, a quarter-inch!

Stick a thick piece of cardboard on the engine compartment side
where you expect to come through!

Line the edge of the finished hole with either a grommet or a strip
of that flexible nylon stuff with the fingers on the backside. You can
find the latter in the Electrical section of marine supply places.

I cannot emphasize the caution points about drilling through the
firewall strongly enough! I got reckless because I was in a hurry, and
ended up drilling through the feed hoses for my heater core. $296 later,
it was fixed -- barely in time for me to leave for my annual scrounge
trip.

If rig mounting is an issue, I'm a reseller for the entire line of
professional radio and accessory mounting systems from SMC. In fact, I'm
using one of their big mounts up front in the van. Would you like me to
send you a digital snapshot?

Good luck.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

4605. Please help my FT902DM

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-22 19:37:27 UTC
From: JMC <jm.caillon@wanadoo.fr>
Message-ID: <au53qb$619$1@news-reader11.wanadoo.fr>
Source record: 39168
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hello,

I am looking for the relay that switch TX/RX into the FT902DM. Where can I buy one ?

Thanks for your help

Jean-Marc
F4DRH

4606. Re: Experiences with LC meters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-22 20:20:38 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v0c8f9q01cfq31@corp.supernews.com>
Source record: 39169

When I was building my 2N2/40, from time to time I came across the need to validate an inductor or capacitor and I used an even cruder version of Leon's trick.

I would put a resistor in series with the component under test, of about the same reactance I expected for the component. I then put the pair across the output of my Fireball 40 transmitter, and measured the RF voltage across each component. This told me the reactance of the part and hence the inductance or capacitance. (If you're not familiar with the FB 40 it's an extremely simple 40 milliwatt transmitter from NJQRP. A Pixie II or even just one of those oscillator cans would work just as well.)

The only special tool this took was an RF probe, which everyone needs to build as a first project anyway.

..

"Leon Heller" <leon@heller123.freeserve.co.uk> wrote in message
news:au486t$o3r$2@newsg4.svr.pol.co.uk...
>
>
> "K9SQG" <k9sqg@aol.com> wrote in message
> news:20021219212058.29498.00000154@mb-ma.aol.com...
> > I'm considering buying an LC meter, mainly for the inductance measuring
> > capability. I don't need a lab quality bridge, just a simple hand-held
> device
> > will be ok. Just trying to find out people's experiences with various
> brands
> > and the pro and con of each.
>
> If you have a signal generator you can use that to measure the resonant
> frequency with a known capacitor.
>
> Leon
> --
> Leon Heller, G1HSM
> leon_heller@hotmail.com
> http://www.geocities.com/leon_heller
>
>

4607. FS Meguro MSW-721E IF Sweeper

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-22 21:01:47 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3E06283B.1A88D64A@nettally.com>
Source record: 39170

I have for sale a Meguro MSW-721E AM-FM IF SweepScope. This is a solid state, Japanese made instrument for sweeping/tuning 455 KHz and 10.7 MHz IF's of broadcast receivers. It has two frequency bands and fixed crystal markers. The unit is in excellent condition and works well. It has variable center frequency and bandwidth for each band so you can also interpolate different IF bandwidths using the fixed markers and scope graticule. Simply inject the calibrated output into the IF circuit you are testing and attach a probe to the detector or limiter of the circuit you are sweeping. You will need a simple external diode RF probe if you are sweeping passive devices out of circuit. With a mixer and external LO, you can sweep through the RF stages as well.

The construction is first class, the scope unit is superior.
$325 shipped/insured in US.

E-mail directly to me if interested.

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

4608. Re: Installation in Vehicles... for the bemused.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-22 22:42:51 UTC
From: "Paul R. Bennett" <rffox@gru.net>
Message-ID: <3E06400E.46CAD59A@gru.net>
Source record: 39171

Grins...
I am not gonna do the firewall drill thing... Already had the hood up...
My old truck had enough room so as I could sit on the fender and rest my my feet on the frame....
Not these new vehicles.
Today I "Very Carefully" slid a knife blade through the wiring grommet that passes between the passenger compartment and the engine compartment.
And then fed the cables through.
Ran them to the battery... and... very carefully... cable tied them to the main wiring harness. I made sure the hot and ground leads were both kept separate and clear of the vehicle chassis.
I ran them both to the battery and then discovered I did not have the nuts required to tie them to the battery connections... very carefully cable tied them off.
Both hot and ground leads are fused.
And thanks much for your input... Even before I read it... I carefully inspected the feedthrough site... and Paranoia had its merry way...
Now there is one... little problem I would appreciate some input with....
Room...
For Radios...
So... what does SMC have to somehow squeeze an HTX-212, and an equal sized Azden 6M and a heath equiv of the Yaesu FT-747 in the minimal room available between the shift stick and the radios?
Paul

Bruce Lane wrote:

> In article <3E04EEAB.3C5D18FD@gru.net>, rffox@gru.net says...
>
> > Thanks All
> > There were several responses and all helpful.
> > Tomorrow I will be doing some cable pulling straight to the battery... both
> > leads fused. I have gotten some Belden 9913 for HF.
>
> <snip>
>
> Be EXTREMELY careful drilling through the firewall!!!
>
> Check your site for the proposed hole front and back VERY
> carefully!
>
> Slip an aluminum spacer or similar sleeve over the drill bit to
> limit its penetration to, say, a quarter-inch!
>
> Stick a thick piece of cardboard on the engine compartment side

> where you expect to come through!
>
> Line the edge of the finished hole with either a grommet or a strip
> of that flexible nylon stuff with the fingers on the backside. You can
> find the latter in the Electrical section of marine supply places.
>
> I cannot emphasize the caution points about drilling through the
> firewall strongly enough! I got reckless because I was in a hurry, and
> ended up drilling through the feed hoses for my heater core. $296 later,
> it was fixed -- barely in time for me to leave for my annual scrounge
> trip.
>
> If rig mounting is an issue, I'm a reseller for the entire line of
> professional radio and accessory mounting systems from SMC. In fact, I'm
> using one of their big mounts up front in the van. Would you like me to
> send you a digital snapshot?
>
> Good luck.
>
> --
> Bruce Lane, Owner and Head Hardware Heavy,
> Blue Feather Technologies -- http://www.bluefeathertech.com
> Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
> kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
> "I'll get a life when someone demonstrates to me it would be superior to
> what I have now..." (Taki Kogoma)

4609. Re: Please help my FT902DM

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-22 22:42:55 UTC
From: la8ak.xnd@online.no
Message-ID: <3e063cb2.438077772@news.online.no>
Source record: 39172
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Sun, 22 Dec 2002 20:37:27 +0100, "JMC" <jm.caillon@wanadoo.fr>
wrote:

>Hello,
>
>I am looking for the relay that switch TX/RX into the FT902DM. Where can I
>buy one ?
>
>Thanks for your help
>
>Jean-Marc
>F4DRH
>
>
I believe it is many relays

--
remove ,xnd to reply

4610. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-23 00:08:17 UTC
From: ON5MJ <on5mjREMOVE@skynet.be>
Message-ID: <3e065407$0$90232$ba620e4c@news.skynet.be>
Source record: 39173
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

```
| Electrons in a wire move in the direction set by the total emf which is
| either positive, negative, or zero, but they certainly don't move at the
| speed of light.

True. Speed is about 1cm/sec.
--
73 de on5mjREMOVE@skynet.be - Jacques
```

4611. Re: Amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-23 01:24:42 UTC
From: rparkin@angelfire.com
Message-ID: <1b29f04b.0212221724.6bca184@posting.google.com>
Source record: 39174
Cross-posted to: alt.ham-radio.atv,rec.radio.amateur.homebrew

scott <acepilot@bloomer.net> wrote in message news:<3DF7EA67.C8C3A4B@bloomer.net>...
> Legal? Licensed or unlicensed? Trying to extend the range of those 2.4 GHz
> video camera modules? Probably not legal to boost it.....Now, if it operates
> somewhere in the ham band up there, that's a different story! There are a few
> places that sell amplifier brick amps, but they're not cheap! Maybe try Down
> East Microwave at
> http://www.downeastmicrowave.com/
>
> Scott
> N0EDV

I am fairly certain it is legal to boost the power of the tx I am
using; license free devices with higher OP power are available, but I
am pretty much stuck with the one I have...

Thanks for the link. Not cheap, but one worth keeping ;-)

Regards & 73's

Richard
GW7NLX

4612. Help needed - SLAs and gell cells

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-23 01:29:30 UTC
From: "Benjamin, KB9LFZ" <KB9LFZ@arrl.net>
Message-ID: <3e0663a9$1_8@news.teranews.com>
Source record: 39175

Hello All!

A question for ya'll to give to give two cents worth of your valued opinion. I have some sealed lead acid batteries(commonly known as gelcells) and looking for some advice on charging.
Looking around I find that most of the chargers out there are mode chargers. Some go by current or by voltage. On the common voltage chargers, they say that during the "absortion mode" the charger limits the charging current to say, around 500mAh or so, and raises the battery voltage to somewhere around 14.4V. Then when the battery is drawing around 30mAh, the charger lowers the voltage to somwhere around 13.4 - 13.8V as in the "float charge" mode.

My question is this, why does the battery's voltage get raised to 14.4V during the "bulk charge or absortion charge" mode? Would it make any difference if I were just attach a charger with the voltage set to somewhere around 13.5V with limited current of, say, 500mAh?

I await anyones' and everyones' informative response.

Appreciatively,
~Benjamin
de KB9LFZ {@arrl.net}

4613. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-23 01:51:41 UTC
From: CW <clinton.magers@attbi.com>
Message-ID: <N_tN9.469597$NH2.33160@sccrnsc01>
Source record: 39176
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

A bit slow. I think.

"ON5MJ" <on5mjREMOVE@skynet.be> wrote in message
news:3e065407$0$90232$ba620e4c@news.skynet.be...
> | Electrons in a wire move in the direction set by the total emf which is
> | either positive, negative, or zero, but they certainly don't move at the
> | speed of light.
>
> True. Speed is about 1cm/sec.
> --
> 73 de on5mjREMOVE@skynet.be - Jacques
>
>

4614. Re: FS Meguro MSW-721E IF Sweeper

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-23 01:52:19 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3E066C53.45F8BCBD@nettally.com>
Source record: 39177

Specs from Meguro website. Apparently they still offer this unit.

MSW-721E AM-FM RADIO IF SWEEPSCOPE
ï¿½ For testing the I-F cicuits in the AM and FM radio receivers

Sweep Frequency Range: A : 400 to 500kHz, B : 9.5 to 11.5MHz

Sweep Width: A : 0 to ï¿½50kHz, B : 0 to ï¿½1MHz

Output Level (50 Ohm load): 10dB ï¿½6

Marker Frequency:
A : 445 / 450 / 455 /460 and 465kHz
B : 10.55 / 10.625 / 10.7 / 10.775 / 10.85MHz
simultaneous display of 5 markers
Minimum Interval: A : 0.1kHz, B : 1kHz

CRT: 5-inch, electromagnetic deflecotion
Vertical Sensitivity: 1mV / DIV
Vertical Response: DC to 10kHz, -3dB

Dimensions & Weight: Approx. 190Wï¿½275Hï¿½340Dmm ï¿½ 5kg
Back

http://www.chawei.com.tw/meguro.htm

Joe Leikhim wrote:

> I have for sale a Meguro MSW-721E AM-FM IF SweepScope. This is a solid
> state, Japanese made instrument for sweeping/tuning 455 KHz and 10.7 MHz
> IF's of broadcast receivers. It has two frequency bands and fixed
> crystal markers. The unit is in excellent condition and works well. It
> has variable center frequency and bandwidth for each band so you can
> also interpolate different IF bandwidths using the fixed markers and
> scope graticule. Simply inject the calibrated output into the IF circuit
> you are testing and attach a probe to the detector or limiter of the
> circuit you are sweeping. You will need a simple external diode RF probe
> if you are sweeping passive devices out of circuit. With a mixer and
> external LO, you can sweep through the RF stages as well.
>
> The construction is first class, the scope unit is superior.
> $325 shipped/insured in US.
>
> E-mail directly to me if interested.
>
> --
> Joe Leikhim K4SAT

> Jleikhim@nettally.com
>
> "Jazz is not dead. It just smells funny." -F.Z.

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

4615. Re: FS Meguro MSW-721E IF Sweeper

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-23 01:53:52 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3E066CB0.634010F6@nettally.com>
Source record: 39178

http://www.meguro.co.jp/english/catalog/data/MSW-721E.htm

Joe Leikhim wrote:

> I have for sale a Meguro MSW-721E AM-FM IF SweepScope. This is a solid
> state, Japanese made instrument for sweeping/tuning 455 KHz and 10.7 MHz
> IF's of broadcast receivers. It has two frequency bands and fixed
> crystal markers. The unit is in excellent condition and works well. It
> has variable center frequency and bandwidth for each band so you can
> also interpolate different IF bandwidths using the fixed markers and
> scope graticule. Simply inject the calibrated output into the IF circuit
> you are testing and attach a probe to the detector or limiter of the
> circuit you are sweeping. You will need a simple external diode RF probe
> if you are sweeping passive devices out of circuit. With a mixer and
> external LO, you can sweep through the RF stages as well.
>
> The construction is first class, the scope unit is superior.
> $325 shipped/insured in US.
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> E-mail directly to me if interested.
>
> --
> Joe Leikhim K4SAT
> Jleikhim@nettally.com
>
> "Jazz is not dead. It just smells funny." -F.Z.

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

4616. What's inside an AC circuit tester?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-23 02:45:55 UTC
From: mcalhoun@ksu.edu
Message-ID: <au5td3$201@unix1.cc.ksu.edu>
Source record: 39179

I have a "Snapit Correct Circuit Tester" (probably purchased from Radio Shack) which plugs into a 120-volt AC U-ground outlet and reports, via three LED's, the status of the outlet's wiring as per the following chart:

0 G 0 Open Ground where O means LED is off
0 0 G Open Neutral G means LED is Green
0 0 0 Open Hot R means LED is Red
R O G Hot/Ground reversed
R G O Hot/Neutral reversed
O G G Correct

QUESTION: WHAT IS THE CIRCUIT INSIDE THIS NIFTY LITTLE TESTER?

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

4617. Re: Help needed - SLAs and gell cells

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-23 03:25:42 UTC
From: gaschafer@attbi.com
Message-ID: <3e068279.17722103@netnews.attbi.com>
Source record: 39180

It would never get fully charged at 13.4 volts. The float voltage
(13.4) can be left on indefinitely
after fully charging. Lead acid batteries like a float voltage. But
they must first be charged at a
higher voltage or they will become sulfated.

The charge current is typically limited to 20 to 25% of the capacity
of the battery to avoid over
stressing the plates. Once the voltage on the battery comes up near
the charge voltage then the
charge current tapers off. Monitoring the charge current at a fixed
charge voltage gives an
indication of the amount of charge the battery has taken on. Then
switching to the float mode
maintains the charge. Maintaining is done to compensate for leakage
that commonly occurs in
batteries.

If you were to leave the higher charge voltage on the battery for long
periods the battery would
be damaged.

Using a charger with too low a charge voltage will never fully charge
the battery and the plates
will sulfate and reduce the life of the battery.

Be sure that the battery is really a gel cell rather than a sealed
lead acid battery. There is a
difference in charge and float voltages.

73
Gary K4FMX

On Sun, 22 Dec 2002 18:29:30 -0700, "Benjamin, KB9LFZ"
<KB9LFZ@arrl.net> wrote:

>Hello All!
>
>
> A question for ya'll to give to give two cents worth of your valued
>opinion. I have some sealed lead acid batteries(commonly known as gelcells)
>and looking for some advice on charging.
> Looking around I find that most of the chargers out there are mode
>chargers. Some go by current or by voltage. On the common voltage chargers,
>they say that during the "absortion mode" the charger limits the charging
>current to say, around 500mAh or so, and raises the battery voltage to

>somewhere around 14.4V. Then when the battery is drawing around 30mAh, the
>charger lowers the voltage to somwhere around 13.4 - 13.8V as in the "float
>charge" mode.
>
> My question is this, why does the battery's voltage get raised to 14.4V
>during the "bulk charge or absortion charge" mode? Would it make any
>difference if I were just attach a charger with the voltage set to somewhere
>around 13.5V with limited current of, say, 500mAh?
>
>
>I await anyones' and everyones' informative response.
>
>
>Appreciatively,
>~Benjamin
>de KB9LFZ {@arrl.net}
>
>

4618. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-23 03:31:18 UTC
From: "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca>
Message-ID: <4svN9.467$o51.231529@news20.bellglobal.com>
Source record: 39181
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

>>| Electrons in a wire move in the direction set by the
>>| total emf which is either positive, negative, or zero,
>>| but they certainly don't move at the speed of light.

> "ON5MJ"
> > True. Speed is about 1cm/sec.

"CW"
> A bit slow. I think.

Jacques is in the right ballpark.

Of course the average velocity for an electron depends on the current and wire gauge (in other words, current density). I did the math once for a 1 amp current in a 14-ga copper wire and it worked out to something similar to Jacques' number, but I don't recall the exact answer. But it was very slow.

For those NG lurkers that may wonder why the light comes on so quickly when the light switch is thrown - while the electrons might take several minutes...

They need to keep in mind that voltage is analogous to water pressure.

Start a distant water pump and the water at the near end (far, far away from the pump) will start to flow almost immediately (assuming that the pipe is already full of water in the same way that a wire is already full of free electrons). But the particular water that was at the pump when it started pumping (perhaps marked with dye) might not arrive at the other end for many hours.

The pressure wave (voltage) moves very quickly. The actual water flow (electrons) depends on the flow rate (current).

4619. FA...3-1000Z AMP FA

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-23 04:41:40 UTC
From: kf4toh@aol.com
Message-ID: <20021222234140.29828.00000232@mb-ma.aol.com>
Source record: 39182

http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=1946897720

RELISTED

4620. Re: Help needed - SLAs and gell cells

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-23 05:18:24 UTC
From: budgie <budgie@nowhere.cantech.net.au>
Message-ID: <3e069bfe.1961197@news.cantech.net.au>
Source record: 39183

On Sun, 22 Dec 2002 18:29:30 -0700, "Benjamin, KB9LFZ"
<KB9LFZ@arrl.net> wrote:

>Hello All!
>
>
> A question for ya'll to give to give two cents worth of your valued
>opinion. I have some sealed lead acid batteries(commonly known as gelcells)
>and looking for some advice on charging.
> Looking around I find that most of the chargers out there are mode
>chargers. Some go by current or by voltage. On the common voltage chargers,
>they say that during the "absortion mode" the charger limits the charging
>current to say, around 500mAh or so, and raises the battery voltage to
>somewhere around 14.4V. Then when the battery is drawing around 30mAh, the
>charger lowers the voltage to somwhere around 13.4 - 13.8V as in the "float
>charge" mode.

That approximates the best regime for SLA's.

> My question is this, why does the battery's voltage get raised to 14.4V
>during the "bulk charge or absortion charge" mode? Would it make any
>difference if I were just attach a charger with the voltage set to somewhere
>around 13.5V with limited current of, say, 500mAh?

It won't go anywhere near full charge at a float that low. We float
them at 13.8 or 13.85 and probably are getting 90% or better. For
full charge, do as the units described in your first para.

For a good description of what is IMHO the best regime, look up the
data sheet on the Unitrode (now in TI) UC3906. Simple, effective.

4621. Re: Technics SA-80 scheme wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-23 06:34:56 UTC
From: Bruce Lane <SpammersAreVermin@dev.null>
Message-ID: <MPG.18704e6c6254a944989aa4@news.drizzle.com>
Source record: 39184

In article <au52mg$2vs$1@lacerta.tiscalinet.it>, albamarr@tiscali.it
says...

> My receiver FM-AM technics SA-80 is out of order . The damage is very
> serious . I need his electronic scheme , I looked for it so much for many
> search engines (google altavista etc.) but I found nothing .
> Can anybody help me to get it ? Thanks in advance
> albamarr@tiscali.it

Wrong newsgroup. You'd probably be better off asking this in
sci.electronics.repair.

rec.radio.amateur.homebrew is for discussions involving the design
and construction of amateur radio equipment, not consumer stereo
receivers.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

4622. Re: Hi-Fi FM decoder internals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-23 09:35:07 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <fNAN9.9772$p_6.768840@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39185

The Phillips TDA1591 and others of its ilk are being used nowadays. They don't need the free-run frequency of the VCO to be adjusted. Instead, they use a variation of a VCXO, with a 456kHz resonator that is divided down to 19kHz. I used this device in a redesign of my McIntosh MR78's decoder. Separation is 55db over the audio range. The best I've been able to get with an LM4500 has been 42dB.

Pete

4623. Powering HT from Cigarette Lighter Socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-23 17:58:49 UTC
From: Kent Haase <ijeh99@mb.sympatico.ca>
Message-ID: <67IN9.6599$7_.27697@news1.mts.net>
Source record: 39186

I've got a Kenwood 2m & 70cm HT that I wish to power from the cigarette lighter socket in a vehicle. Kenwood makes a "filtered" plug and cord assembly (probably $$), but I've got several unneeded assemblies for charging a cellphone, and I'd like to adapt one of them by replacing the charger circuitry with a filter.

What approach should I use to construct such a filter? Lowpass PI filter? What -3dB frequency? Should I filter both sides of the 12V? Do I even really need one?

Any comments appreciated.
Kent VE4KEH

4624. Re: What's inside an AC circuit tester?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-23 20:25:44 UTC
From: "Derek R. Smith" <derek@multnomah.demon.co.uk>
Message-ID: <SFa$ImDIF3B+Ewaq@multnomah.demon.co.uk>
Source record: 39187

Are you sure that these are LED's.

In the testers I've seen these lamps are neon bulbs with a suitable
current limiting resistor (typically around 47k)

If you number your columns 1,2 and 3 from left to right
Lamp 1 is between Neutral and Ground
Lamp 2 is between Hot and Neutral
Lamp 3 is between Hot and Ground

I guess LED's could replace the Neons but they would probably need
reverse voltage protection diodes across them and higher value limiting
resistors. It also seem likely that lamps 1,2 and 3 would light if the
neutral was open when you used LEDs. This does not occur with neons due
to the need to exceed the 'striking voltage'.

In message <au5td3$201@unix1.cc.ksu.edu>, Myron A Calhoun
<mcalhoun@ksu.edu> writes
>I have a "Snapit Correct Circuit Tester" (probably purchased from Radio
>Shack) which plugs into a 120-volt AC U-ground outlet and reports, via
>three LED's, the status of the outlet's wiring as per the following chart:
>
> 0 G 0 Open Ground where O means LED is off
> 0 0 G Open Neutral G means LED is Green
> 0 0 0 Open Hot R means LED is Red
> R O G Hot/Ground reversed
> R G O Hot/Neutral reversed
> O G G Correct
>
>QUESTION: WHAT IS THE CIRCUIT INSIDE THIS NIFTY LITTLE TESTER?
>
>--Myron.

--
Derek R. Smith.

4625. Re: Powering HT from Cigarette Lighter Socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-23 21:11:47 UTC
From: Ralph Mowery <rmowery@ctc.net>
Message-ID: <IcWcna6aG7MYF5qjXTWcrg@ctc.net>
Source record: 39189

"Kent Haase" <ijeh99@mb.sympatico.ca> wrote in message
news:67IN9.6599$7_.27697@news1.mts.net...
> I've got a Kenwood 2m & 70cm HT that I wish to power from the cigarette
> lighter socket in a vehicle. Kenwood makes a "filtered" plug and cord
> assembly (probably $$), but I've got several unneeded assemblies for
> charging a cellphone, and I'd like to adapt one of them by replacing the
> charger circuitry with a filter.
>
> What approach should I use to construct such a filter? Lowpass PI filter?
> What -3dB frequency? Should I filter both sides of the 12V? Do I even
> really need one?
>
> Any comments appreciated.
> Kent VE4KEH
>
You need to make sure the HT will take the voltage the car puts out. YOu
should not need any filter. If you do , it will probaly just take a coil in
series with the hot wire and then a big capacitor to ground.

4626. Gouriet-Clapp osc

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-23 21:41:39 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E078313.82E433DD@northwest.com>
Source record: 39188

My Eico 722 VFO uses a Gouriet-Clapp circuit. To turn on the osc tube (6au6) for XMT, the cathode is grounded thru a slide switch.

I've considered a more electronic means of switching...such as using a fet switch (capable of enduring the cathode current).

Any suggestions would be helpful.

4627. Would anyone know how to 'eliminate' the hummmm I have in my power supply?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-23 23:53:13 UTC
From: braincambre500@yahoo.com
Message-ID: <85a87c6c.0212231553.63158520@posting.google.com>
Source record: 39190

Hello all,

Merry Christmas and a Happy New Year!

I always dabble in making LPFM transmitters, using my LM317T adjustable power supply.

The power supply has been working great over the years, but there has always been a noticeable 'humm' coming from my receivers end.

Would anyone know how to eliminate this humm I have from the power supply.

Sincerely, Patrick

4628. Re: Gouriet-Clapp osc

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 01:24:42 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v0fdqukh1bjg3d@corp.supernews.com>
Source record: 39191

A NPN transistor that can handle whatever current you expect, can't be that
much and it's cheaper than a fet!
"L Caracciolo" <larryc@northwest.com> wrote in message
news:3E078313.82E433DD@northwest.com...
> My Eico 722 VFO uses a Gouriet-Clapp circuit. To turn on the osc tube
> (6au6) for XMT, the cathode is grounded thru a slide switch.
>
> I've considered a more electronic means of switching...such as using a
> fet switch (capable of enduring the cathode current).
>
> Any suggestions would be helpful.
>

4629. Re: Would anyone know how to 'eliminate' the hummmm I have in my power supply?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 01:35:49 UTC
From: scott <acepilot@bloomer.net>
Message-ID: <3E07B9F5.D8CF6A03@bloomer.net>
Source record: 39192

Try placing a 100 to 1000 uF and a 0.1 uF capacitor directly across the output
of the power supply as near to the regulator IC as possible. Note polarity on
the electrolytic type and voltage rating (should be at least 1.5 to 2 times
the highest output voltage).

Scott
N0EDV

Patrick wrote:

> Hello all,
>
> Merry Christmas and a Happy New Year!
>
> I always dabble in making LPFM transmitters, using my LM317T adjustable
> power supply.
>
> The power supply has been working great over the years, but there has
> always been a noticeable 'humm' coming from my receivers end.
>
> Would anyone know how to eliminate this humm I have from the power supply.
>
> Sincerely, Patrick

--

Scott
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

4630. Re: Would anyone know how to 'eliminate' the hummmm I have in my power supply?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 01:54:34 UTC
From: Kent Haase <ijeh99@mb.sympatico.ca>
Message-ID: <W7PN9.6815$7_.28535@news1.mts.net>
Source record: 39193

Is it possible that the magnetic field from the transformer in the power supply is coupling energy into the receiver? If so, move them a few feet apart.

Kent VE4KEH
"Patrick" <braincambre500@yahoo.com> wrote in message
news:85a87c6c.0212231553.63158520@posting.google.com...
> Hello all,
>
> Merry Christmas and a Happy New Year!
>
> I always dabble in making LPFM transmitters, using my LM317T adjustable
> power supply.
>
> The power supply has been working great over the years, but there has
> always been a noticeable 'humm' coming from my receivers end.
>
> Would anyone know how to eliminate this humm I have from the power supply.
>
>
> Sincerely, Patrick

4631. Re: Help needed - SLAs and gell cells

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 02:23:23 UTC
From: "Benjamin, KB9LFZ" <KB9LFZ@arrl.net>
Message-ID: <3e07c1c3$1_4@news.teranews.com>
Source record: 39194
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.misc

I'm kind of wondering if each battery has different requirements on
charging.
I know that some batteries also have different charing rates(V and A) based
on the cycle usage.

Any one else have any comments?

Thankfully,
~Benjamin
de KB9LFZ {@arrl.net}

"Benjamin, KB9LFZ" <KB9LFZ@arrl.net> wrote in message
news:3e0663a9$1_8@news.teranews.com...
> Hello All!
>
>
> A question for ya'll to give to give two cents worth of your valued
> opinion. I have some sealed lead acid batteries(commonly known as
gelcells)
> and looking for some advice on charging.
> Looking around I find that most of the chargers out there are mode
> chargers. Some go by current or by voltage. On the common voltage
chargers,
> they say that during the "absortion mode" the charger limits the charging
> current to say, around 500mAh or so, and raises the battery voltage to
> somewhere around 14.4V. Then when the battery is drawing around 30mAh, the
> charger lowers the voltage to somwhere around 13.4 - 13.8V as in the
"float
> charge" mode.
>
> My question is this, why does the battery's voltage get raised to 14.4V
> during the "bulk charge or absortion charge" mode? Would it make any
> difference if I were just attach a charger with the voltage set to
somewhere
> around 13.5V with limited current of, say, 500mAh?
>
>
> I await anyones' and everyones' informative response.
>
>
> Appreciatively,
> ~Benjamin
> de KB9LFZ {@arrl.net}
>

>

4632. Re: Would anyone know how to 'eliminate' the hummmm I have in my power supply?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 04:18:54 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e07df28.13633529@news.freeserve.net>
Source record: 39195

On 23 Dec 2002 15:53:13 -0800, braincambre500@yahoo.com (Patrick)
wrote:

>Hello all,
>
>Merry Christmas and a Happy New Year!
>
>I always dabble in making LPFM transmitters, using my LM317T adjustable
>power supply.
>
>The power supply has been working great over the years, but there has
>always been a noticeable 'humm' coming from my receivers end.
>
Pat, it might be obvious but.
Is the voltage into the Vreg adequatley high and smoothed.
Is the Vreg actually Vregging ?.
etc. etc.

4633. Re: Would anyone know how to 'eliminate' the hummmm I have in my power supply?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 04:30:51 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <au8ntu$i5f$1@slb1.atl.mindspring.net>
Source record: 39196

Something I would check is, how much unregulated input voltage is going
to the LM317 and how much output voltage is it set for ?

It is possible that the input voltage from the AC rectifier is low enough
that when the low voltage part of the input AC ripple hits, it is below the
requirement for the LM317 and that would allow the ripple to go through the
regulator and show up on the "regulated" DC output voltage.

That low voltage point in the unregulated DC voltage ripple won't show up
on meters, although an Oscilloscope would see it...

Since this has shown up in more than one of your Transmitters, probably
pulling different DC currents, I would suspect the unregulated DC voltage is
something like 2 volts above the required output voltage, at least when the
power supply is under load.

Personally, I like to see 3 or 4 volts above the output voltage, although
that voltage drop in the regulator winds up as heat when you are pulling
current.

Another thing that might help is to increase the size of the filter
capacitor right after the rectifiers. This results in a larger initial
current surge when the power supply is turned on, but it also provides a
'stiffer' DC voltage to the input of the LM317 voltage regulator.

Jim Pennell
N6BIU

"Patrick" <braincambre500@yahoo.com> wrote in message
news:85a87c6c.0212231553.63158520@posting.google.com...
> Hello all,
>
> Merry Christmas and a Happy New Year!
>
> I always dabble in making LPFM transmitters, using my LM317T adjustable
> power supply.
>
> The power supply has been working great over the years, but there has
> always been a noticeable 'humm' coming from my receivers end.
>
> Would anyone know how to eliminate this humm I have from the power supply.
>
>
> Sincerely, Patrick

4634. Re: Help needed - SLAs and gell cells

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 04:54:55 UTC
From: N9WOS <N9WOS@worldnet.att.net>
Message-ID: <zMRN9.76774$hK4.6279777@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39097
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.misc

"Benjamin, KB9LFZ" <KB9LFZ@arrl.net> wrote in message
news:3e07c1c3$1_4@news.teranews.com...
> I'm kind of wondering if each battery has different requirements on
> charging.
> I know that some batteries also have different charing rates(V and A) based
> on the cycle usage.
>
> Any one else have any comments?

Please read all my comments because there is
a few things that i need to point out.

You use different charging methods for the
type of service you are using a the battery for.

If you are using it for fork lift, motive power,
or other full charge/ full discharge application.

You want to bring it to full charge as quick as possible.
set current limit to c/10 or even c/5
So you set the float voltage to ~15V and when the
current drops off bellow c/100 then you have a full charged battery
that's ready to go back into the device it's running.
If you leave them hooked to the unit at 15V they will
broil dry after a while.(ie) destroy the batteries.

If it's a standby application where it's hooked up all the time.
Set charge current limit to c/20
You set the float to around 13.5 to 13.8 and hold it there.
That will keep the batteries at 100% charge and won't over charge them.
But it will take a long time for them to reach full charge.~2days or so....

And the charging rate is based upon the size of the battery.
C/20 means that it's charged at one twentieth of it's rated AH.

There is some batteries called gel cells that you can only charge
so fast because if you charge them too fast, bubbles will form in the electrolyte.
And the damage is usually irreversible.
The charging rate for them is usually limited to C/20 or even less......
If it's a 10AH battery, you can only charge it at 0.5A max.

> >I have some sealed lead acid batteries(commonly known as
> gelcells)
> > and looking for some advice on charging.

That is the main point that the correction needs made.
That common knowledge is INCORRECT KNOWLEDGE

Most sealed lead acid batteries are not gel cells.
They ARE most likely, "Absorbed glass mate."/"Starved electrolyte."

Gel cells are a decent bit more expensive and if a sealed lead
acid battery is a gel cell.... It will proudly proclaim it on the side.

If it doesn't specifically say "GEL CELL" ......
Or "GELLED ELECTROLYTE"
Or "GELLED BATTERY"
Then it isn't a gel cell.

The "Sealed battery is gel cell" myth is one common myth
that you need to realize is false.

I would say that 90 to 95+% of sealed batteries are NOT gel cells.

Most sealed batteries will handle the usage that a normal flooded
cell will handle.

There is one exception.....
You have to avoid applying overly high charging voltages to them.
Because they are, by their very nature.... sealed.....
So once you broil the electrolyte away.... you can't put it back.

> > Looking around I find that most of the chargers out there are mode
> > chargers. Some go by current or by voltage.

Ones that go by current are strictly for cyclic use.
When you charge at c/10.
You hook it up and 10 hours latter, you disconnect it.
Or the timer in the charger shuts it off.

>>On the common voltage chargers,
> > they say that during the "absortion mode" the charger limits the charging
> > current to say, around 500mAh or so, and raises the battery voltage to
> > somewhere around 14.4V. Then when the battery is drawing around 30mAh, the
> > charger lowers the voltage to somwhere around 13.4 - 13.8V as in the
> "float
> > charge" mode.

That is the best type for any application.

It charges them close to 15V to get them close
to full charge as quick as possible, then it switches to
13.8 V to keep it at full charge without broiling the battery dry.
That way.... if you forget and leave the battery on the charger
for a day or two....
When you see that it's still on, you won't find a FRIED battery.
You will find a nice fully charge one.

> > My question is this, why does the battery's voltage get raised to 14.4V
> > during the "bulk charge or absortion charge" mode? Would it make any

> > difference if I were just attach a charger with the voltage set to
> somewhere
> > around 13.5V with limited current of, say, 500mAh?
> >
> >
> > I await anyones' and everyones' informative response.
> >
>

For more info.... ask the people at "sci.chem.electrochem.battery"

4635. Re: Would anyone know how to 'eliminate' the hummmm I have in my power supply?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 05:00:40 UTC
From: fmmck@aol.com
Message-ID: <20021224000040.11931.00000186@mb-fy.aol.com>
Source record: 39099

<< The power supply has been working great over the years, but there has always been a noticeable 'humm' coming from my receivers end. >>

Patrick-

This reminds me of a hum problem with direct-conversion QRP Ham Rigs, such as the Heath HW-7. In those cases, it isn't necessarily the power supply causing the hum.

For some reason the local oscillator becomes modulated by 60 Hz. It may be that the shielding is inadequate, or that the oscillator signal gets coupled through the power supply to the 60 Hz side. I've never seen a good explanation, but have read of many others having the same problem as I've had.

My best results in attempting to reduce the hum, were obtained by running both power leads together through a large toroid ferrite core. I looped them through the core several times to notice a reduction in the hum, but never was able to completely eliminate it.

73, Fred, K4DII

4636. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 05:53:46 UTC
From: Rick Karlquist <richard@karlquist.remove.this.com>
Message-ID: <KDSN9.441195$WL3.122588@rwcrnsc54>
Source record: 39100

The key to demistifying SWR couplers is to realize that
"forward" and "reverse" voltages are defined basically
as the sum and difference (respectively) of the voltage
and current. The coupled line (much shorter than a
wavelength) is really a lumped component having both
capacitive and inductive coupling, which basically detects
voltage and current respectively. The diode voltages are
the sum or difference of voltage and current. You could
replace the coupled line with a coupling capacitor and a
coupling coil. It's cheaper to build the assembly as a
short section of coupled transmission line.

Rick N6RK

"Avery Fineman" <averyfineman@aol.com> wrote in message
news:20021218162738.22961.00000142@mb-mp.aol.com...
> In article <3E0099C5.9040605@ieee.org>, OC_CAM's Razor
<Cecil.A.Moore@ieee.org>
> writes:
>
> >Jason Hsu wrote:
> >> Can someone tell me how an SWR meter works? I'm looking at the SWR
> >> meter project described at:
> >> http://www.arrl.org/members-only/tis/info/pdf/9702033.pdf
> >>
> >> I know that an SWR meter works by detecting the differences between
> >> the forward and reflected powers. In this particular circuit, the
> >> forward and reflected powers are sent into an LM3914 chip. I am
> >> familiar with the functions of the 3914 chip. The forward power
> >> becomes a forward voltage that is used as the high reference voltage
> >> level. The reflected power becomes a reflected voltage that becomes
> >> the signal that the LM3914 chip tests.
> >>
> >> The forward power and the reflected power look like they are fed into
> >> virtually IDENTICAL circuits. (Notice how both the forward and
> >> reflected sides are fed into a Ge diode. And the positive side faces
> >> the transmission line for both.) I know that there are couplers in
> >> this circuit, but I am having difficulty understanding what's going
> >> on. How does this circuit ensure that one part of the circuit
> >> responds only to the forward power and that the other part of the
> >> circuit only responds to the reflected power?
> >
> >This one is very easy to understand. The two pickups on the stripline
> >are arranged in opposite directions. Each pickup has a 50 ohm load on
> >one end and a diode on the other end. The 50 ohm load dissipates the

> >coupled wave in one direction and the diode rectifies the coupled wave
> >in the other direction. Each pickup is designed to respond to a wave
> >traveling in only one direction. The forward sampled voltage is rectified
> >and the reflected sampled voltage is rectified before being presented to
> >the LM3914 chip, i.e. the LM3914 is working only with DC values.
> >--
> >cheers, CAM http://www.qsl.net/w5dxp
>
> Hi Cecil, Merry Christmas!
>
> Here's some things on couplers other than microstrip/
> stripline octave-band devices, general information on them:
>
> The "Bruene Discriminator" (or "Detector") may have started
> the forward-reverse reading transmission line detectors way
> back in the early 1950s as part of the Collins Radio
> "Autotune" system. That is an RF current-sensing transformer
> plus coupled RF line voltage double detector arrangement.
> There's a good write-up on it, along with current and voltage
> phase relationship diagrams in TM 11-806, the technical
> manual for the T-195 transmitter in the AN/GRC-19 military HF
> radio. The whole T-195 TM is 33 MB in size, available at:
>
> http://www.kg7bz.com/manuals.html
>
> The same TM also describes the final amplifier's automatic
> tuning system in both text and diagrams...in addition to the
> separate antenna matching tuning section.
>
> For a good explanation of various transformers arranged as
> directional couplers, hybrids, and impedance changers:
>
> http://www.mellis.net [click on Tutorials button]
>
> Four HTML tutorials include diagrams with current/voltage
> relationships shown for better description. Those apply to
> HF all the way down to audio. There's several other things
> on Ellis' site which might be interesting to homebrewers.
>
> Len Anderson
> retired (from regular hours) electronics engineer person
>

4637. Re: Iambic paddles?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 07:13:17 UTC
From: Alfred Lorona <w6wqc@dslextreme.com>
Message-ID: <au91er$568a4$1@ID-49117.news.dfncis.de>
Source record: 39101

If a two paddle mechanism is called an iambic paddle, what is it called when it is used to operate an 'ultimatic' electronic keyer? :)

73, AL

4638. Re: Would anyone know how to 'eliminate' the hummmm I have in my power supply?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 07:52:54 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E081256.34C1@sneakemail.com>
Source record: 39098

Patrick wrote:
>
> Hello all,
>
> Merry Christmas and a Happy New Year!
>
> I always dabble in making LPFM transmitters, using my LM317T adjustable
> power supply.
>
> The power supply has been working great over the years, but there has
> always been a noticeable 'humm' coming from my receivers end.
>
> Would anyone know how to eliminate this humm I have from the power supply.
>
> Sincerely, Patrick

There may be a few millivolts of ripple from a properly-designed LM317 regulator. The ripple attenuation depends on the output voltage, and can vary between 60 to 80 dB. If the output voltage is above 5V, adding a 10uF cap from the Adjust pin to ground can increase the ripple rejection.

If LPFM means low power FM, even a few millivolts of ripple can cause noticeable hum in the received signal. You can reduce the regulator ripple a number of ways. See

http://www3.sympatico.ca/add.automation/spice/ripple.htm

Best Regards,

Mike

4639. Re: Would anyone know how to 'eliminate' the hummmm I have in my power supply?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 08:31:17 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <au960laql1@freenet9.carleton.ca>
Source record: 39102

Fred McKenzie (fmmck@aol.com) writes:
> << The power supply has been working great over the years, but there has
> always been a noticeable 'humm' coming from my receivers end. >>
>
> Patrick-
>
> This reminds me of a hum problem with direct-conversion QRP Ham Rigs, such as
> the Heath HW-7. In those cases, it isn't necessarily the power supply causing
> the hum.
>
> For some reason the local oscillator becomes modulated by 60 Hz. It may be
> that the shielding is inadequate, or that the oscillator signal gets coupled
> through the power supply to the 60 Hz side. I've never seen a good
> explanation, but have read of many others having the same problem as I've had.
>
> My best results in attempting to reduce the hum, were obtained by running both
> power leads together through a large toroid ferrite core. I looped them
> through the core several times to notice a reduction in the hum, but never was
> able to completely eliminate it.
>
> 73, Fred, K4DII
>
That would be my guess too, though I was still puzzling over the use of "LPFM"
since I thought it was an actual class of FM broadcast license in the US,
so either someone is bootlegging or has a legitimately unlicensed
transmitter.

About a decade ago I noticed the same thing when connecting a DC
receiver to a line operated power supply. Rememberin that I'd read
something about this sort of hum, I looked for the bit. I never
tried a choke, but just bypassed each of the diodes in the power supply
with ceramic capacitors, I forget whether they were .1s of .01s.
The hum I had noticed went away, though before trying it I had
kept adding larger filter capacitors to the output of the rectifier,
without any change.

Since then, I've routinely bypassed the rectifiers in power supplies
I've thrown together. Just last week I noticed some telltale hum
in a power supply I was running a car radio off, and just put a bypass
capacitor across the secondary of the power transformer. Immediately
the hum went away.

Michael VE2BVW

4640. Re: Would anyone know how to 'eliminate' the hummmm I have in my power supply?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 10:09:57 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <au9ks7dvh1@newsg1.svr.pol.co.uk>
Source record: 39106

"Mike Monett" <z06hgto001@sneakemail.com> wrote in message
news:3E081256.34C1@sneakemail.com...
> Patrick wrote:
> >
> > Hello all,
> >
> > Merry Christmas and a Happy New Year!
> >
> > I always dabble in making LPFM transmitters, using my LM317T adjustable
> > power supply.
> >
> > The power supply has been working great over the years, but there has
> > always been a noticeable 'humm' coming from my receivers end.
> >
> > Would anyone know how to eliminate this humm I have from the power
supply.
> >
> > Sincerely, Patrick
>
> There may be a few millivolts of ripple from a properly-designed LM317
> regulator. The ripple attenuation depends on the output voltage, and can
> vary between 60 to 80 dB. If the output voltage is above 5V, adding a
> 10uF cap from the Adjust pin to ground can increase the ripple rejection.

A diode is advisable between the capacitor and the output of the regulator.

Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

4641. Re: Would anyone know how to 'eliminate' the hummmm I have in my power supply?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 10:12:34 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3E083312.9000004@ay.com.au>
Source record: 39103

Patrick,

When I was an FM pirate I had this problem, it was two fold. My VCO regulator wasn't the best, some careful use of a zener and rearrangement of the VCO circuit to make it more robust to supply variation fixed that.

The second problem was a ground loop in the studio to multiplex feed lines, breaking them up with audio isolation transformers fixed that, but effected the frequency response quite a bit. I had to hack the transformer laminations and add a compensation network before the preemphasis networks.

I don't believe in ungrounding equiment to fix loops, it is a hack, and may one day catch up with you, with fatal consequences. You could try running the TX on a gel-cell or similar battery so it floats and is on clean power. But if your VCO is *that* sensitive that supply hum is an issue the transmitted audio quality will suffer anyway.

Another thing to watch out for is RF getting back into the supply and upsetting it. Check the supply output with a scope on AC, is it really the supply that is the problem?

Patrick wrote:
> Hello all,
>
> Merry Christmas and a Happy New Year!
>
> I always dabble in making LPFM transmitters, using my LM317T adjustable
> power supply.
>
> The power supply has been working great over the years, but there has
> always been a noticeable 'humm' coming from my receivers end.
>
> Would anyone know how to eliminate this humm I have from the power supply.
>
>
> Sincerely, Patrick

--
Alan Yates
http://www.vk2zay.net/
The Moon is Waning Gibbous (78% of Full)

4642. Need IF coil 10,7 Mc

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 10:48:40 UTC
From: 9A5WW <sinisa.rietkovic@bj.hinet.hr>
Message-ID: <au9e0u$b7pe$1@as201.hinet.hr>
Source record: 39104

Hello !!!!!!!!

I am in Croatia and in my country i can��t find this coil so please help me
friends from all over the world

p.s. i need only 5 pieces

4643. Re: Need IF coil 10,7 Mc

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 11:45:48 UTC
From: Alan Yates <alany@ay.com.au>
Message-ID: <3E0848EB.9020008@ay.com.au>
Source record: 39105

9A5WW wrote:

> I am in Croatia and in my country i can?t find this coil so please help me
> friends from all over the world
>
> p.s. i need only 5 pieces

Attack an FM broadcast radio that has been junked with a soldering iron?
That is where I get most of mine from. Over here in Australia we can
get cheap and nasty AM/FM broadcast radios from $2 stores that are worth
more in parts than their face value.

--
Alan Yates
http://www.vk2zay.net/
The Moon is Waning Gibbous (77% of Full)

4644. WTB:Cheap dual band mobile

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 14:56:21 UTC
From: FM <radiovintage@hotmail.com>
Message-ID: <pA_N9.3721$ka5.445737@newsread1.prod.itd.earthlink.net>
Source record: 39107
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I am looking for a dual bander 2/440 for mobile use.Looks are not important
but price is.Please state price and condition.
Thanks,73

4645. Re: Would anyone know how to 'eliminate' the hummmm I have in my power supply?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 15:02:36 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v0gtofmn0oar54@corp.supernews.com>
Source record: 39108

First get a scope or an AC millivolt meter and measure the AC on the DC lead
to see if that's where the hum is coming from. You may be chasing your tale
thinking it's the power suplly. Divide and conquer.
good luck
hank wd5jfr
"Patrick" <braincambre500@yahoo.com> wrote in message
news:85a87c6c.0212231553.63158520@posting.google.com...
> Hello all,
>
> Merry Christmas and a Happy New Year!
>
> I always dabble in making LPFM transmitters, using my LM317T adjustable
> power supply.
>
> The power supply has been working great over the years, but there has
> always been a noticeable 'humm' coming from my receivers end.
>
> Would anyone know how to eliminate this humm I have from the power supply.
>
>
> Sincerely, Patrick

4646. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 16:34:56 UTC
From: Richard Fry <rfry@adams.net>
Message-ID: <C00O9.1167$Eh.148494@newsfeed.slurp.net>
Source record: 39110
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

"J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote
>>
> For those NG lurkers that may wonder why the light comes on so
> quickly when the light switch is thrown - while the electrons might
> take several minutes...
> They need to keep in mind that voltage is analogous to water pressure.
> The pressure wave (voltage) moves very quickly. The actual water flow
> (electrons) depends on the flow rate (current).

That will not explain why the light turns on quickly. It takes voltage AND current (ie, power) to light a light bulb or do any other "work."

If the bulb had to wait several minutes for the current to arrive, it would be dark until then.

Richard Fry

4647. Re: Would anyone know how to 'eliminate' the hummmm I have in my power supply?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 18:06:01 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E08A209.1024@sneakemail.com>
Source record: 39109

Leon Heller wrote:
>
> "Mike Monett" <z06hgto001@sneakemail.com> wrote in message
> news:3E081256.34C1@sneakemail.com..

[...]

> > There may be a few millivolts of ripple from a properly-designed LM317
> > regulator. The ripple attenuation depends on the output voltage, and can
> > vary between 60 to 80 dB. If the output voltage is above 5V, adding a
> > 10uF cap from the Adjust pin to ground can increase the ripple rejection.
>
> A diode is advisable between the capacitor and the output of the regulator.
>
> Leon
> --
> Leon Heller, G1HSM
> leon_heller@hotmail.com
> http://www.geocities.com/leon_heller

Yes, you are correct, if the output voltage is over 25V or the
Adjust cap is larger than 10uF. From the LM117 spec:

"Protection Diodes"

"When an output capacitor is connected to a regulator and the
input is shorted, the output capacitor will discharge into the
output of the regulator. The discharge current depends on the
value of the capacitor, the output voltage of the regulator, and
the rate of decrease of VIN. In the LM117, this discharge path is
through a large junction that is able to sustain 15A surge with no
problem. This is not true of other types of positive regulators.
For output capacitors of 25 uF or less, there is no need to use
diodes."

"The bypass capacitor on the adjustment terminal can discharge
through a low current junction. Discharge occurs when either the
input or output is shorted."

"Internal to the LM117 is a 50W resistor which limits the peak
discharge current. No protection is needed for output voltages of
25V or less and 10 uF capacitance."

http://www.national.com/ds/LM/LM117.pdf

Mike

4648. Re: Iambic paddles?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 19:27:59 UTC
From: mjmanship@iquest.net
Message-ID: <3e08b523.6154227@news.iquest.net>
Source record: 39111

On Mon, 23 Dec 2002 23:13:17 -0800, "Alfred Lorona"
<w6wqc@dslextreme.com> wrote:

>If a two paddle mechanism is called an iambic paddle, what is it called when
>it is used to operate an 'ultimatic' electronic keyer? :)
>
>73, AL
>
>

The utimate paddle.

4649. Re: How do couplers in SWR meters work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 19:51:34 UTC
From: Ed Senior <eseniors@earthlink.net>
Message-ID: <aV2O9.5047$b97.492277@newsread2.prod.itd.earthlink.net>
Source record: 39112
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

This water analogy may be getting a bit strained; but with water, this is no big mystery.

Assuming a valve is open at the far end, water will start to flow out as soon as the pressure wave gets down there. (Pipeline is assumed to be full when you start, natch.) You don't have to wait several minutes for that flow to occur--unless we're talking about the California Aquaduct or something. Of course, the specific water that flows immediately from the far end is the water that's already down there. "New" water from the sending end will take much longer to arrive.

You are free to substitute electrons for water in all this, at your own risk.

"Richard Fry" <rfry@adams.net> wrote in message
news:C00O9.1167$Eh.148494@newsfeed.slurp.net...
>
> That will not explain why the light turns on quickly. It takes voltage
AND
> current (ie, power) to light a light bulb or do any other "work."
>
> If the bulb had to wait several minutes for the current to arrive, it
would
> be dark until then.
>
> Richard Fry
>
> "J. Harvey" <JM002.Harvey_ANTI*SPAM_@Sympatico.ca> wrote
> >>
> > For those NG lurkers that may wonder why the light comes on so
> > quickly when the light switch is thrown - while the electrons might
> > take several minutes...
> > They need to keep in mind that voltage is analogous to water pressure.
> > The pressure wave (voltage) moves very quickly. The actual water flow
> > (electrons) depends on the flow rate (current).
> ----------
>
>

4650. Troubleshooting Simple VHF-AM Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-24 22:14:11 UTC
From: Paul Zerkel <pzerkel@insightbb.com>
Message-ID: <T_4O9.496272$QZ.74506@sccrnsc02>
Source record: 39113

Though a ham for some time, I am new to homebrewing and the first project I picked was this receiver. http://www.e-insite.net/ednmag/archives/1997/092597/20di_03.htm I used the PCB from FAR circuits. After many months of procrastinating and collecting parts I finally got everything soldered onto the board.

As the project was nearing completion I discovered the following web site where the original author suggests some improvements; http://www.geocities.com/hagtronics/aircraft.html I have not made those improvements to my project yet. And of course the receiver does not work. I turn it on and I hear nothing, no static, no click, nothing. I am using WalkMan type earphones.

Originally my project had only ~3.3 volts on the Vcc pin. I did look at the schematic and decide that I had a reistor where the zener diode belonged. [Note: the FAR board does not have any labeling indicating what parts go where.] I removed resistor and put 1N5228B (I was unable to find a 1N748A) diode in, I now have 6.1 volts on the Vcc pin but same results.

After starting this project I read in the ARRL Handbook that "receivers are usually buit backwards, starting with the AF amp section" I did not do that in this project because of the order in which I procured parts.

So I am not sure what my next step should be. Is the 1N5228B diode a show stopper? Should I make the suggested improvements before I even try to troubleshoot any further? Should I rip off all the AF amp parts and connect an amp which I know works (I have one of the $12 mini audio amps from Radio Shack)? Do I even need to take all of the amplifier section parts off the board before connecting the mini amp? Is there something else I should be looking for?

As of yet I do not have a 'scope. I may purchase one but I would like to have the confidence in my ability to build a simple receiver before I spend that kind of money. I just am not sure what I should be looking at next or what kinds of tools I am going to need to do so.

Thanks in advance from a middle aged rookie.

4651. Ni Cad battery storage

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-25 00:13:31 UTC
From: Ralph Lane <rlane7301@comcast.net>
Message-ID: <kKWcnUElA9i3ZZWjXTWc3Q@comcast.com>
Source record: 39115

I wish to store several nicad batteries for several months. Shoud I store them fully charged or what? Most nicads loose their charge rather quickly.......recharge them every month or so? Will they be damaged if allowed to remain discharged for months at a time?
Any info will be welcome.
Ralph

4652. Thank you for all the helpful hints gentleman...

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-25 00:41:27 UTC
From: braincambre500@yahoo.com
Message-ID: <85a87c6c.0212241641.e712332@posting.google.com>
Source record: 39116

Hello all,

Yes, I will try all the things that you all mentioned. I do believe,
like one person said, that it is not so much the power supply as to
the oscillator picking up that 60 Hz.

I did put a non-grounded shield in between the power supply and transmitter
and the hummmmmm definately decreased.

I do believe I will work on that.

Again, thank you for all the great comments.

Merry Chrismtas and a Happy New Year to all.

Respectfully,

Patrick Cambre

4653. Re: Would anyone know how to 'eliminate' the hummmm I have in my power supply?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-25 00:46:09 UTC
From: braincambre500@yahoo.com
Message-ID: <85a87c6c.0212241646.5b4ff5df@posting.google.com>
Source record: 39117

Hello all,

Yes, thank you for all that great advice. I will continue to start doing those things you all said and see if any one helps. Will let you all know later how things transpires.

A Very Merry Christmas and a Happy New Year to all!

Sincerely,

Patrick Cambre

4654. Re: Ni Cad battery storage

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-25 00:52:25 UTC
From: "atec77(antispam)" <"atec77(antispam)"@hotmail.com>
Message-ID: <3E090149.8C90BA1F@hotmail.com>
Source record: 39118

google will be more specific but it should be about 3 months before recharging
will become an issue , I think , perhaps someone can be more elucidating ?

Ralph Lane wrote:
>
> I wish to store several nicad batteries for several months. Shoud I store
> them fully charged or what? Most nicads loose their charge rather
> quickly.......recharge them every month or so? Will they be damaged if
> allowed to remain discharged for months at a time?
> Any info will be welcome.
> Ralph

4655. Re: Troubleshooting Simple VHF-AM Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-25 01:08:09 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.1872a4d666c23a17989681@192.168.42.131>
Source record: 39119

In article <T_4O9.496272$QZ.74506@sccrnsc02>, pzerkel@insightbb.com
says...

<snippety>

> As of yet I do not have a 'scope. I may purchase one but I would like to
> have the confidence in my ability to build a simple receiver before I spend
> that kind of money. I just am not sure what I should be looking at next or
> what kinds of tools I am going to need to do so.

You're in a kind of chicken-or-egg situation. The bottom line is
that you have to have, or have access to, at least minimal test equipment
(multimeter and at least a basic O-scope) to effectively troubleshoot
nearly any sort of receiver.

Check your work VERY carefully against the kit plans. Check
for cold solder joints, misinstalled parts, etc. Don't rule out the
possibility that there may be an error in the kit's plans themselves
(though a PC board does dramatically decrease such possibilities).

If you don't have the experience or equipment to troubleshoot, seek
out someone from, say, your local ham radio club that does, and ask if
they're willing to "elmer" you along. Lists of clubs may be found by
digging around at http://www.arrl.org

Good luck.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

4656. Ideas for GS-35 tube mounting ???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-25 02:08:31 UTC
From: Douglas Snowden <snowden@peoplepc.com>
Message-ID: <v0hq2g7koudk85@corp.supernews.com>
Source record: 39114

I am starting to collect parts for a Russian GS-35 linear, which is
similar in characteristics to the 8877, but mounting is a lot
different. I successfully mounted a GI7B tube by just clamping the
grid to the chassis and providing air holes for circulation to the
plate. Any experience with the GS-35 out there?
Could I do similar with the GS35? I am guessing I might need to make sure
I cool the cathode are also.

Merry Christmas

Doug N4IJ

4657. Re: Troubleshooting Simple VHF-AM Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-25 04:42:36 UTC
From: Tom Coates <tecoates@comcast.net>
Message-ID: <zTmdnbGSdqOkqpSjXTWcrg@comcast.com>
Source record: 39121

A signal tracer might be helpful. As I recall they're easy to build - mostly
a diode and a small audio amp. Perhaps someone can jump in and evaluate
this idea and (if warranted) provide additional information.

Tom

"Bruce Lane" <SpammersAreVermin@dev.nul> wrote in message
news:MPG.1872a4d666c23a17989681@192.168.42.131...
> In article <T_4O9.496272$QZ.74506@sccrnsc02>, pzerkel@insightbb.com
> says...
>
> <snippety>
>
> > As of yet I do not have a 'scope. I may purchase one but I would like to
> > have the confidence in my ability to build a simple receiver before I
spend
> > that kind of money. I just am not sure what I should be looking at next
or
> > what kinds of tools I am going to need to do so.
>
> You're in a kind of chicken-or-egg situation. The bottom line is
> that you have to have, or have access to, at least minimal test equipment
> (multimeter and at least a basic O-scope) to effectively troubleshoot
> nearly any sort of receiver.
>
> Check your work VERY carefully against the kit plans. Check
> for cold solder joints, misinstalled parts, etc. Don't rule out the
> possibility that there may be an error in the kit's plans themselves
> (though a PC board does dramatically decrease such possibilities).
>
> If you don't have the experience or equipment to troubleshoot, seek
> out someone from, say, your local ham radio club that does, and ask if
> they're willing to "elmer" you along. Lists of clubs may be found by
> digging around at http://www.arrl.org
>
> Good luck.
>
> --
> Bruce Lane, Owner and Head Hardware Heavy,
> Blue Feather Technologies -- http://www.bluefeathertech.com
> Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
> kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
> "I'll get a life when someone demonstrates to me it would be superior to
> what I have now..." (Taki Kogoma)

4658. Re: Troubleshooting Simple VHF-AM Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-25 05:02:54 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <aube5u$9o3$1@freenet9.carleton.ca>
Source record: 39122

"Tom Coates" (tecoates@comcast.net) writes:
> A signal tracer might be helpful. As I recall they're easy to build - mostly
> a diode and a small audio amp. Perhaps someone can jump in and evaluate
> this idea and (if warranted) provide additional information.
>
> Tom
>
>
Yes, and there are other little things someone could throw together
to help troubleshoot. A signal injector can be handy (though maybe the
harmonics won't be so great at VHF), and made out of a pair of transistors.
Use a radio (scanner or transceiver with wide range receive) to find
the local oscillator; that it's the VHF receiver's local oscillator can
be verified if turning it off makes the signal go away). Find one of
those TTL crystal oscillators that are so common, one that has a harmonic
that will land in the receiver's tuning range, and you have some sort of
signal source. People got by with a lot of ingenuity in the past, and
a simple receiver can be checked out with similarly simple bits of
circuitry.

Michael VE2BVW

> "Bruce Lane" <SpammersAreVermin@dev.nul> wrote in message
> news:MPG.1872a4d666c23a17989681@192.168.42.131...
>> In article <T_4O9.496272$QZ.74506@sccrnsc02>, pzerkel@insightbb.com
>> says...
>>
>> <snippety>
>>
>> > As of yet I do not have a 'scope. I may purchase one but I would like to
>> > have the confidence in my ability to build a simple receiver before I
> spend
>> > that kind of money. I just am not sure what I should be looking at next
> or
>> > what kinds of tools I am going to need to do so.
>>
>> You're in a kind of chicken-or-egg situation. The bottom line is
>> that you have to have, or have access to, at least minimal test equipment
>> (multimeter and at least a basic O-scope) to effectively troubleshoot
>> nearly any sort of receiver.
>>
>> Check your work VERY carefully against the kit plans. Check
>> for cold solder joints, misinstalled parts, etc. Don't rule out the
>> possibility that there may be an error in the kit's plans themselves
>> (though a PC board does dramatically decrease such possibilities).

>>
>> If you don't have the experience or equipment to troubleshoot, seek
>> out someone from, say, your local ham radio club that does, and ask if
>> they're willing to "elmer" you along. Lists of clubs may be found by
>> digging around at http://www.arrl.org
>>
>> Good luck.
>>
>> --
>> Bruce Lane, Owner and Head Hardware Heavy,
>> Blue Feather Technologies -- http://www.bluefeathertech.com
>> Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
>> kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
>> "I'll get a life when someone demonstrates to me it would be superior to
>> what I have now..." (Taki Kogoma)
>
>

4659. Re: Ni Cad battery storage

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-25 05:09:40 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E093D94.4623@sneakemail.com>
Source record: 39120

Ralph Lane wrote:
>
> I wish to store several nicad batteries for several months. Shoud I store
> them fully charged or what? Most nicads loose their charge rather
> quickly.......recharge them every month or so? Will they be damaged if
> allowed to remain discharged for months at a time?
> Any info will be welcome.
> Ralph

According to the experts, NiCads are very tolerant of storage:

http://www.powerstream.com/Storage.htm

"Store NiCad batteries in a dry location with low humidity, no
corrosive gasses, and at temperature range of -20 DegC to +45
DegC. Storing batteries where humidity is extremely high, or where
temperatures fall below -20 DegC or above +45 DegC"

"Because long term storage can accelerate battery self-discharge,
and lead to the deactivation of reactants, locations where the
temperature ranges between +10 DegC and +30 DegC are suitable for
long term storage."

"When storing batteries for more than one year, charge at least
once a year to prevent leakage and deterioration of performancedue
to self-discharging. When using a rapid voltage detection charger
carry out charge and discharge at least once ever 6 months."

"The sealed nickel-cadmium cell can be stored in the charged or
discharged state without damage. It can be restored for service by
recharging (one or two charge/discharge cycles)."

I have NiCads that I have stored for years, then suddenly I find a use
for them. They seem to work fine after a couple of charge/discharge
cycles.

Mike

4660. Re: Ni Cad battery storage

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-25 06:31:18 UTC
From: Ralph Lane <rlane7301@comcast.net>
Message-ID: <AOydnUW-3d4ozZSjXTWcow@comcast.com>
Source record: 39123

Thanks, just the info I needed
Ralph
"Mike Monett" <z06hgto001@sneakemail.com> wrote in message
news:3E093D94.4623@sneakemail.com...
> Ralph Lane wrote:
> >
> > I wish to store several nicad batteries for several months. Shoud I
store
> > them fully charged or what? Most nicads loose their charge rather
> > quickly.......recharge them every month or so? Will they be damaged if
> > allowed to remain discharged for months at a time?
> > Any info will be welcome.
> > Ralph
>
> According to the experts, NiCads are very tolerant of storage:
>
> http://www.powerstream.com/Storage.htm
>
> "Store NiCad batteries in a dry location with low humidity, no
> corrosive gasses, and at temperature range of -20 DegC to +45
> DegC. Storing batteries where humidity is extremely high, or where
> temperatures fall below -20 DegC or above +45 DegC"
>
> "Because long term storage can accelerate battery self-discharge,
> and lead to the deactivation of reactants, locations where the
> temperature ranges between +10 DegC and +30 DegC are suitable for
> long term storage."
>
> "When storing batteries for more than one year, charge at least
> once a year to prevent leakage and deterioration of performancedue
> to self-discharging. When using a rapid voltage detection charger
> carry out charge and discharge at least once ever 6 months."
>
> "The sealed nickel-cadmium cell can be stored in the charged or
> discharged state without damage. It can be restored for service by
> recharging (one or two charge/discharge cycles)."
>
> I have NiCads that I have stored for years, then suddenly I find a use
> for them. They seem to work fine after a couple of charge/discharge
> cycles.
>
> Mike

4661. Re: Hi-Fi FM decoder internals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-25 09:40:59 UTC
From: RF <listaco@terra.es>
Message-ID: <aubv3o$ar9$3@nsnmpen2-gest.nuria.telefonica-data.net>
Source record: 39124

> The Phillips TDA1591 and others of its ilk are being used nowadays.

Thank you Pete. Acording to Philips datasheets:

TDA1591 -> SNR 76 dB - Channel separation 40 dB
TDA1592 -> SNR 82 dB - Channel separation 40 dB

And for the FM detector?

National LM3189 has 80 dB SNR
Harris CA3189 has 72 dB SNR

do you know anyone better?

4662. Re: Hi-Fi FM decoder internals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-25 10:13:17 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <1xfO9.12309$p_6.992978@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39126

Phillips has some pretty good I.F. amp / Detector chips that are being used in some of the high end tuners. I've got a Linn Kudos, and I did open it up, but I forgot which Phillips chip it uses. Magnum-Dynalab has gone to some of the Phillips chips in their newer tuners. They did use the LM4500 in their older designs, but the vendor discontinued that devices. My Belles Research Discrete Class A Tuner uses the 4500, and it doesn't sound as good as the Linn unit. The midrange is reticent sounding, and the mid bass doesn't have the punch of either the Linn or my Luxman T110. The MR78 with the TDA1591 sounds very similar to the Linn. I hope this helps.

Pete

4663. Re: NE1 HAVE A NO-TUNE VCO FOR THE FM BROADCAST BAND? (i. e.: POS-150)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-25 10:28:13 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <1LfO9.12312$p_6.993807@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39127
Cross-posted to: rec.radio.amateur.homebrew,alt.engineering.electrical,alt.ham-radio.vhf-uhf

The Mini-Circuits are more sophisticated than some of the other offerings that I have seen. The reason that they have the 2nd harmonic suppressed at -30dBc is because they have a tracking filter in the output circuit. Most of the VCOs that I have seen have only 10 or 15dB of 2nd harmonic suppresion. Another thing about the Mini-Circuits devices is their relatively flat KV characteristic over their specified tuning range.
Designing a VCO can be fun, but there are some pitfalls. Sometimes, it is hard to get a monotonic response from the VCO, especially with a wide range unit. I remember one unit that worked fine in the breadboard stage, but once the PC board was laid out, the strays were reaking havoc on the circuit. As you varied the tuning voltage up in value, the unit would increase in frequency, but at some tuning voltages, the unit would start to tune backwards, only to tune in the proper direction as the tune voltage was further increased.
One way that you can characterize a VCO is to hook up a Network Analyzer to the input tuned circuit of the circuit, and look at the S11 parameters. Setting up the analyzer for a Smith Chart display, you can look at the Unity Gain Circle. There will be a frequency range where the VCO will exhibit negative resistance; it this range is contigous, the VCO will be fine, but if there are loops in the displayed response, you will not get monotonic tuning response.
The whole point of this is that it is easier to purchase a VCO from a reputable manufacturer such as Mini-Circuits. I have also used some of the units from Magnum Microwave, and they have been ok, but the ones from Vari-L have left something to be desired. Neither phase noise nor harmonic suppresion were as good as the Mini-Circuits devices, and on top of that, the Mini-Circuits VCOs were priced much cheaper.

Pete

4664. Re: Iambic paddles?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-25 14:04:44 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <3E09BAFC.18A3462E@one.net>
Source record: 39128

Boy, this could be the beginning of a lot of puns <g>.

Personally, I don't call a two-paddle mechanism and iambic paddle --
it's just a dual-paddle key.

The iambics are in the electronics, not the key. But you need a
dual-paddle key if you want to make an iambic keyer work iambically
(sp???). You can't do it with a single paddle.

... Rich

Alfred Lorona wrote:
>
> If a two paddle mechanism is called an iambic paddle, what is it called when
> it is used to operate an 'ultimatic' electronic keyer? :)
>
> 73, AL

4665. Re: Iambic paddles?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-25 16:43:48 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e09df75.1902736@news.freeserve.net>
Source record: 39129

On Wed, 25 Dec 2002 09:04:44 -0500, Rich Griffiths <richgrif@one.net>
wrote:

>Boy, this could be the beginning of a lot of puns <g>.
>
>Personally, I don't call a two-paddle mechanism and iambic paddle --
>it's just a dual-paddle key.
>
>The iambics are in the electronics, not the key. But you need a
>dual-paddle key if you want to make an iambic keyer work iambically
>(sp???). You can't do it with a single paddle.
>
Ok, I'll bite...
a simple key (ie up/down on/off) is ?...
a single Paddle Key is ? ....
A double paddle Key is ? ...
A "Bug Key is ? ...

4666. Re: Troubleshooting Simple VHF-AM Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-25 17:41:35 UTC
From: w4pqwhs@aol.com
Message-ID: <20021225124135.16984.00000237@mb-cf.aol.com>
Source record: 39130

Paul, seems you are experincing the usual problems that go with home building ...check all connections, parts, and make sure there are no mistakes in wiring,layout etc..forget the scope until you get several years of electronics training OK good luck Harold W4PQW

4667. Re: Troubleshooting Simple VHF-AM Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-25 18:30:43 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3e09f943@news.netacc.net>
Source record: 39131

"W4pqw HS" <w4pqwhs@aol.com> wrote in message
news:20021225124135.16984.00000237@mb-cf.aol.com...
> ..forget the scope until you get several years of electronics
> training OK good luck Harold W4PQW

What a preposterous statement. With a basic second hand scope you will need 20 minutes (not 2 years) of instruction on electronics. If anything, the scope will be a real learning tool for persuing your studies.

Having taught freshman engineering labs I can assure you that the engineering students meet Mr. O Scope the first week of school, not in their Jr. Year.

Steve

4668. Re: Troubleshooting Simple VHF-AM Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-25 19:04:40 UTC
From: Idontwantspam@net
Message-ID: <3e09ffde.8829656@news.bellatlantic.net>
Source record: 39132

On Wed, 25 Dec 2002 13:30:43 -0500, "Stephen C. Robbins"
<srobbinsNoSPaMDUDES@netacc.net> wrote:

>
>"W4pqw HS" <w4pqwhs@aol.com> wrote in message
>news:20021225124135.16984.00000237@mb-cf.aol.com...
>> ..forget the scope until you get several years of electronics
>> training OK good luck Harold W4PQW
>
>What a preposterous statement. With a basic second hand scope you will need
>20 minutes (not 2 years) of instruction on electronics. If anything, the
>scope will be a real learning tool for persuing your studies.
>
>Having taught freshman engineering labs I can assure you that the
>engineering students meet Mr. O Scope the first week of school, not in their
>Jr. Year.
>
There are many things you can do with a scope very early in your
training. There are a few others which will take more training to do.
Not a proper electronics lab without one, IMO. You probably do not
need a highly sophisticated one to start.

Many people have trouble learning electronics because it is hard to
visualize (electrons are tiny). An oscilloscope as a learning tool is
invaluable for this, especially for learning AC, RF, and digital
circuits.

Work the flea markets and find a boat anchor, manual style O'scope.
Not big bucks unless you go for the high-end models.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4669. Diff btwn 5763 and 6AU6

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-25 20:33:15 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E0A160B.F4FE5085@northwest.com>
Source record: 39133

I don;t hv a spec on the 5763. In older books, it seemed to be the osc tube of choice, over the 6AU6.

Why?

4670. Re: Diff btwn 5763 and 6AU6

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-25 22:03:43 UTC
From: la8ak.xnd@online.no
Message-ID: <3e0a2b25.7885212@news.online.no>
Source record: 39134

On Wed, 25 Dec 2002 12:33:15 -0800, L Caracciolo
<larryc@northwest.com> wrote:

>I don;t hv a spec on the 5763. In older books, it seemed to be the osc
>tube of choice, over the 6AU6.
>
>Why?
>
very much

see http://home.wxs.nl/~frank.philipse/frank/frank.html
--
remove ,xnd to reply

4671. Heathkit SB 230 Help with initial checks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 01:30:10 UTC
From: GAEL79@peoplepc.com
Message-ID: <3de1a5d2.0212251730.31cd8766@posting.google.com>
Source record: 39136
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hello All,

I am new to this, and this is my first Amplifier, so be gentle with me (HI-HI).

I have pieced together a Heathkit sb 230 HF Amplifier and am having proplems. I did not know the history of these parts, so I was very detail oriented (you might say anal retentive) about checking all the parts and taking several days to go through the complete assembly manual to ensure all was assembled correctly.

Here's what happened:
I am working the initial checks here, with no coax, radio, antenna, just the stand alone amp.
I am on page 88 of the assembly manual. Meter zero - GOOD. Check #1 - all GOOD. Check #2 pulled wire from pin 3, cover back on, this part goes good, hi temp light works. replaced wire on pin 3, replaced cover. Plugged in line cord. Turned amp. on. I got the delay light, and it went out within the 60-90 second window.

Turned the meter switch to exciter only. The "exciter" light works only in the exciter position, as it is supposed to.

Now is when things go wrong. I switched the meter to plate, they tell me to find a piece of "hook-up wire" to short out the relay phono socket. So, I found a wire and I am just starting to lean over the cabinet, to reach the relay socket (I never actually shorted the relay socket out), it is now 15-20 seconds after I swithed to plate, and I see a spark, through the cabinet top in the area of the relay (RY1), I blow a house circuit breaker, also the fuse in the back of the amp blew.

I must state at this point, the fuses I bought were .75 amp fuses, but not slow blow. I hope that explains my following actions.

I removed the cover, did not smell anything burnt or see any visual damage after a detailed inspection to both sides of the amp.

O.K. perhaps the fuse was faulty, I tell myself, or the fact that they call out for slow blow, and I could only find fast blow fuses in the correct amperage. Maybe the flash I saw was the relay contacts???...

I talked myself in to trying another fuse. This time It took about 5 seconds (it did not happen instantly), I had what sounded like fire crackers, and could see several sparks dancing in the rf enclosure. (I am sure it was arcing, Going on, I could see it through the top at

C15, in the rf enclosure.) Quickly, I shut off the main power switch. This time I did not blow the house circuit breaker.

Of course the fuse blew again. This time after removing the cover, I removed the RF cover to find no arcing spots on the capacitor plates (guess I am lucky). I did however, find R17, 33ohm, 1 Watt resistor blown to bits. This resistor is located just off of the grid of v1.

About the 8873 ceramic tube. The filament pins 5 and 6 show continuity. and the grid pins (4,7,11) are not shorted to the cathode pins (1,2,3,8,9,10).

Does the fact that that resister blew, and the fuses blew, mean I have high grid current? Did the arcing in the rf enclosure happen because the tube was energized, and no dummy load was connected to the amp?? Is this amp trying to amplify power, when it is not supposed to? Does the "fireworks display" in the rf enclosure at least prove the tube is good or amplifying like it is supposed to?

I have no idea what to do next. Anyone who could point me in a direction, I would be greatful.

Thank you for taking the time to read through this!!!

73,

Scott KC9AWN

P.S. I posted this on E-Ham.net a couple of days ago. The responce I got back was something about checking for para. oscillations? Could someone please explain to me?

Thanks,

Scott

4672. New simple LC filter design program

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 02:08:16 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <audoaf$6tv$4@knossos.btinternet.com>
Source record: 39137

PROGRAM "LPF_HPF.exe"

Most filters consist of one or more cascaded, simple, 3-component, T or Pi sections and are used in a multitude of applications where pass-band ripple, frequencies of infinite attenuation in the stop-band, exact impedances matches, etc., are not of consequence.

This easy to use program calculates component values of high-pass, low-pass, T and Pi, basic filter sections. Internal filter loss is neglected. Operating inconveniences which may be present in more complicated programs can be avoided.

Filter response vs frequency is in terms of dB insertion loss between Ro terminations for 1 to 5 cascaded sections. Frequency range is from audio to VHF.

Download in a few seconds program LPF_HPF.exe from website below and run immediately.

==========
Regards from Reg G4FGQ
For Free Radio Design Software
Go to http://www.g4fgq.com
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4673. Re: Troubleshooting Simple VHF-AM Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 02:08:27 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3e098304$0$25270@echo-01.iinet.net.au>
Source record: 39125

As posted by others, you have the chicken and egg situation of no test gear.
From memory these chips run on 8V - I dont think you would get much at 3.3V
Download a copy of the datasheet from from the web - I presume it will be
found somewhere.
If you listen to the normal discriminator output you should get FM "hash" -
this could be a good source of signal for testing.
You could invest in a digital multimeter and check voltages at VCC and check
continuity of *all* the connections and the correct placment of every single
comopnent. and check whether there are any shorts to ground. The zener is a
rather odd configuration - assuming the chip can stand 9V (check datasheet)
you might omit it. If the wrong diode was present (you said you did not have
the correct one) it might block your supply altogether. Try touching the
RSSI output with a finger - do you get any hum in the headphones?
Of course, if you had the right gear, you could inject a 455 KHz signal into
the IF. It might be worth making up a simple oscillator using a ceramic
resonator or maybe taking off the IF from another receiver - say a cheap AM
portable etc etc

Richard

Paul Zerkel <pzerkel@insightbb.com> wrote in message
news:T_4O9.496272$QZ.74506@sccrnsc02...
>
> Though a ham for some time, I am new to homebrewing and the first project
I
> picked was this receiver.
> http://www.e-insite.net/ednmag/archives/1997/092597/20di_03.htm I used
the
> PCB from FAR circuits. After many months of procrastinating and collecting
> parts I finally got everything soldered onto the board.
>
> As the project was nearing completion I discovered the following web site
> where the original author suggests some improvements;
> http://www.geocities.com/hagtronics/aircraft.html I have not made those
> improvements to my project yet. And of course the receiver does not work.
I
> turn it on and I hear nothing, no static, no click, nothing. I am using
> WalkMan type earphones.
>
> Originally my project had only ~3.3 volts on the Vcc pin. I did look at
the
> schematic and decide that I had a reistor where the zener diode belonged.
> [Note: the FAR board does not have any labeling indicating what parts go
> where.] I removed resistor and put 1N5228B (I was unable to find a 1N748A)
> diode in, I now have 6.1 volts on the Vcc pin but same results.

>
> After starting this project I read in the ARRL Handbook that "receivers
are
> usually buit backwards, starting with the AF amp section" I did not do
that
> in this project because of the order in which I procured parts.
>
> So I am not sure what my next step should be. Is the 1N5228B diode a show
> stopper? Should I make the suggested improvements before I even try to
> troubleshoot any further? Should I rip off all the AF amp parts and
connect
> an amp which I know works (I have one of the $12 mini audio amps from
Radio
> Shack)? Do I even need to take all of the amplifier section parts off the
> board before connecting the mini amp? Is there something else I should be
> looking for?
>
> As of yet I do not have a 'scope. I may purchase one but I would like to
> have the confidence in my ability to build a simple receiver before I
spend
> that kind of money. I just am not sure what I should be looking at next or
> what kinds of tools I am going to need to do so.
>
> Thanks in advance from a middle aged rookie.
>
>
>

4674. Re: Iambic paddles?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 02:18:39 UTC
From: Rich Griffiths <richgrif@one.net>
Message-ID: <3E0A66FF.F89010FC@one.net>
Source record: 39139

100% correct.

A simple key is a simple key. You make the dits. You make the dahs.

A single paddle key is a single paddle key. With it, you can use an electronic keyer, but you can only make the keyer send a dit, or a dah, or a string of dits, or a string of dahs, depending on which side you push that paddle to.

A double paddle key is a double paddle key. With it, you can use an electronic keyer to send a dit, or a dah, or a string of dits, or a string of dahs, or di-dah-dit, or dah-di-dah, or dah-di-dah-dit, or dah-dah-di-dah, etc. Those last four are essentials of iambic keying, where much of your operating is not just swinging a paddle from side to side -- it's squeeze keying. One paddle sends dits, and the other sends dahs. And you can intermingle them any way you like.

A bug is a mechanical precursor of electronic keyers. A typical bug will give you repeated dits by pressing and holding one paddle, and you make the dahs yourself by pressing the other paddle repeatedly. You don't need any electronics; just plug it into the transmitted keying circuit.

To me, squeeze keying is the greatest thing since sliced bread. It takes a little practice to learn, but only a little. My fist is a sloppy mess at 20+ wpm with a straight (simple) key, a single paddle is too tiring, and I never learned to send properly with a bug. But squeeze keying with an iambic keyer is wonderful.

... Rich

Mike W wrote:
>
> On Wed, 25 Dec 2002 09:04:44 -0500, Rich Griffiths <richgrif@one.net>
> wrote:
>
> >Boy, this could be the beginning of a lot of puns <g>.
> >
> >Personally, I don't call a two-paddle mechanism and iambic paddle --
> >it's just a dual-paddle key.
> >
> >The iambics are in the electronics, not the key. But you need a
> >dual-paddle key if you want to make an iambic keyer work iambically
> >(sp???). You can't do it with a single paddle.
> >
> Ok, I'll bite...

> a simple key (ie up/down on/off) is ?...
> a single Paddle Key is ? ....
> A double paddle Key is ? ...
> A "Bug Key is ? ...

4675. Looking for good 3-500Z amp design and parts!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 02:26:15 UTC
From: Tony <nospam@shoveit.com>
Message-ID: <bNtO9.57036$KW2.1789586@twister.austin.rr.com>
Source record: 39135

Looking for parts necessary to build an HF amp using a single 3-500Z tube.
Need everything but the tubes, any suggestions or used/new parts please
e-mail me at
n5gpi@hotmail.com

--
Sign up for Paypal and make me $5.00

https://www.paypal.com/refer/pal=WHRP8XHRMLSX4

4676. Doppler Shift Formula???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 03:41:05 UTC
From: scott <acepilot@bloomer.net>
Message-ID: <3E0A7A51.FD286EED@bloomer.net>
Source record: 39140

Does anyone have the formula for determining doppler shift handy? Saw it once many years ago, but misplaced it in the mounds of paperwork collected over the years (pack rat syndrome) and it probably got thrown out during a "cleaning session". Thanks!

--

Scott N0EDV
http://corbenflyer.tripod.com
http://groups.yahoo.com/group/ParasolAirplanes
Building RV-4
Gotta Fly or Gonna Die!

4677. Re: Heathkit SB 230 Help with initial checks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 04:00:53 UTC
From: jeff <w5omr-anti-spam@w5omr.antispam.shacknet.nu>
Message-ID: <V9vO9.57104$KW2.1800149@twister.austin.rr.com>
Source record: 39138
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

> P.S. I posted this on E-Ham.net a couple of days ago. The responce I
> got back was something about checking for para. oscillations? Could
> someone please explain to me?

Parasitic oscillations.

the fact that the grid resistor was blown to bits, indicates to me that there might have been some vhf oscillations, that probably started because the resistor had possibly changed values, or simply wasn't large enough to handle the current being drawn through it, when the amp was place in the 'operate' mode (by closing the relay).

Check out the characteristics of the 8873. You should find out what the static current would be on the grid, while voltage is applied.
Since this is grounded-grid, there won't be any bias supply, -but- the grid leak resistor will still have some voltage across it, and there will be some grid current, at rest (grounded grid amps, are still run in AB1).
Whatever that voltage is, at the amount of grid current being read, will determine how much power handling capability is required of the resistor.

Merry Christmas - hope it was good.
-Geoff

4678. Re: Troubleshooting Simple VHF-AM Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 04:47:29 UTC
From: Paul Zerkel <pzerkel@insightbb.com>
Message-ID: <BRvO9.462373$P31.155534@rwcrnsc53>
Source record: 39141

First, Thank you to everyone for replying so quickly especially during the busy holiday.

>>From memory these chips run on 8V - I dont think you would get much at 3.3V<<
The 3.3 volts was what I had when I had a resistor installed where I now have a zener diode. (again the PCB has no labeling) so I was doing my best to deduce from the traces & schematic where components belonged). After I replaced the resistor with a diode, I am now getting between 5.5-6.1 volts on the Vcc pin (depending on freshness of 9v battery).

According to the SA605 datasheet, the Vcc power suplly voltage range is 4.5v min and 8.0v max. The absolute maximum is 9 volts. So I am thinking 6 volts or should be reasonable on the Vcc pin.

I do not get a hum in the headphone when I touch the RSSI pin with a finger.

I am not giving up on this. I do have a multimeter but no O-scope. Actually I discovered that my local junior college is offering Electronics 100 in an evening class this Spring semester. I signed up for it (I did once before, but the evening class was cancelled that time). If this class happens I may have some access to an oscilloscope soon. I have also been watching ebay pretty closely lately.

4679. Re: Iambic paddles?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 08:19:05 UTC
From: Alfred Lorona <w6wqc@dslextreme.com>
Message-ID: <auee29$6ktrf$1@ID-49117.news.dfncis.de>
Source record: 39142

"Rich Griffiths" <richgrif@one.net> wrote in message
news:3E09BAFC.18A3462E@one.net...
> Boy, this could be the beginning of a lot of puns <g>.
>
> Personally, I don't call a two-paddle mechanism and iambic paddle --
> it's just a dual-paddle key.
>
> The iambics are in the electronics, not the key. But you need a
> dual-paddle key if you want to make an iambic keyer work iambically
> (sp???). You can't do it with a single paddle.
>
> ... Rich

You are absolutely correct. In spite of the almost universal usage of
calling a dual paddle mechanism an 'Iambic keyer', there is no such thing.
It's just a dual lever or dual paddle key. The 'Iambic' (or Ultimatic) part
is in the elctronic keyer circuit - not in the paddles. :)

73, AL

4680. Re: Doppler Shift Formula???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 09:30:22 UTC
From: "John D. Farr" <jfarr62@comcast.net>
Message-ID: <ZqWdnbH16LekUZejXTWc3Q@comcast.com>
Source record: 39143

Scott:

f_d = 2 * V * f / c; where f_d is the Doppler shift in Hertz, V is the velocity in meters per second, f is the frequency in Hertz, and c is the speed of light, 3 * 10^8 meters per second.

GL, John KC4ZXX

"scott" <acepilot@bloomer.net> wrote in message news:3E0A7A51.FD286EED@bloomer.net...
> Does anyone have the formula for determining doppler shift handy? Saw
> it once many years ago, but misplaced it in the mounds of paperwork
> collected over the years (pack rat syndrome) and it probably got thrown
> out during a "cleaning session". Thanks!
>
> --
>
> Scott N0EDV
> http://corbenflyer.tripod.com
> http://groups.yahoo.com/group/ParasolAirplanes
> Building RV-4
> Gotta Fly or Gonna Die!
>
>

4681. Micro fox hunt transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 12:00:08 UTC
From: David Findlay <david@davsoft.com.au>
Message-ID: <cbCO9.16317$YN6.42598@news-server.bigpond.net.au>
Source record: 39144

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

Anyone know of a design for a tiny(preferably matchbox size) foxhunt
transmitter on 2 metre band? Is licensing required for such a device?
Thanks,

David

- --
BOFH excuse #79:

Look, buddy: Windows 3.1 IS A General Protection Fault.

-----BEGIN PGP SIGNATURE-----
Version: GnuPG v1.0.7 (GNU/Linux)

iD8DBQE+Cu9HZOfFgbBAbXARAkhOAJ91T8WxVQozXJgQUkpB6/md7gnUPwCfSEH/
KQDyJjXk0SKmN4IQbSJQwAw=
=7lqZ
-----END PGP SIGNATURE-----
```

4682. Re: Micro fox hunt transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 12:46:53 UTC
From: Idontwantspam@net
Message-ID: <3e0af757.5407785@news.bellatlantic.net>
Source record: 39145

On Thu, 26 Dec 2002 12:00:08 GMT, David Findlay <david@davsoft.com.au>
wrote:

>Anyone know of a design for a tiny(preferably matchbox size) foxhunt
>transmitter on 2 metre band? Is licensing required for such a device?
>Thanks,
>
Here is a small radio controller to make an HT into a foxhunt
transmitter:
http://www.byonics.com/piccon/piccon.html
Note that this is a kit, but a pretty simple one. Depends on your
matchbox, but this will fit. There are some tiny, lower powered HTs
out there. You should be able to find one that fits into the palm of
your hand, less antenna.

Transmitting on 2M requires a licensed control operator, and
compliance with the station ID rules. The device does not require
licensing.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4683. Re: Heathkit SB 230 Help with initial checks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 14:06:29 UTC
From: Larry Gauthier <larryg_at_ismi.net>
Message-ID: <v0m372bfr9bff0@corp.supernews.com>
Source record: 39146
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Scott,

First - tell us a little more about your amplifier. As I recall, the SB230 was introduced in 1975, and produced until the early 80's. Unless you were r-e-a-l s-l-o-w and very anal retentive, it shouldn't have taken you 20 years to assemble this Heathkit. What's the background - all new parts? Sealed box? Disassemble and rebuild from scratch?

Second, there were problems with the SB230 and self-oscillation, and during its life we included several versions of parasitic suppressors to prevent VHF self-oscillation of the tube -- resulting in the types of behavior that you describe. Depending on when your kit was manufactured, you may have an early model with a ...less-than-optimal... parasitic suppressor on the tube.

My memory is a little shaky on this - that was about 30 years ago for me. But there is a Heath mailing list and Heath reference sites on the net, with on-line technical bulletins for kits like the SB230. You should check those out before re-applying power to the SB230.

In case you hadn't noticed, the 8873 tube sells new for about $700 [it was $35 in 74 when we designed the amplifier] , rendering the amp all-but-useless in the event of a tube failure (and used 8873s are scarcer than hen's teeth). So, you should take great care when troubleshooting this problem less you blow the tube.

-larry
K8UT
a former ham from Heath

"Scott" <GAEL79@peoplepc.com> wrote in message
news:3de1a5d2.0212251730.31cd8766@posting.google.com...
> Hello All,
>
> I am new to this, and this is my first Amplifier, so be gentle with me
> (HI-HI).
>
> I have pieced together a Heathkit sb 230 HF Amplifier and am having
> proplems. I did not know the history of these parts, so I was very
> detail oriented (you might say anal retentive) about checking all the
> parts and taking several days to go through the complete assembly
> manual to ensure all was assembled correctly.
>
> Here's what happened:
> I am working the initial checks here, with no coax, radio, antenna,
> just the stand alone amp.

> I am on page 88 of the assembly manual. Meter zero - GOOD. Check #1 -
> all GOOD. Check #2 pulled wire from pin 3, cover back on, this part
> goes good, hi temp light works. replaced wire on pin 3, replaced
> cover. Plugged in line cord. Turned amp. on. I got the delay light,
> and it went out within the 60-90 second window.
>
> Turned the meter switch to exciter only. The "exciter" light works
> only in the exciter position, as it is supposed to.
>
> Now is when things go wrong. I switched the meter to plate, they tell
> me to find a piece of "hook-up wire" to short out the relay phono
> socket. So, I found a wire and I am just starting to lean over the
> cabinet, to reach the relay socket (I never actually shorted the
> relay socket out), it is now 15-20 seconds after I swithed to plate,
> and I see a spark, through the cabinet top in the area of the relay
> (RY1), I blow a house circuit breaker, also the fuse in the back of
> the amp blew.
>
> I must state at this point, the fuses I bought were .75 amp fuses, but
> not slow blow. I hope that explains my following actions.
>
> I removed the cover, did not smell anything burnt or see any visual
> damage after a detailed inspection to both sides of the amp.
>
> O.K. perhaps the fuse was faulty, I tell myself, or the fact that they
> call out for slow blow, and I could only find fast blow fuses in the
> correct amperage. Maybe the flash I saw was the relay contacts???...
>
> I talked myself in to trying another fuse. This time It took about 5
> seconds (it did not happen instantly), I had what sounded like fire
> crackers, and could see several sparks dancing in the rf enclosure. (I
> am sure it was arcing, Going on, I could see it through the top at
> C15, in the rf enclosure.) Quickly, I shut off the main power switch.
> This time I did not blow the house circuit breaker.
>
> Of course the fuse blew again. This time after removing the cover, I
> removed the RF cover to find no arcing spots on the capacitor plates
> (guess I am lucky). I did however, find R17, 33ohm, 1 Watt resistor
> blown to bits. This resistor is located just off of the grid of v1.
>
> About the 8873 ceramic tube. The filament pins 5 and 6 show
> continuity. and the grid pins (4,7,11) are not shorted to the cathode
> pins (1,2,3,8,9,10).
>
> Does the fact that that resister blew, and the fuses blew, mean I have
> high grid current? Did the arcing in the rf enclosure happen because
> the tube was energized, and no dummy load was connected to the amp??
> Is this amp trying to amplify power, when it is not supposed to? Does
> the "fireworks display" in the rf enclosure at least prove the tube is
> good or amplifying like it is supposed to?

>
> I have no idea what to do next. Anyone who could point me in a
> direction, I would be greatful.
>
> Thank you for taking the time to read through this!!!
>
> 73,
>
> Scott KC9AWN
>
> P.S. I posted this on E-Ham.net a couple of days ago. The responce I
> got back was something about checking for para. oscillations? Could
> someone please explain to me?
>
> Thanks,
>
> Scott

4684. Re: Diff btwn 5763 and 6AU6

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 15:13:15 UTC
From: "Richard F. Gillette P.E." <r.f.gillette@ieee.org>
Message-ID: <3E0B1C8C.B9C9AE8B@ieee.org>
Source record: 39048

My tube manual shows 6AU6 sharp cutoff RF amp. 3.5 watts and 5763 beam power RF amp. 13.5 watts plate dissipation.

J M Noeding wrote:
>
> On Wed, 25 Dec 2002 12:33:15 -0800, L Caracciolo
> <larryc@northwest.com> wrote:
>
> >I don;t hv a spec on the 5763. In older books, it seemed to be the osc
> >tube of choice, over the 6AU6.
> >
> >Why?
> >
> very much
>
> see http://home.wxs.nl/~frank.philipse/frank/frank.html
> --
> remove ,xnd to reply

4685. Re: Diff btwn 5763 and 6AU6

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 16:05:38 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <M5udnV9c-92nrpajXTWc2Q@cnmnetwork.com>
Source record: 39049

Maybe you mean a 5963.

4686. Re: Diff btwn 5763 and 6AU6

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 17:06:20 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E0B370C.64F05BB6@northwest.com>
Source record: 39050

nope... a 5763.

Bob wrote:

> Maybe you mean a 5963.

4687. Re: Diff btwn 5763 and 6AU6

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 17:07:51 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E0B3767.65486381@northwest.com>
Source record: 39051

that's all fine...but what makes one tube a better osc thanthe other.

the 5763 has higher transconductance...but that's not really the deciding
factor, is t? Or, are the differences buried in the performance charts?
============

"Richard F. Gillette P.E." wrote:

> My tube manual shows 6AU6 sharp cutoff RF amp. 3.5 watts and 5763 beam
> power RF amp. 13.5 watts plate dissipation.
>
> J M Noeding wrote:
> >
> > On Wed, 25 Dec 2002 12:33:15 -0800, L Caracciolo
> > <larryc@northwest.com> wrote:
> >
> > >I don;t hv a spec on the 5763. In older books, it seemed to be the osc
> > >tube of choice, over the 6AU6.
> > >
> > >Why?
> > >
> > very much
> >
> > see http://home.wxs.nl/~frank.philipse/frank/frank.html
> > --
> > remove ,xnd to reply

4688. Re: Diff btwn 5763 and 6AU6

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 17:48:36 UTC
From: Steve Robertson <ke4oh@yahoo.com>
Message-ID: <3E0B40F4.CE997C00@yahoo.com>
Source record: 39052

5963 is a 12AU7 with a special cathode for use in digital (computer!)
circuits. Nice audio tubes, I might add.

Steve Robertson

Bob wrote:

> Maybe you mean a 5963.

4689. Re: Would anyone know how to 'eliminate' the hummmm I have in my power supply?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 17:51:55 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E0B41BB.510B@sneakemail.com>
Source record: 39047

Patrick wrote:
>
> Hello all,
>
> Merry Christmas and a Happy New Year!
>
> I always dabble in making LPFM transmitters, using my LM317T adjustable
> power supply.

[...]

> Sincerely, Patrick

Patrick,

You are probably well beyond this stage, but I happened to come across a beginner's FM transmitter page you might enjoy reading. It compares several different methods and has some specs for frequency drift with warmup and antenna orientation:

http://members.tripod.com/~transmitters/begin.htm

Mike

4690. Re: First mixer in Drake R7/TR7?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 18:13:11 UTC
From: d8lars@dtek.chalmers.se
Message-ID: <aufgrnpnd1@nyheter.chalmers.se>
Source record: 39053

In article <3E035D1F.5BCAA841@northwest.com>,
L Caracciolo <larryc@northwest.com> wrote:
>LO strength is one factor, cleanliness of the LO signal would need to be
>considered as well. When the rig first came out, some friends bought them
>up...only to find the LO signal looking less than desirable. With no antenna
>(just a dummy load), the ten meter band sounded full of weak signals. Drake
>promised to address the matter with field updates, then came out with the
>outboard VFO (someone correct me on that, if I'm wrong). And, don;t forget about
>proper termination of the IF and LO ports.

Thanks for the reply! Both my TR7 and R7 sounds OK on 10 meters, but they are
late versions. Looking at early and late service manuals some things have
changed, but the main change seem to be that more shielding is used in
the later versions. Probably bad shielding and bad grounding can cause
ill effects in the 7-series.

The outboard VFO came in two different versions, one PTO-version, the same
that is used in TR7/R7, called RV7, and a synthezised version called RV75.
The main use of these are to reduce the drift. I do not think that they will
influence the phase noise to any great extent.

The LO cleanliness is something that I intend to look at also. I'll bring
the R7 to my work place and take a look at the LO on a spectrum analyzer.
I am not sure how to improve the LO, besides doing a total redesign, but I
will take a look at it.

The LO port seem correctly terminated (a 2N3866 amplifer followed by a
-3 dB pad, then the mixer) I am a bit unsure about the IF though. It is
feed through a PIN-diode (MPN3404) switch to an amplifier (J310) (the
amplifier is used both in RX and TX, the diodes are used to reverse the
signal path, switching between RX and TX) Perhaps one should add a
diplexer here to terminate the unwanted mixing products into 50 ohms?
Reading "Solid State Design for the Radio Amateur" by Wes Hayward and
Doug DeMaw, this seem to be a good idea. Any comments on this, anyone?

73 de Lars, sm6rpz
--
Lars E Pettersson | Chalmers University of Technology
d8lars@dtek.chalmers.se | Gothenburg, SWEDEN

4691. Re: First mixer in Drake R7/TR7?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 18:18:27 UTC
From: d8lars@dtek.chalmers.se
Message-ID: <aufh5j$po1$1@nyheter.chalmers.se>
Source record: 39054

In article <rMLM9.6414$p_6.473786@bgtnsc04-news.ops.worldnet.att.net>,
Pete KE9OA <n.gianakopoulos@worldnet.att.net> wrote:
>One other thing that can be done to improve the 7 series is to replace the
>2nd mixer and Translation Mixer diodes with quad matched sets of 1N5711 Hot
>Carrier diodes. For some reason, Drake chose to use 1N4148s.
>
>Pete

I actually did this on my former TR7. I changed the four diodes and
four resistors to a HP5082-2830 ring mixer. I did not do any
measurements, but it sounded clearer after this.

73 de Lars, sm6rpz
--
Lars E Pettersson | Chalmers University of Technology
d8lars@dtek.chalmers.se | Gothenburg, SWEDEN

4692. Re: First mixer in Drake R7/TR7?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 18:28:05 UTC
From: Marco PE1LPK <m.vliet9@planet.nl>
Message-ID: <auhb74jud1@reader08.wxs.nl>
Source record: 39080

Dear Sirs,

an dutch radioamateur without internet of our club in zaandam holland is looking for the agligment info of his drake R7 receiver.
He have some troubls with the noiseblanker nb7 also.
does some-one of you maybe o copy of the agligment section of the service manual.
In his owners manual is nothing to find.

Marco PE1LPK

4693. Re: Heathkit SB 230 Help with initial checks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 18:39:07 UTC
From: fmmck@aol.com
Message-ID: <20021226133907.03252.00000170@mb-cc.aol.com>
Source record: 39056

<< Turned the meter switch to exciter only. The "exciter" light works only in the exciter position, as it is supposed to.

Now is when things go wrong. I switched the meter to plate, they tell me to find a piece of "hook-up wire" to short out the relay phono socket. So, I found a wire and I am just starting to lean over the cabinet, to reach the relay socket (I never actually shorted the relay socket out), it is now 15-20 seconds after I swithed to plate, and I see a spark, through the cabinet top in the area of the relay (RY1), >>

Scott-

It sounds as if you have high voltage at this point, but no RF drive and nothing connected to the input of the amplifier. Are you supposed to have high voltage before the relay is energized?

If there is an parasitic or self oscillation, it could be because of having nothing connected to the input. Connecting 50 Ohm dummy loads might help for troubleshooting, both on input and output.

I don't think there should be any control grid current under no-drive conditions unless the grid was driven from a positive voltage source. That might happen if a coupling capacitor from a previous stage was leaking or a bias supply had its rectifier connected backwards.

Good Luck.

73, Fred, K4DII

4694. Re: First mixer in Drake R7/TR7?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 18:39:09 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E0B4CCD.8A98E664@northwest.com>
Source record: 39055

hi, lars. merry christmas.

see below...
===

Lars Petterson wrote:

> In article <3E035D1F.5BCAA841@northwest.com>,
> L Caracciolo <larryc@northwest.com> wrote:
> >LO strength is one factor, cleanliness of the LO signal would need to be
> >considered as well. When the rig first came out, some friends bought them
> >up...only to find the LO signal looking less than desirable. With no antenna
> >(just a dummy load), the ten meter band sounded full of weak signals. Drake
> >promised to address the matter with field updates, then came out with the
> >outboard VFO (someone correct me on that, if I'm wrong). And, don;t forget about
> >proper termination of the IF and LO ports.
>
> Thanks for the reply! Both my TR7 and R7 sounds OK on 10 meters, but they are
> late versions. Looking at early and late service manuals some things have
> changed, but the main change seem to be that more shielding is used in
> the later versions. Probably bad shielding and bad grounding can cause
> ill effects in the 7-series.
>
> The outboard VFO came in two different versions, one PTO-version, the same
> that is used in TR7/R7, called RV7, and a synthezised version called RV75.
> The main use of these are to reduce the drift. I do not think that they will
> influence the phase noise to any great extent.

multi-pole passive filtering works well. one has to be careful of phase margin in the added/modified filters. you could end up with a permanently whistling osc, regardless of dial settings.

>
> The LO cleanliness is something that I intend to look at also. I'll bring
> the R7 to my work place and take a look at the LO on a spectrum analyzer.
> I am not sure how to improve the LO, besides doing a total redesign, but I
> will take a look at it.

lots of spurs might be visible. be careful not to introduce outside signals as accidentally-injected into the rig.
gives false results. prevents chasing a ghost signal.

but, at what level does one deem a clean LO? it all depends on what you ultimately want from the rig.

better bypassing and PS filtering can go a long way. remember, these are consumer electronics rigs.

>
> The LO port seem correctly terminated (a 2N3866 amplifer followed by a
> -3 dB pad, then the mixer)

a six- or ten-dB pad would be better. reflections would be reduced in level by twice the isolation. a ten dB pad would reduce the reflected component (back into the LO or IF port) by 20 dB. that's a power factor of 1/100.

> I am a bit unsure about the IF though. It is
> feed through a PIN-diode (MPN3404) switch to an amplifier (J310) (the
> amplifier is used both in RX and TX, the diodes are used to reverse the
> signal path, switching between RX and TX) Perhaps one should add a
> diplexer here to terminate the unwanted mixing products into 50 ohms?
> Reading "Solid State Design for the Radio Amateur" by Wes Hayward and
> Doug DeMaw, this seem to be a good idea. Any comments on this, anyone?
>

i've done this but "heard" no measureable performance increase (both with 2 meter and aircraft band converters). it could be useful, tho, in a strong signal/ crowded signal environment. diplexers are quite easy to build. might be better bang-for-the-buck to add a ten dB pad right at the IF and RF ports.

again, the end results is...what level of measureable performance do you want the rig to perform to?

larryc
=====

> 73 de Lars, sm6rpz
> --
> Lars E Pettersson | Chalmers University of Technology
> d8lars@dtek.chalmers.se | Gothenburg, SWEDEN

4695. Re: Heathkit SB 230 Help with initial checks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 18:51:05 UTC
From: GAEL79@peoplepc.com
Message-ID: <3de1a5d2.0212261051.32b6efa2@posting.google.com>
Source record: 39057
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

"Larry Gauthier" <larryg_at_ismi.net> wrote in message
news:<v0m372bfr9bff0@corp.supernews.com>...
> Scott,
>
> First - tell us a little more about your amplifier. As I recall, the SB230
> was introduced in 1975, and produced until the early 80's.<snip> What's the background -
all new parts? Sealed box? Disassemble and rebuild from scratch?

I got the amp from a garage sale, in piles of parts. I am lucky
enough enough to have an old tv/ham store in town for some of the
resistors, caps etc. that were missing. I wish I new more about the
amp. but I don't. I can tell you that I went step-by-step through
every page of the manual and (NOW) it is together correctly. (I am a
Avionics Technician by trade) Whether the tube is any good is anyones
guess, but it passed the coninuity test on the heater pins, and the
grid pins are not shorted to the cathode pins. I would also assume
that the tube was good, or I would not have had the "fireworks" in the
rf enclosure.

> Second, there were problems with the SB230 and self-oscillation, and during
> its life we included several versions of parasitic suppressors to prevent
> VHF self-oscillation of the tube -- resulting in the types of behavior that
> you describe. Depending on when your kit was manufactured, you may have an
> early model with a ...less-than-optimal... parasitic suppressor on the tube.

Forgive my ignorance here but...

Should there be any oscillations at this point? please understand that
I have no experiance with HF amps. I had "nothing" hooked to the amp,
and am doing the initial checks. I didn't have "anything" external to
the amp hooked up. No radio, no antenna, no dummy load, nothing. Your
operators manual does not tell me to hook up anything to the amplifier
to do these initial tests. I did not even get to short out the relay
connector, per your manuals instructions, before things went bad.
> My memory is a little shaky on this - that was about 30 years ago for me.
> But there is a Heath mailing list and Heath reference sites on the net, with
> on-line technical bulletins for kits like the SB230. You should check those
> out before re-applying power to the SB230.
I have looked to no avail. A ton of information on SB200/201 and
SB220/221 and SB1000's, but no info on SB230's. If anyone knows of a
source on the net, I am all ears.

> In case you hadn't noticed, the 8873 tube sells new for about $700 [it was
> $35 in 74 when we designed the amplifier] , rendering the amp
> all-but-useless in the event of a tube failure (and used 8873s are scarcer

> than hen's teeth).<Snip>.
Yes, I did notice that. If it gets to the point where I have to buy a new tube, I will modify the amp for a different tube and provide a blower for cooling.
>
> -larry
> K8UT
> a former ham from Heath
It is good to know that there are places, that a guy like me can go to "throw" out a question and literally pick the brains of so many experts. Your attitudes tward new hams is the one thing I believe that will keep this hobby going. THANKS TO ALL WHO ARE GENEROUS ENOUGH TO KEEP THIS WONDERFUL HOBBY ALIVE!!!

73,
Scott

4696. Re: Diff btwn 5763 and 6AU6

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 19:28:57 UTC
From: snarflemike@yahoo.com
Message-ID: <20619edc.0212261128.3446d8e0@posting.google.com>
Source record: 39059

L Caracciolo <larryc@northwest.com> wrote in message
news:<3E0A160B.F4FE5085@northwest.com>...
> I don;t hv a spec on the 5763. In older books, it seemed to be the osc
> tube of choice, over the 6AU6.
>
> Why?

The 5763, along with various video pentodes, were preferred as
oscillators in transmitters because, thanks to their high gain and
good grid-plate shielding, you could get a fair amount of power out of
them with minimal crystal (or tuned-circuit) current. The goal was
usually to be able to drive one of the "typical" medium power RF PA
tubes, such as the 807, 6146, 6DQ6, ect., directly. OTOH, I once saw
a circuit where the pentode section of a 6U8 was driving two 6146s to
full grid current, so I've often thought that the use of such big
oscillator tubes was less a technical issue than a case of "couldn't
hurt, and doesn't cost any more." Just MHO!

73,
Mike, KK6GM

4697. Re: First mixer in Drake R7/TR7?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 19:33:36 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E0B5990.5FC403E2@northwest.com>
Source record: 39058

Lars Petterson wrote:

> In article <rMLM9.6414$p_6.473786@bgtnsc04-news.ops.worldnet.att.net>,
> Pete KE9OA <n.gianakopoulos@worldnet.att.net> wrote:
> >One other thing that can be done to improve the 7 series is to replace the
> >2nd mixer and Translation Mixer diodes with quad matched sets of 1N5711 Hot
> >Carrier diodes. For some reason, Drake chose to use 1N4148s.
> >
> >Pete

they're cheap! the diodes, that is...

4698. Re: Gouriet-Clapp osc

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 20:13:22 UTC
From: la8ak.xnd@online.no
Message-ID: <3e0b0615.63941837@news.online.no>
Source record: 39060

On Mon, 23 Dec 2002 19:24:42 -0600, "Henry Kolesnik"
<wd5jfr@oklahoma.net> wrote:

>A NPN transistor that can handle whatever current you expect, can't be that
>much and it's cheaper than a fet!
>"L Caracciolo" <larryc@northwest.com> wrote in message
>news:3E078313.82E433DD@northwest.com...
>> My Eico 722 VFO uses a Gouriet-Clapp circuit. To turn on the osc tube
>> (6au6) for XMT, the cathode is grounded thru a slide switch.
>>
>> I've considered a more electronic means of switching...such as using a
>> fet switch (capable of enduring the cathode current).
>>
>> Any suggestions would be helpful.
>>
>
It really depends on your sources, and the blocking voltage on the
cathode. I would have chosen VN2408, but since I haven't seen the
circuit I am not aware if low capacitance in the device is important

73
LA8AK
--
remove ,xnd to reply

4699. Re: Gouriet-Clapp osc

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 21:11:59 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E0B709F.B3739C91@northwest.com>
Source record: 39061

Hi.

150V on the plate...so, when the cathode is disconnected, the "instantaneous" cathode potential would be about 150v.

========

J M Noeding wrote:

> On Mon, 23 Dec 2002 19:24:42 -0600, "Henry Kolesnik"
> <wd5jfr@oklahoma.net> wrote:
>
> >A NPN transistor that can handle whatever current you expect, can't be that
> >much and it's cheaper than a fet!
> >"L Caracciolo" <larryc@northwest.com> wrote in message
> >news:3E078313.82E433DD@northwest.com...
> >> My Eico 722 VFO uses a Gouriet-Clapp circuit. To turn on the osc tube
> >> (6au6) for XMT, the cathode is grounded thru a slide switch.
> >>
> >> I've considered a more electronic means of switching...such as using a
> >> fet switch (capable of enduring the cathode current).
> >>
> >> Any suggestions would be helpful.
> >>
> >
> It really depends on your sources, and the blocking voltage on the
> cathode. I would have chosen VN2408, but since I haven't seen the
> circuit I am not aware if low capacitance in the device is important
>
> 73
> LA8AK
> --
> remove ,xnd to reply

4700. Re: Micro fox hunt transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-26 22:56:18 UTC
From: David Findlay <david@davsoft.com.au>
Message-ID: <mOLO9.17081$YN6.45656@news-server.bigpond.net.au>
Source record: 39063

> Here is a small radio controller to make an HT into a foxhunt
> transmitter:
> http://www.byonics.com/piccon/piccon.html
> Note that this is a kit, but a pretty simple one. Depends on your
> matchbox, but this will fit. There are some tiny, lower powered HTs
> out there. You should be able to find one that fits into the palm of
> your hand, less antenna.

Cool thanks. What I'm basically looking at using it for is locating rocket kits after they land in the scrub and get lost. It would be fitted inside the tube somehow, which is usually pretty small. Thanks,

David

--
BOFH excuse #427:

network down, IP packets delivered via UPS

4701. Re: First mixer in Drake R7/TR7?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 00:04:06 UTC
From: la8ak.xnd@online.no
Message-ID: <3e0b64ad.88161660@news.online.no>
Source record: 39064

On Thu, 26 Dec 2002 11:33:36 -0800, L Caracciolo
<larryc@northwest.com> wrote:

>
>
>Lars Petterson wrote:
>
>> In article <rMLM9.6414$p_6.473786@bgtnsc04-news.ops.worldnet.att.net>,
>> Pete KE9OA <n.gianakopoulos@worldnet.att.net> wrote:
>> >One other thing that can be done to improve the 7 series is to replace the
>> >2nd mixer and Translation Mixer diodes with quad matched sets of 1N5711 Hot
>> >Carrier diodes. For some reason, Drake chose to use 1N4148s.
>> >
>> >Pete
>
>they're cheap! the diodes, that is...
>
1N4148's are better and inexpensive according to DJ8ES and other, but
somebody don't like cheap compoents so you may choose HP5082-2830 or
1N5711

--
remove ,xnd to reply

4702. Re: Diff btwn 5763 and 6AU6

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 00:04:07 UTC
From: la8ak.xnd@online.no
Message-ID: <3e0b657b.88368114@news.online.no>
Source record: 39065

On Thu, 26 Dec 2002 09:07:51 -0800, L Caracciolo
<larryc@northwest.com> wrote:

>that's all fine...but what makes one tube a better osc thanthe other.
>
>the 5763 has higher transconductance...but that's not really the deciding
>factor, is t? Or, are the differences buried in the performance charts?

Lots of equipment use 6AU6 (EF94), but I have good experience with
6DA6) (EF89). But my preference is 6U8/6U8 or 6BL8/ECF82. Used the
latter in my FL-dx-500 (triode as oscillator and pentode as buffer),
but it really depends on how much work you want to do
>============
>
>"Richard F. Gillette P.E." wrote:
>
>> My tube manual shows 6AU6 sharp cutoff RF amp. 3.5 watts and 5763 beam
>> power RF amp. 13.5 watts plate dissipation.
>>
>> J M Noeding wrote:
>> >
>> > On Wed, 25 Dec 2002 12:33:15 -0800, L Caracciolo
>> > <larryc@northwest.com> wrote:
>> >
>> > >I don;t hv a spec on the 5763. In older books, it seemed to be the osc
>> > >tube of choice, over the 6AU6.
>> > >
>> > >Why?
>> > >
>> > very much
>> >
>> > see http://home.wxs.nl/~frank.philipse/frank/frank.html
>> > --
>> > remove ,xnd to reply
>

--
remove ,xnd to reply

4703. Re: Micro fox hunt transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 00:37:51 UTC
From: Idontwantspam@net
Message-ID: <3e0ba040.18783849@news.bellatlantic.net>
Source record: 39066

On Thu, 26 Dec 2002 22:56:18 GMT, David Findlay <david@davsoft.com.au>
wrote:

>> Here is a small radio controller to make an HT into a foxhunt
>> transmitter:
>> http://www.byonics.com/piccon/piccon.html
>> Note that this is a kit, but a pretty simple one. Depends on your
>> matchbox, but this will fit. There are some tiny, lower powered HTs
>> out there. You should be able to find one that fits into the palm of
>> your hand, less antenna.
>
>Cool thanks. What I'm basically looking at using it for is locating rocket
>kits after they land in the scrub and get lost. It would be fitted inside
>the tube somehow, which is usually pretty small. Thanks,
>
Ah, high tech hide and seek. A simpler beacon may do it for you then,
and you may be able to find kits to do that. You can't be the only
person looking for their model rocket.

You may still want the foxhunt controller to practice with.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4704. Re: First mixer in Drake R7/TR7?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 00:44:43 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3e0ba267$1@news.netacc.net>
Source record: 39067

> >
> >> In article <rMLM9.6414$p_6.473786@bgtnsc04-news.ops.worldnet.att.net>,
> >> Pete KE9OA <n.gianakopoulos@worldnet.att.net> wrote:
> >> >One other thing that can be done to improve the 7 series is to replace
the
> >> >2nd mixer and Translation Mixer diodes with quad matched sets of
1N5711 Hot
> >> >Carrier diodes. For some reason, Drake chose to use 1N4148s.
> >> >
> >> >Pete
> >

Pete, this sounds reasonable. What parameters are they matching on the HCDs and what is a source for these matched components?

Thanks in advance for info.

Steve

4705. Re: Gouriet-Clapp osc

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 00:53:35 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E0BA48F.A4F@sneakemail.com>
Source record: 39062

L Caracciolo wrote:
>
> Hi.
>
> 150V on the plate...so, when the cathode is disconnected, the "instantaneous"
> cathode potential would be about 150v.

Nah. The grid is grounded, so conduction stops at the cutoff voltage,
perhaps 40 to 60V. The transistors in an ordinary PC power supply can
handle over 300V and several amps. Just disassemble a dead power supply
and get them for free:)

Mike

4706. Re: Gouriet-Clapp osc

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 02:31:34 UTC
From: la8ak.xnd@online.no
Message-ID: <3e0bbb1e.110293640@news.online.no>
Source record: 39068

On Thu, 26 Dec 2002 16:53:35 -0800, Mike Monett
<z06hgto001@sneakemail.com> wrote:

>L Caracciolo wrote:
>>
>> Hi.
>>
>> 150V on the plate...so, when the cathode is disconnected, the "instantaneous"
>> cathode potential would be about 150v.
>
>Nah. The grid is grounded, so conduction stops at the cutoff voltage,
>perhaps 40 to 60V. The transistors in an ordinary PC power supply can
>handle over 300V and several amps. Just disassemble a dead power supply
>and get them for free:)
>
>Mike
You probably only need 5V or less to bias it off. Particularly if the
oscilllator is keyed, it is no advantage to have high voltage, so a
voltage divider is the best

jm
--
remove ,xnd to reply

4707. Re: Active Antenna for beginner to radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 04:59:15 UTC
From: shawnews <poey@neg.net>
Message-ID: <D6RO9.298577$ka.7205241@news1.calgary.shaw.ca>
Source record: 39070

There is just a new one today.
-Myumi

http://www.qrp.pops.net/probe1.htm

4708. Re: Troubleshooting Simple VHF-AM Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 05:12:36 UTC
From: Tom Coates <tecoates@comcast.net>
Message-ID: <lWKdnfcwCqeifJajXTWcqA@comcast.com>
Source record: 39071

>If this class happens I may
> have some access to an oscilloscope soon. I have also been watching ebay
> pretty closely lately.

Many of the scopes offered on eBay are wornout government or industry surplus. Parts - especially CRTs - can be costly. I decided to wait until I could afford a new one or at least one that was lightly used.

Tom

4709. Re: Troubleshooting Simple VHF-AM Receiver (finding a scope)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 06:01:15 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E0BECAB.AEFC8C7E@northwest.com>
Source record: 39072

Or, wait till the springtime hamfests...
=====

Tom Coates wrote:

> >If this class happens I may
> > have some access to an oscilloscope soon. I have also been watching ebay
> > pretty closely lately.
>
> Many of the scopes offered on eBay are wornout government or industry
> surplus. Parts - especially CRTs - can be costly. I decided to wait until I
> could afford a new one or at least one that was lightly used.
>
> Tom

4710. Re: Troubleshooting Simple VHF-AM Receiver (finding a scope)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 06:28:17 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E0BF301.BEF@sneakemail.com>
Source record: 39073

L Caracciolo wrote:
>
> Or, wait till the springtime hamfests...
> =====
>
> Tom Coates wrote:
>
> > >If this class happens I may
> > > have some access to an oscilloscope soon. I have also been watching ebay
> > > pretty closely lately.
> >
> > Many of the scopes offered on eBay are wornout government or industry
> > surplus. Parts - especially CRTs - can be costly. I decided to wait until I
> > could afford a new one or at least one that was lightly used.
> >
> > Tom

The very best scope you can get is the TEK 7904. Mainframes are cheap,
and you can get plugins to do just about anything - dual channel 200MHz,
single channel to 1GHz, 10uV/div with variable bandwidth up to 1MHz,
sampling plugins to 12GHz, tdr, spectrum analysis, even a transistor
curve tracer. No modern scope can match the versatility.

I see John Bau has a 7904 4-slot 500MHz scope mainframe listed on his
site for US$235.

http://www.users.qwest.net/~jbau/tstequip.htm

I've bought stuff from John and recommend him very highly. I convinced a
friend in Germany to get a 7904 and a bunch of plugins. Everything
arrived in good condition and he is very happy with it.

About the only problem you may have is the electrolytics tend to dry out
after several decades. I replaced one in the power supply of my 7854
recently. I happen to have all the manuals, but didn't need them to
disassemble the scope and get at the caps. A replacement cost about $2.00
and it works good as new.

Mike

4711. Re: Troubleshooting Simple VHF-AM Receiver (finding a scope)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 06:34:05 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E0BF45D.680A@sneakemail.com>
Source record: 39074

Mike Monett wrote:

[...]

> single channel to 1GHz

[...]

Of course, the 7A29A has 1GHz bandwidth and was intended for the 7104,
but it works fine in the 7904 and 7854 which have lower bandwidth.

Mike

4712. Re: Gouriet-Clapp osc

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 07:37:51 UTC
From: Mike Monett <z06hgto001@sneakemail.com>
Message-ID: <3E0C034F.363C@sneakemail.com>
Source record: 39069

J M Noeding wrote:

[...]

> You probably only need 5V or less to bias it off. Particularly if the
> oscilllator is keyed, it is no advantage to have high voltage, so a
> voltage divider is the best
>
> jm

You are dead on! I looked at the specs for 6AU6WA the on Frank's tube site http://www.mif.pg.gda.pl/homepages/frank/vs.html

The grid #1 voltage for Ib = 10uA is -4.2 to -6.5V.

You have a very good memory. I haven't touched one of those since about 1967!

Mike

4713. Re: Would anyone know how to 'eliminate' the hummmm I have in my power supply?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 08:16:39 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <H%TO9.80395$hK4.6606552@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39075

I have also done that over the years. Doug DeMaw described the technique of connecting .01uF caps across each of the rectifier diodes, so that they would not rectify RF. He stated that this would eliminate common mode problems in DC receivers. I took things another step, by bypassing each leg of the secondary of the power transformer to ground with a 1uF NP cap. This eliminates the switching noise coming from the diodes, giving a power supply that is "quiet" all the way down to 10kHz. I never did realize why some portables would always seem to receive some kind of flourescent light type of interference down below 600kHz. I discovered this bypassing technique out of desperation!

Pete

4714. Re: First mixer in Drake R7/TR7?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 08:31:10 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <idUO9.80400$hK4.6608706@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39076

It did improve my unit somewhat. Before the change, the MDS was .15uV;
after the change, the MDS improved to .07uV.

Pete

4715. Re: First mixer in Drake R7/TR7?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 08:37:40 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <ojUO9.80402$hK4.6609179@bgtnsc05-news.ops.worldnet.att.net>
Source record: 39077

I bought a batch of them when I was working at Rockwell-Collins, from their Inventory Disposal store. They used to sell components for $1.00 per pound. It was pretty funny, when you would have a bunch of stuff, and the cashier would put everything on a scale.
As far as the matching of the devices, these were done at HP. I had around 50 sealed static dissipative bags of these quad sets. Most of them when the way of the hamfests, but I did manage to keep some of them. One of the fellows who purchased them from me told me that they were matched to within .01dB of each other. I am not sure what he meant, but the HP label on each bag states them to be matched sets.

Pete

4716. Re: Hi-Fi FM decoder internals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 09:45:31 UTC
From: RF <listaco@terra.es>
Message-ID: <auh7l3$9nq$1@nsnmpen2-gest.nuria.telefonica-data.net>
Source record: 39078

Thank you again.

I have found Philips TDA1596, TDA1597 and TDA1599 with 82dB SNR.

4717. Re: New simple LC filter design program

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 10:30:44 UTC
From: la8ak.xnd@online.no
Message-ID: <3e0bbe28.111072102@news.online.no>
Source record: 39079

On Thu, 26 Dec 2002 02:08:16 +0000 (UTC), "Reg Edwards"
<g4fgq.regp@btinternet.com> wrote:

>
>PROGRAM "LPF_HPF.exe"
>
>.....
.....
.....
>
>Download in a few seconds program LPF_HPF.exe from website below and run
>immediately.
>---
>==========
>Regards from Reg G4FGQ
>For Free Radio Design Software
>Go to http://www.g4fgq.com
>==========
>.....
>For cut-off freqs 1/x times entered value, multiply all L's & C's by x
suppose you mean:
For cut-off freqs 1/n times entered value, multiply all L's & C's by n

||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
73 JM
--
remove ,xnd to reply

4718. Re: New simple LC filter design program

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 10:54:53 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <auhbhtqir1@helle.btinternet.com>
Source record: 39081

> >For cut-off freqs 1/x times entered value, multiply all L's & C's by x
> suppose you mean:
> For cut-off freqs 1/n times entered value, multiply all L's & C's by n

==========

No, I don't mean that.

n has already been used in the program for the number of cascaded filter
sections.

I don't want to receive a lot of complaints from fans like yourself about
the confusion caused.

There's method in my madness. ;o)

Yours, Reg

4719. Simple RF transformers: Which way connected, does it matter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 13:42:48 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <auhlb2$793lq$1@ID-150848.news.dfncis.de>
Source record: 39082

There are three RF transformers in the 3 stages of the Rx RF amplifier: AE;1st RF;2ndRF. Primaries are untuned, secondaries are tuned. Secondaries are in fact part of grid circuit, primaries are in anode circuit (except AE of course where primary goes to aerial), and of course one side of the primary windings and secondary windings is "dead" ie, not "hot" rf wise.

Question: If I reverse which end of secondary or primary is "dead" (or "hot") will it make any difference? Or should "dead" side of windings be sort of opposite or near each other on the coil fomer? TIA.

4720. Re: Simple RF transformers: Which way connected, does it matter?

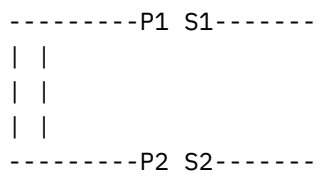
Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 14:54:29 UTC
From: Henry Kolesnik <wd5jfr@oklahoma.net>
Message-ID: <v0oqdb4nlo7r76@corp.supernews.com>
Source record: 39083

Your question is not clear to me. Tell us again what you want to do in another way and what you think it'll accomplish.
Many years ago when I was a TV tech we sold a new TV to the Mayor, he bought it because his wife liked the cabinet but he didn't like the picture. But depsite his complaining he ended up with the nice cabinet and snowy picture. After a few days he came back compaining about the picture and he couldn't understand why the expensive cabinet didn't play as well as the cheap cabinet. On service calls the techs found that if they installed a "hot" 6BQ7A in the tuner, the picture would be less snowy, but the 6BQ7s would only stay hot for a week or so. The chassis were not interchangeable and the factory was slow in repsonding. To make a long story short I yanked the chasiis took it back to the service bench and after countless hours (no good test equipt) I discovered that the first IF transformer was installed backwards in the can. The polarity dot was correct on the tabs but the coils were miswired inside the can. After I changed the transformer the picture was superiior to all the other sets. I became the Mayor's and shop owner hero!
73
hank wd5jfr
"Richard" <nearlynews_email@ntlworld.com> wrote in message news:auhlb2$793lq$1@ID-150848.news.dfncis.de...
> There are three RF transformers in the 3 stages of the Rx RF amplifier:
> AE;1st RF;2ndRF. Primaries are untuned, secondaries are tuned.
> Secondaries are in fact part of grid circuit, primaries are in anode
> circuit (except AE of course where primary goes to aerial), and of
> course one side of the primary windings and secondary windings is "dead"
> ie, not "hot" rf wise.
>
> Question: If I reverse which end of secondary or primary is "dead" (or
> "hot") will it make any difference? Or should "dead" side of windings
> be sort of opposite or near each other on the coil fomer? TIA.
>

4721. Re: Simple RF transformers: Which way connected, does it matter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 15:40:12 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <auhs71$754ct$1@ID-150848.news.dfncis.de>
Source record: 39084

TFMR



Say, physically, P1 is at same end of coil former as S1. If S1 is the "hot" side of the secondary, does it matter whether P1 is rf "hot" or "cold"?

4722. Re: Simple RF transformers: Which way connected, does it matter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 15:51:21 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <auhstm$b5a$1@slb6.atl.mindspring.net>
Source record: 39085

Richard:

[snip]
> Question: If I reverse which end of secondary or primary is "dead" (or
> "hot") will it make any difference? Or should "dead" side of windings
> be sort of opposite or near each other on the coil fomer? TIA.
[snip]

According to schematic diagrams reversing these connections will make no difference.

But then we all know that all things are not shown on schematic diagrams.

In practice the inter-winding capacitances, which are a "stray" unwanted parasitic
effect, between the winding ends and the other winding will be different. The
inter-winding capacitance is invariably slightly larger with one end grounded than
with the opposite end of the winding grounded. Ideally, the inter-winding capacitance
should be zero in either case, but it never is!

Why should we care about inter-winding capacitance?

With an *ideal* transformer having zero inter-winding capacitance, the so-called
common mode rejection is infinite, but with such capacitance it is not. Hence
unwanted common mode signals are coupled across the transformer. Depending
upon the application, low common mode rejection ratio [CMRR is usually specified
in dB] may or may not cause a problem during operation. It's usual effect when
evident is to introduce spurious unwanted signals at a low level.

But then the solution is cheap, eh? Just connect the *correct* end to ground!

How much does this improve the common mode rejection ratio? Often it can make
improvements of as much as 20 - 25dB in the CMRR. Not insignificant if you
encounter a spurious problem.

Sometimes inter-winding capacitance is partially mitigated by use of a grounded
Faraday shield between windings. Even though this kind of shielding reduces

the
effects of low CMRR, connecting the *correct* end of the winding to ground
still improves the situation, and the cost is the same. Cheap, just connect
the *correct* end to ground.

In critical applications, such as instrumentation, etc... knowledgeable
design
engineers always specify the correct ends of windings for ground connection.

How can you tell which end is correct if they are not marked. If possible,
a
simple visual inspection of the winding layups may reveal which end is
closest
to the other winding in question, and hence which end has the highest inter-
winding capacitance, this end should be grounded, leaving the lowest
inter-winding capacitance to couple the unwanted high frequency spurious
signals.

"In theory, theory and practice are the same, but in practice they are
different!"
--Yogi Berra

Season's greetings,

--
Peter K1PO
Indialantic By-the-Sea, FL

4723. Re: Simple RF transformers: Which way connected, does it matter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 16:23:54 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <auhup0$7avt1$1@ID-150848.news.dfncis.de>
Source record: 39086

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:auhstm$b5a$1@slb6.atl.mindspring.net...
> Richard:

> How can you tell which end is correct if they are not marked. If
possible,
> a simple visual inspection of the winding layups may reveal which end
is
> closest to the other winding in question, and hence which end has the
highest inter-
> winding capacitance, this end should be grounded, leaving the lowest
> inter-winding capacitance to couple the unwanted high frequency
spurious
> signals.

There are variations of how things are wound.

Where there are two single layer coils the ends that are rf "cold"
should be at the same end?

If one pile wound coil is atop another pile wound coil, the junction of
these two coils should be rf "cold", meaning primary and secondary coils
ends that come close at this point should both be connected to rf "cold"
parts of their respective circuits?

If one pile wound coil were atop a single layer coil, the pile wound
should, for best results, be at one end of the single layer coil and at
that end the single layer coil should be connected at rf "cold", whilst
the pile wound coil end nearest the single layer coil should be at rf
"cold"?

4724. Re: Simple RF transformers: Which way connected, does it matter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 16:31:54 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <auhv9n$5nc$1@slb6.atl.mindspring.net>
Source record: 39087

Richard:

[snip]
> There are variations of how things are wound.
>
> Where there are two single layer coils the ends that are rf "cold"
> should be at the same end?
>
> If one pile wound coil is atop another pile wound coil, the junction of
> these two coils should be rf "cold", meaning primary and secondary coils
> ends that come close at this point should both be connected to rf "cold"
> parts of their respective circuits?
>
> If one pile wound coil were atop a single layer coil, the pile wound
> should, for best results, be at one end of the single layer coil and at
> that end the single layer coil should be connected at rf "cold", whilst
> the pile wound coil end nearest the single layer coil should be at rf
> "cold"?
[snip]

Yes indeed, I agree.

All of those suggested connections use the lowest inter-winding
capacitance connecton.

The central idea in CMRR reduction is to minimize interwinding C.

A general formula for the capacitance C of a capacitor
[that's capacitance of a *condenser*, for *fogeys*] is:

C = eps*A/d

Where eps is the dielectric material factor, A is *effective* Area of
the capacitor plates facing each other, and d is the distance between
them.

Usually with inter-winding one tries to arrange for the observed
capacitance between windings to be as small as possible. In many
cases, it is the distance d between the primary and secondary windings
[ends] that should be maximized to minimize C.

4725. Re: Simple RF transformers: Which way connected, does it matter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 16:52:12 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <aui0eo$7c4ek$1@ID-150848.news.dfncis.de>
Source record: 39088

Concerning two single layer coils.

TFMR

```
---------P1 S1-------
| |
| |
| |
---------P2 S2-------
```

Say P1 was rf "hot" and S1 rf "hot" P2 and S2 at rf "ground" or rf "cold". Capacitance between P1 and S1 conveys an unwanted current over to S1. But if S1 was at rf "cold (decoupled to chassis) any current transfered by capacitance would go to ground. Is this contradicting what we thought about desirable transformer connections for single layer coils?

4726. Ringmixer LO level?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 17:01:24 UTC
From: la8ak.xnd@online.no
Message-ID: <3e0c86e8.162471615@news.online.no>
Source record: 39089

Suppose you wire a mixer like SBL-1 using different types of diodes,
how can the drive level be estimated dependent on type of diodes?
In my case I would use 1N914/1N4148 type, suppose the drive level
needed is somewhat higher than for 2800 type diodes?

73
Jan-Martin
LA8AK
--
remove ,xnd to reply

4727. Re: Ringmixer LO level?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 17:49:30 UTC
From: Rick Karlquist <richard@karlquist.remove.this.com>
Message-ID: <Ko0P9.330722$pN3.24400@sccrnsc03>
Source record: 39090

You would still need about 30 mA peak to peak, but
the voltage required would be twice as much. The
input impedance for the LO port on an SBL-1 is
actually somewhat less than 50 ohms, so with the
doubling of voltage, you would end up somewhat
greater than 50 ohms. It's not critical; you can still
use a 50 ohm LO source.

Why do you want to do this? If it is to get higher
dynamic range, you should know that the conventional
way to do that is to add reverse self-bias to Schottky
diodes by putting a parallel RC circuit in series with
each diode.

Rick N6RK

"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3e0c86e8.162471615@news.online.no...
> Suppose you wire a mixer like SBL-1 using different types of diodes,
> how can the drive level be estimated dependent on type of diodes?
> In my case I would use 1N914/1N4148 type, suppose the drive level
> needed is somewhat higher than for 2800 type diodes?
>
> 73
> Jan-Martin
> LA8AK
> --
> remove ,xnd to reply

4728. Thank you all for responding...with such great things to try!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 18:12:05 UTC
From: braincambre500@yahoo.com
Message-ID: <85a87c6c.0212271012.1da36ca9@posting.google.com>
Source record: 39091

Hello all,

I will surely get back on the workbench and try all the things that everyone has stated....in ref to your own trials of getting the hummm out.

Yes, the LPFM works fine, but the humm...since it's been there for so long...has almost become a mascot of my transmissions. Oh well, I surely would like the ole' mascot to retire.

Sincerely,

Patrick

4729. Diplexer improvements (was Re: First mixer in Drake R7/TR7?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 19:01:53 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E0CA3A1.90FF4BD3@northwest.com>
Source record: 39092

Hi, Pete.

I used an SRA-1 mixer with 6dB pads on LO/IF/ RF ports, into a Collins 75S3B rx, the IF was 28.2mHz, and no 2m preamp. The minimum discernable signal w/o the diplexer was better than -150dBm. I used a 10 dB attenuator on the output of the HP 608D, to get below the minimum -140dBm dial marking.

Based on this result, I didn;t use anything special.

LArryC
=========

Pete KE9OA wrote:

> It did improve my unit somewhat. Before the change, the MDS was .15uV;
> after the change, the MDS improved to .07uV.
>
> Pete

4730. amplifier schematic help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 19:04:16 UTC
From: Mario <nospam@nospam.com>
Message-ID: <Qu1P9.73768$Ti2.10344@afrodite.telenet-ops.be>
Source record: 39093

Hi,

I'm having some problems understanding a bias circuit for a 250Watt
powermodule. To be able to discuss about the circuit, I did put it on
http://www.angelfire.com/space/schematic/amp_circuit.jpg
The transformers T1 and T2 are needed to transform impedances. I guess D1
is used to protect the high power transistors.
I'd like to get to know more about the bias circuit, that consists of Q3
and Q4. R3 is a variable resistor, R2 is a 10Watt 50 ohm resistor and R1 is
a 1800 ohm resistor. How does this circuit work ?

Regards,

Mario.

4731. Re: Thank you all for responding...with such great things to try!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 19:44:53 UTC
From: Idontwantspam@net
Message-ID: <3e0cad72.28618571@news.bellatlantic.net>
Source record: 39094

On 27 Dec 2002 10:12:05 -0800, braincambre500@yahoo.com (Patrick)
wrote:

>Yes, the LPFM works fine, but the humm...since it's been there for so
>long...has almost become a mascot of my transmissions. Oh well, I
>surely would like the ole' mascot to retire.
>
Do it like some software vendors "It's not a bug, it's a feature".

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4732. Re: amplifier schematic help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 19:46:25 UTC
From: "G. Beat" <gregory.beat.nospam@spam.attbi.com>
Message-ID: <l62P9.531601$NH2.35397@sccrnsc01>
Source record: 39095

The late Helge Granberg's application notes while at Motorola,
explain all aspects of biasing for solid state amplifiers

http://www.communication-concepts.com/appnotes.htm

w9gb

"Mario" <nospam@nospam.com> wrote in message
news:Qu1P9.73768$Ti2.10344@afrodite.telenet-ops.be...
> Hi,
>
> I'm having some problems understanding a bias circuit for a 250Watt
> powermodule. To be able to discuss about the circuit, I did put it on
> http://www.angelfire.com/space/schematic/amp_circuit.jpg
> The transformers T1 and T2 are needed to transform impedances. I guess D1
> is used to protect the high power transistors.
> I'd like to get to know more about the bias circuit, that consists of Q3
> and Q4. R3 is a variable resistor, R2 is a 10Watt 50 ohm resistor and R1
is
> a 1800 ohm resistor. How does this circuit work ?
>
> Regards,
>
> Mario.

4733. Re: Simple RF transformers: Which way connected, does it matter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 20:06:13 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <auibrh$3ig$1@slb0.atl.mindspring.net>
Source record: 39096

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:aui0eo$7c4ek$1@ID-150848.news.dfncis.de...
>
> Concerning two single layer coils.
>
>
> TFMR
>
> ---------P1 S1-------
> | |
> | |
> | |
> ---------P2 S2-------
>
>
>
> Say P1 was rf "hot" and S1 rf "hot" P2 and S2 at rf "ground" or rf
> "cold". Capacitance between P1 and S1 conveys an unwanted current over
> to S1. But if S1 was at rf "cold (decoupled to chassis) any current
> transfered by capacitance would go to ground. Is this contradicting
> what we thought about desirable transformer connections for single layer
> coils?
>

4734. Re: Simple RF transformers: Which way connected, does it matter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 20:14:35 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <auicb6nci1@slb1.atl.mindspring.net>
Source record: 38997

Richard:

[snip]
> ---------P1 S1-------
> | |
> | |
> | |
> ---------P2 S2-------
:
:
> Say P1 was rf "hot" and S1 rf "hot" P2 and S2 at rf "ground" or rf
> "cold". Capacitance between P1 and S1 conveys an unwanted current over
> to S1. But if S1 was at rf "cold (decoupled to chassis) any current
> transfered by capacitance would go to ground. Is this contradicting
> what we thought about desirable transformer connections for single layer
> coils?
[snip]

I don't understand [exactly... specifically] what you mean by
"rf ground", "rf cold" and "chassis".

The fact that you use so many terms for what should be the same thing,
at least in my mind, indicate to me that perhaps you are not sure of
where "ground" is.

I believe you said that S1 was both "hot" *AND* decoupled to chassis!

I'm surprised by that! Do you mean that both are at rf ground? If so then
where do you expect the signal coupled from P1 to S2 by the magnetic
coupling to go if it's been decoupled into ground? The signal at S1
with respect to "ground" and/or "cold" will be zero! What?

rf cold, ground, chassis,...

What exactly do you wish to do with the signal coupled from P to S? i.e.
where does it go next? And how is it to be handled?

--
Peter K1PO
Indialantic By-the-Sea, FL

4735. Re: Thank you all for responding...with such great things to try!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 20:16:38 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3E0CB526.FC9FFF75@nettally.com>
Source record: 38998

look out for ground loops. make sure all equipment/components have a
single point ground.

Patrick wrote:

> Hello all,
>
> I will surely get back on the workbench and try all the things that
> everyone has stated....in ref to your own trials of getting the
> hummm out.
>
> Yes, the LPFM works fine, but the humm...since it's been there for so
> long...has almost become a mascot of my transmissions. Oh well, I
> surely would like the ole' mascot to retire.
>
> Sincerely,
>
> Patrick

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"Jazz is not dead. It just smells funny." -F.Z.

4736. divide by 10 at 150 mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 22:03:37 UTC
From: gpatterson53@hotmail.com
Message-ID: <9c2b8e62.0212271403.392045d6@posting.google.com>
Source record: 38999

How does one prescale by 10 at 2 meter frequencies these days? I can no longer get my 95H90 or 11C90 chips (argghhh!). Any help?

Tnx Gary W4AF

4737. Re: Ringmixer LO level?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 22:46:52 UTC
From: la8ak.xnd@online.no
Message-ID: <3e0cd108.181450507@news.online.no>
Source record: 39001

Rick

Thanks for an interesting reply. No, I wouldn't do that, or I wouldn't think of modifying an already working device. But I've used 1N4148 mixers on some occasions, and just had to find a way to put the words to get the reply I was after. I wasn't aware of those '30mA', but I was told that better IMD could be achieved by connecting two 1N4148 or other type in series for each place. On the other hand I have a douzen CM-1, SBL-1H, SRA-1, MD108, some SL6440's, 74HC4066 and other types available in the shack, so I don't dream about making my own mixers, I was just curious

The problem is more like that it is difficult to use all the components I get from friends around the world, but now I have got another argument to evaluate some of them

73, Jan-Martin LA8AK

On Fri, 27 Dec 2002 17:49:30 GMT, "Rick Karlquist" <richard@karlquist.remove.this.com> wrote:

>You would still need about 30 mA peak to peak, but
>the voltage required would be twice as much. The
>input impedance for the LO port on an SBL-1 is
>actually somewhat less than 50 ohms, so with the
>doubling of voltage, you would end up somewhat
>greater than 50 ohms. It's not critical; you can still
>use a 50 ohm LO source.
>
>Why do you want to do this? If it is to get higher
>dynamic range, you should know that the conventional
>way to do that is to add reverse self-bias to Schottky
>diodes by putting a parallel RC circuit in series with
>each diode.
>
>Rick N6RK
>

>"J M Noeding" <la8ak.xnd@online.no> wrote in message
>news:3e0c86e8.162471615@news.online.no...
>> Suppose you wire a mixer like SBL-1 using different types of diodes,
>> how can the drive level be estimated dependent on type of diodes?
>> In my case I would use 1N914/1N4148 type, suppose the drive level
>> needed is somewhat higher than for 2800 type diodes?
>>
>> 73

>> Jan-Martin
>> LA8AK
>> --
>> remove ,xnd to reply
>
>

--
remove ,xnd to reply

4738. Re: Diplexer improvements (was Re: First mixer in Drake R7/TR7?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 22:46:53 UTC
From: la8ak.xnd@online.no
Message-ID: <3e0cd1d6.181656462@news.online.no>
Source record: 39000

On Fri, 27 Dec 2002 11:01:53 -0800, L Caracciolo
<larryc@northwest.com> wrote:

>Hi, Pete.
>
>I used an SRA-1 mixer with 6dB pads on LO/IF/ RF ports, into a Collins
>75S3B rx, the IF was 28.2mHz, and no 2m preamp. The minimum discernable
>signal w/o the diplexer was better than -150dBm. I used a 10 dB attenuator
>on the output of the HP 608D, to get below the minimum -140dBm dial
>marking.
>
>Based on this result, I didn;t use anything special.
>
>LArryC
>=========
I don't know the HP608D, but suppose you already are aware if the
output atenuator is good for signal levels down to -140dBm? I wouldn't
rust my Wavetek model 3001.

Before being aware of the misery I spoiled the 70cm transverter, hi,
but model 3001 isn't safe below 1V if the equipment under test isn't
well screened.

73, LA8AK
>
>Pete KE9OA wrote:
>
>> It did improve my unit somewhat. Before the change, the MDS was .15uV;
>> after the change, the MDS improved to .07uV.
>>
>> Pete
>

--
remove ,xnd to reply

4739. Re: Simple RF transformers: Which way connected, does it matter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 22:46:53 UTC
From: la8ak.xnd@online.no
Message-ID: <3e0cd310.181970814@news.online.no>
Source record: 39002

On Fri, 27 Dec 2002 15:14:35 -0500, "Peter O. Brackett"
<ab4bc@ix.netcom.com> wrote:

>Richard:
>
>[snip]
>> ---------P1 S1-------
>> | |
>> | |
>> | |
>> ---------P2 S2-------
>:
>:
>> Say P1 was rf "hot" and S1 rf "hot" P2 and S2 at rf "ground" or rf
>> "cold". Capacitance between P1 and S1 conveys an unwanted current over
>> to S1. But if S1 was at rf "cold (decoupled to chassis) any current
>> transfered by capacitance would go to ground. Is this contradicting
>> what we thought about desirable transformer connections for single layer
>> coils?
>[snip]
>
>I don't understand [exactly... specifically] what you mean by
>"rf ground", "rf cold" and "chassis".
>
It is a definition sometimes used with Hi-Q tuned circuits in
tube-circuits where one end of the coil were supposed to be better for
ground side than the opposite dependent on the way you wind the coil.
You usually placed the link on the cold side. But for transformers on
toroid cores it is no such things, you just ground the side of winding
which gives the desired phase relationship.

73, LA8AK

>The fact that you use so many terms for what should be the same thing,
>at least in my mind, indicate to me that perhaps you are not sure of
>where "ground" is.
>
>I believe you said that S1 was both "hot" *AND* decoupled to chassis!
>
>I'm surprised by that! Do you mean that both are at rf ground? If so then
>where do you expect the signal coupled from P1 to S2 by the magnetic
>coupling to go if it's been decoupled into ground? The signal at S1
>with respect to "ground" and/or "cold" will be zero! What?
>
>rf cold, ground, chassis,...

>
>What exactly do you wish to do with the signal coupled from P to S? i.e.
>where does it go next? And how is it to be handled?
>
>--
>Peter K1PO
>Indialantic By-the-Sea, FL
>
>

--
remove ,xnd to reply

4740. Re: Simple RF transformers: Which way connected, does it matter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 23:22:53 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <auinao$73u4b$1@ID-150848.news.dfncis.de>
Source record: 39003

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:auicb6nci1@slb1.atl.mindspring.net...
> Richard:
>
> [snip]
> > ---------P1 S1-------
> > | |
> > | |
> > | |
> > ---------P2 S2-------
> :
> :
> > Say P1 was rf "hot" and S1 rf "hot" P2 and S2 at rf "ground" or rf
> > "cold". Capacitance between P1 and S1 conveys an unwanted current
over
> > to S1. But if S1 was at rf "cold (decoupled to chassis) any current
> > transfered by capacitance would go to ground. Is this contradicting
> > what we thought about desirable transformer connections for single
layer
> > coils?
> [snip]
>
> I don't understand [exactly... specifically] what you mean by
> "rf ground", "rf cold" and "chassis".
>
> The fact that you use so many terms for what should be the same thing,
> at least in my mind, indicate to me that perhaps you are not sure of
> where "ground" is.

I thought I was using commonly used terms. Placing a capacitor with low
reactance to rf at P2 and S2 would make these ends effectively connected
to chassis for rf purposes. You know that of course. I just call P1
and S2 at rf "ground" or rf "cold", I could say rf "chassis". Opposite
would be rf "live" or rf "hot". You could touch P1 and P2 without
detuning the resonant circuit if the primary or secondary were parallel
tuned circuits.

So, if you wound two single layer coils, primary and secondary one above
the other and decoupled both at the same end, then that looks bad to me,
because if P1 and P2 are both rf "hot" rf current can leak
through the capacitance between P1 and P2 ends and get into the
secondary circuit. Whereas if P1 was rf "hot" and S2 was at rf
"chassis"
any unwanted current passing by capacitance from P1 to S2
(assuming the ends were the vulnerable spots because they are most

rf "hot") would go to ground at P2. But, also wanted signals at the resonant frequency would also want to leak through and go to chassis at S2. However it could be that C is so small between P1 and S1 that little signal at the resonant (say HF) frequency passes by way of capacitance, ,but unwanted (say VHF) signals would more readily pass. Thus if this were the case it's best that if P1 is rf "hot" S2 be rf "cold"

But maybe with regular rf rx amplifiers, in practice, unles there is a local VHF Tx about, it matters little which way the transformer connections are made.

4741. Re: Simple RF transformers: Which way connected, does it matter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 23:25:52 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <auing7$7m6ih$1@ID-150848.news.dfncis.de>
Source record: 39004

"Richard" <nearlynews_email@ntlworld.com> wrote in message
news:auinao$73u4b$1@ID-150848.news.dfncis.de...
> You could touch P1 and P2 without
> detuning the resonant circuit if the primary or secondary were
parallel
> tuned circuits.

I mean P2 and S2 of course.

4742. Re: divide by 10 at 150 mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 23:27:59 UTC
From: Norm Mann <folder0735@hotmail.com>
Message-ID: <3e0ce158$0$187@news.impulse.net>
Source record: 39005

"gary" <gpatterson53@hotmail.com> wrote in message
news:9c2b8e62.0212271403.392045d6@posting.google.com...
> How does one prescale by 10 at 2 meter frequencies these days? I can
> no longer get my 95H90 or 11C90 chips (argghhh!). Any help?

Check some of the newer chip families. Some of the 74/54 'AS' and 'F'
series will probably work in that range. You may have to test for chips
that work at frequency. i.e. Specs may guarantee 100 Mhz with typical
speeds 120 to 140 Mhz.

-CB

4743. Re: Simple RF transformers: Which way connected, does it matter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-27 23:37:30 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <auio61$7mvs0$1@ID-150848.news.dfncis.de>
Source record: 39006

This is the one to read. Got confused with my P's ans S's and my 1's
and 2's in the original post.

"Peter O. Brackett" <ab4bc@ix.netcom.com> wrote in message
news:auicb6nci1@slb1.atl.mindspring.net...
> Richard:
>
> [snip]
> > ---------P1 S1-------
> > | |
> > | |
> > | |
> > ---------P2 S2-------
> :
> :
> > Say P1 was rf "hot" and S1 rf "hot" P2 and S2 at rf "ground" or rf
> > "cold". Capacitance between P1 and S1 conveys an unwanted current
> > over to S1. But if S1 was at rf "cold (decoupled to chassis) any
current
> > transfered by capacitance would go to ground. Is this contradicting
> > what we thought about desirable transformer connections for single
> > layer coils?
> [snip]
>
> I don't understand [exactly... specifically] what you mean by
> "rf ground", "rf cold" and "chassis".
>
> The fact that you use so many terms for what should be the same thing,
> at least in my mind, indicate to me that perhaps you are not sure of
> where "ground" is.

I thought I was using commonly used terms. Placing a capacitor with low
reactance to rf at P2 and S2 would make these ends effectively connected
to chassis for rf purposes. You know that of course. I just call P2
and S2 at rf "ground" or rf "cold", I could say rf "chassis". Opposite
would be rf "live" or rf "hot". You could touch P2 and S2 without
detuning the resonant circuit if the primary or secondary were parallel
tuned circuits.

So, if you wound two single layer coils, primary and secondary one above
the other and decoupled both at the same end, then that looks bad to me,
because if P1 and S1 are both rf "hot" rf current can leak
through the capacitance between P1 and S1 ends and get into the
secondary circuit. Whereas if P1 was rf "hot" and S1 was at rf
"chassis" any unwanted current passing by capacitance from P1 to S1

(assuming the ends were the vulnerable spots because they are most rf "hot") would go to ground at S1. But, also wanted signals at the resonant frequency would also want to leak through and go to chassis at S1. However it could be that C is so small between P1 and S1 that little signal at the resonant (say HF) frequency passes by way of capacitance, but unwanted (say VHF) signals would more readily pass. Thus if this were the case it's best that if P1 is rf "hot" S1 be rf "cold"

But maybe with regular rf rx amplifiers, in practice, unles there is a local VHF Tx about, it matters little which way the transformer connections are made. Especially if one coil is not wound above the other or one is a small link and it's at the rf "cold" end.

4744. Re: Simple RF transformers: Which way connected, does it matter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 00:09:08 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <auiq31$fl9$1@slb0.atl.mindspring.net>
Source record: 39007

Richard:

[snip]
> But maybe with regular rf rx amplifiers, in practice, unles there is a
> local VHF Tx about, it matters little which way the transformer
> connections are made. Especially if one coil is not wound above
> the other or one is a small link and it's at the rf "cold" end.
[snip]

This is true.

If your application is not bothered by common mode signals, then it simply doesn't matter which terminals you connect to ground.

The connections on transformers are only important if they make a difference in the operation of your application. Try it one way and look for disturbances,
then try it the other way and look for disturbances. Then use the connection
that results in the least disturbance to your circuit operation. If it makes no
discernable difference, which it often does not, then you don't care.

When it does make a difference, then it is always the inter-winding capacitances
and the finite common mode rejection that causes the problem.

In many/most typical application circumstances it simply makes no difference.
That is why most such commercial transformers are not marked with "polarity" or "start and finish" marks.

In extreme cases, such as with instrumentation in the presense of very strong
common mode signals, the winding geometry of the transformers are specially designed and manufactured to reduce and/or equalize the inter-winding capacitance
to enhance the common mode rejection ratio.

--
Peter K1PO
Indialantic By-the-Sea, FL

4745. Re: divide by 10 at 150 mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 00:33:16 UTC
From: Jim and Glenna Larsen <zamo@pcez.com>
Message-ID: <v0pscin8b9vo7e@corp.supernews.com>
Source record: 39008

Hi Gary,

> How does one prescale by 10 at 2 meter frequencies these days? I can
> no longer get my 95H90 or 11C90 chips (argghhh!). Any help?

I have had good luck with the MC12080 chip from ON Semiconductor. The cost is about $4.00 from Newark Electronics. This is a surface mount part. The input frequency spec is 100 MHz to 1.1 GHz, but I have used it successfully at 50 MHz.

73,

Jim
N7IHQ

4746. Re: Wanted 1GHZ PLL Evaluation Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 00:37:30 UTC
From: george craig <geocraig@worldnet.att.net>
Message-ID: <en6P9.16524$p_6.1273895@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39010

Hey Joe how are you doing??? Get a ready made 1 or 2 Ghz L.O. @ +7DBM with
>120DB
phase noise @ 100khz offset from wilmanco www.wilmanco.com
it will cost 200 or 300 bucks but your time is worth something too!! George
Joe Leikhim <jleikhim@nettally.com> wrote in message
news:3E029AC3.4CAE29BE@nettally.com...
> OK!
> I can't believe all the responses to this question! All of this was
appreciated.
> My original post was for a PLL board which was programmable by parallel
data so
> that the dividers could be hardwired, eliminating the need for any
processor
> circuitry.
>
> There was a firm selling such a board a few years ago. The sold prototype
boards
> for TO-5 RF amplifiers and VCO's. I since lost track of them.
>
> Here is what I have learned:
>
> Don't try to do direct synthesis at 1 GHz too much phase noise.
> Multiply from a crystal.
> Use a narrow loop filter -- 1 kHz or less -- and you'll have no
> trouble achieving the VCO's 10 kHz noise spec of -104 dBc/Hz.
> Etc.
>
> I have decided to resurrect an old GLB synthesizer board (80's vintage
with a
> Motorola 1414x?? chip) and strip off the on board VCO and substitute a
prescaler
> in its place. An outboard minicircuits VCO will do the heavy hauling. I
will have
> to rejig the dividers to work with the prescaler and external 10 MHz
reference.
> The loop will be another task because I am not sure the GLB has the
voltage swing
> or fioltering required. Of course I will need a active filter to provide
low
> noise VCO supply voltage.
>
> I am building a converter to allow a 0-1 GHz spectrum analyser/tracking
generator
> work up to 2 GHz. A 2 GHz LO would get me to 3 GHz, so I am also looking

into
> making the PLL work with a second VCO for that range.
>
> Joe Leikhim wrote:
>
> > Ron wrote:
> >
> > > The serial data isn't anything to do with the eval board?
> > > you are actually programming the device, if you use any
> > > of those devices you will need to get data into them
> > >
> >
> > Are you saying once I program their (Z-COMM's) PLL with their PC based
loader
> > I can remove power from the circuit and it will retain the frequency
data? If
> > so it will work.
> >
> > > Why 10mhz? why not a 300mhz tripler, wouldn't be that
> > > noisy? say a balanced ring with a couple of Schottky dodes?
> > >
> >
> > I guess I could do that but I want the LO to be locked to the 10 MHz
> > reference of the host equipment. So 1000/10 is a lot of multiplication
and
> > possible spurs.
> >
> > >
> > > On Sun, 15 Dec 2002 01:35:02 -0500, Joe Leikhim
> > > <jleikhim@nettally.com> wrote:
> > >
> > > >Hi I am looking for a 1.000 GHz frequency source to drive a
> > > >downconverter project. The source needs to be low noise and be
> > > >referenced to an external 10 Mhz reference. It doesn't need
modulation
> > > >and channel spacing is not important. What I am looking for is a
board
> > > >with parallel address lines which can be either DIP switch or jumper
> > > >programmable. I know that Z-Comm has an eval board that looks
promising
> > > >but it requires a PC to load the data into a latch. It looks
volatile. I
> > > >don't want to complicate the project with a PIC just to load the
> > > >frequency which will always be the same.
> >
> > --
> > Joe Leikhim K4SAT
> > Jleikhim@nettally.com
> >
> > "Jazz is not dead. It just smells funny." -F.Z.

>
> --
> Joe Leikhim K4SAT
> Jleikhim@nettally.com
>
> "Jazz is not dead. It just smells funny." -F.Z.
>
>

4747. WORD97 disks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 00:41:43 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E0CF347.9C687F76@northwest.com>
Source record: 39009

Where could I find a generous soul to sell/send me the install disks for WORD 97? Also what newsgroup would be more appropriate?

4748. Re: amplifier schematic help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 05:26:54 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E0D361E.352DEEC6@northwest.com>
Source record: 39011

Q3 provides the current used to bias Q1 and Q2. Q4 adjusts the bias point for Q3, which sets the drive current for Q1 and Q2. C9 appears to be a hi-freq rolloff feedback cap. What is its value?

D1 is in parallel with the Vbe diodes of Q1 and Q2. It is likely to maintain a specific Vbe during hi-temperature operation (to inhibit thermal runaway).

My translation on the circuit...
==========
Mario wrote:

> Hi,
>
> I'm having some problems understanding a bias circuit for a 250Watt
> powermodule. To be able to discuss about the circuit, I did put it on
> http://www.angelfire.com/space/schematic/amp_circuit.jpg
> The transformers T1 and T2 are needed to transform impedances. I guess D1
> is used to protect the high power transistors.
> I'd like to get to know more about the bias circuit, that consists of Q3
> and Q4. R3 is a variable resistor, R2 is a 10Watt 50 ohm resistor and R1 is
> a 1800 ohm resistor. How does this circuit work ?
>
> Regards,
>
> Mario.

4749. Re: Hi-Fi FM decoder internals

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 08:36:38 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <qodP9.16951$p_6.1319502@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39012

There is one thing that I really like about Phillips chips. They seem to work "right out of the box". What I mean is, very few external support components, and good performance.

Pete

4750. Re: Diplexer improvements (was Re: First mixer in Drake R7/TR7?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 08:45:33 UTC
From: Pete KE9OA <n.gianakopoulos@worldnet.att.net>
Message-ID: <NwdP9.16958$p_6.1319279@bgtnsc04-news.ops.worldnet.att.net>
Source record: 39013

Hi Larry,
I do like those Mini-Circuits mixers; they do work very
well. It sounds as if things worked out for you. The one reason that I do like the SRA-3, TUF-3, TFM-3, SBL-3, and TAK-3 series is that the "3" series have approximately 4.75dB SSB conversion loss, while the "1" series have approximately 6.5dB. When not using an RF stage, it does help a bit. Will it make an audible difference on the HF bands? Probably not, but still, it is nice to have that extra sensitivity when using a whip antenna. Also, the "3" series are good down to 25kHz, while the "1" series are specified down to 500kHz, so the "3s" are good for LW reception. I believe the SRA-5, etc. are good to even lower frequencies, but I would need to check my databook on that one.

Pete

4751. Re: Simple RF transformers: Which way connected, does it matter?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 09:04:36 UTC
From: la8ak.xnd@online.no
Message-ID: <3e0cf6ae.191090567@news.online.no>
Source record: 39014

The most usual time one uses such is to combine the windings

```
---------P1 S1-------
| |
| |
| |
---------P2 S2-------

---------P3 S3-------
| |
| |
| |
---------P4 S4-------
```

--
remove ,xnd to reply

4752. Re: WORD97 disks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 09:04:37 UTC
From: la8ak.xnd@online.no
Message-ID: <3e0cf7c9.191373687@news.online.no>
Source record: 39015

On Fri, 27 Dec 2002 16:41:43 -0800, L Caracciolo
<larryc@northwest.com> wrote:

>Where could I find a generous soul to sell/send me the install disks for
>WORD 97? Also what newsgroup would be more appropriate?
>
Suppose you already have the license?

--
remove ,xnd to reply

4753. Re: amplifier schematic help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 11:12:14 UTC
From: Mario <nospam@nospam.com>
Message-ID: <iGfP9.75191$Ti2.10543@afrodite.telenet-ops.be>
Source record: 39016

L Caracciolo <larryc@northwest.com> wrote in
news:3E0D361E.352DEEC6@northwest.com:

> Q3 provides the current used to bias Q1 and Q2. Q4 adjusts the bias
> point for Q3, which sets the drive current for Q1 and Q2. C9 appears
> to be a hi-freq rolloff feedback cap. What is its value?
>
> D1 is in parallel with the Vbe diodes of Q1 and Q2. It is likely to
> maintain a specific Vbe during hi-temperature operation (to inhibit
> thermal runaway).
>
> My translation on the circuit...
> =============
> Mario wrote:
>
>> Hi,
>>
>> I'm having some problems understanding a bias circuit for a 250Watt
>> powermodule. To be able to discuss about the circuit, I did put it on
>> http://www.angelfire.com/space/schematic/amp_circuit.jpg
>> The transformers T1 and T2 are needed to transform impedances. I
>> guess D1 is used to protect the high power transistors.
>> I'd like to get to know more about the bias circuit, that consists of
>> Q3 and Q4. R3 is a variable resistor, R2 is a 10Watt 50 ohm resistor
>> and R1 is a 1800 ohm resistor. How does this circuit work ?
>>
>> Regards,
>>
>> Mario.
>
>

Thanks all for analysing the circuit.
Ok, I think i start to understand it. Could a good biascurrent be measured
by measuring the R2 voltage ? The only way to bias the whole thing is via
R3, so i guess the voltage across R2 can be used to determine the ideal
biaspoint of Q1 and Q3, no ?
The push-pull transistors are BLW96's.
C9 is a ceramic : 0.01&#65533;F 500V

4754. Re: WORD97 disks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 12:16:42 UTC
From: "Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net>
Message-ID: <3e0d9615@news.netacc.net>
Source record: 39017

"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3e0cf7c9.191373687@news.online.no...
> On Fri, 27 Dec 2002 16:41:43 -0800, L Caracciolo
> <larryc@northwest.com> wrote:
>
> >Where could I find a generous soul to sell/send me the install disks for
> >WORD 97? Also what newsgroup would be more appropriate?
> >
> Suppose you already have the license?
>
>

He did not ask for copies. He asked for the disks. No one running Word 97 would give up his disks (re-install after a crash eg) so if someone no longer uses 97, has purchased Office 2000 (not an upgrade), then he is free to sell/give his disks to anyone he wants.

Steve

4755. Re: WORD97 disks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 14:14:27 UTC
From: john walton <jdwalton@comcast.net>
Message-ID: <USednV1WbOBjLJCjXTWcow@comcast.com>
Source record: 39018

But technically, you are required to remove WORD97 from the machine that it
is on.

I wish WordPerfect hadn't faltered so badly.

"Stephen C. Robbins" <srobbinsNoSPaMDUDES@netacc.net> wrote in message
news:3e0d9615@news.netacc.net...
>
> "J M Noeding" <la8ak.xnd@online.no> wrote in message
> news:3e0cf7c9.191373687@news.online.no...
> > On Fri, 27 Dec 2002 16:41:43 -0800, L Caracciolo
> > <larryc@northwest.com> wrote:
> >
> > >Where could I find a generous soul to sell/send me the install disks
for
> > >WORD 97? Also what newsgroup would be more appropriate?
> > >
> > Suppose you already have the license?
> >
> >
>
> He did not ask for copies. He asked for the disks. No one running Word
97
> would give up his disks (re-install after a crash eg) so if someone no
> longer uses 97, has purchased Office 2000 (not an upgrade), then he is
free
> to sell/give his disks to anyone he wants.
>
> Steve
>
>

4756. Stuff I want to get rid of

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 14:20:37 UTC
From: Dan Stanger <dan.stanger@ieee.org>
Message-ID: <3E0DB335.5EDCB2DA@ieee.org>
Source record: 39019

I have about 14 lbs of RG 108 A/U coax,
2 Raytheon thermal relays gh 2392 12e in boxes from 1951,1952
1 bomac bl 650, it looks like a waveguide terminator?
hp 1422A timebase quantity 2, have calibration tags on them.
hp 1400A diff amps quantity 2, have calibration tags on them.

will take a offer enough to
get me to pack it and ship it + shipping from Denver, CO.
dan.stanger@ieee.org

4757. Re: Ideas for GS-35 tube mounting ???

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 14:45:39 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <u7z9XfHTkbD+EAf+@ifwtech.co.uk>
Source record: 39020

Douglas Snowden wrote:
>I am starting to collect parts for a Russian GS-35 linear, which is
>similar in characteristics to the 8877, but mounting is a lot
>different. I successfully mounted a GI7B tube by just clamping the
>grid to the chassis and providing air holes for circulation to the
>plate. Any experience with the GS-35 out there?
>Could I do similar with the GS35? I am guessing I might need to make sure
>I cool the cathode are also.

There are several ways to mount the GS35b. A finger-stock grid ring is not very successful because of the enormous weight of copper in the anode cooler. Clamping works well, either direct to the chassis with four L-brackets (like you would mount an Eimac air-system socket, only bigger) or with a turned ring as shown at:
http://www.6mdx.eurobell.co.uk

For cooling, it's best to blow air in *above* the chassis, and let most of it pass through the anode cooler. The hot air should go straight out of the amplifier through an exit chimney.

The cathode area requires much less cooling than the anode, and this can be adequately done by four holes of about 0.75in (20mm) diameter, spaced close around the grid clamp. Cool air flows downward around the cathode connections, and then exits through a screened hole in the base of the amp (with a much bigger open area than the four holes in the chassis).

There are many other ideas at www.nd2x.net which is probably the world's best site for amplifier designs using Russian tubes.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4758. Obtaining SPICE model paramters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 15:27:26 UTC
From: Paul Burridge <pb@notthisbitosiris1.co.uk>
Message-ID: <9lgr0vok4vad0m51niv4r8mgnscj1sv4ai@4ax.com>
Source record: 39024

Hi,

How does one derive model parameters as required by SPICE from
manufacture's datasheets?

thanks
--

"What is now proved was once only imagin'd"
- William Blake, 1793

4759. Re: WORD97 disks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 16:23:43 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.18776febbc9afae989699@192.168.42.131>
Source record: 39021

In article <USednV1WbOBjLJCjXTWcow@comcast.com>, jdwalton@comcast.net
says...

<snip>

> I wish WordPerfect hadn't faltered so badly.

Faltered? Maybe. Failed? No way. I still use WP. Have been since
DOS ver. 5.1, and I've got not the slightest intention of switching.

I don't care who makes it. At its core feature set, WP still runs
rings around Office for technical writing.

But, then again, that's a whole 'nother story. I'll not let the
topic drift get any further than that on my part.

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

4760. Re: amplifier schematic help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 16:55:41 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E0DD78D.E8E1A7A0@northwest.com>
Source record: 39022

hi, mario. remember, the bias point (drive current) for q3/q4 sets the output current drive for q1/q2. not quite the same beast as grid voltage for a tube.

we're looking at currents here, not voltage. you could work backwards, knowing a basic Vbe is about 0.6volt. using kirchoff's voltage laws, and make a rough estimate of what current values are involved.
======

Mario wrote:

> L Caracciolo <larryc@northwest.com> wrote in
> news:3E0D361E.352DEEC6@northwest.com:
>
> > Q3 provides the current used to bias Q1 and Q2. Q4 adjusts the bias
> > point for Q3, which sets the drive current for Q1 and Q2. C9 appears
> > to be a hi-freq rolloff feedback cap. What is its value?
> >
> > D1 is in parallel with the Vbe diodes of Q1 and Q2. It is likely to
> > maintain a specific Vbe during hi-temperature operation (to inhibit
> > thermal runaway).
> >
> > My translation on the circuit...
> > =============
> > Mario wrote:
> >
>
> Thanks all for analysing the circuit.
> Ok, I think i start to understand it. Could a good biascurrent be measured
> by measuring the R2 voltage ? The only way to bias the whole thing is via
> R3, so i guess the voltage across R2 can be used to determine the ideal
> biaspoint of Q1 and Q3, no ?
> The push-pull transistors are BLW96's.
> C9 is a ceramic : 0.01ï¿½F 500V

4761. Re: WORD97 disks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 16:58:21 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E0DD82D.5380D8A4@northwest.com>
Source record: 39023

but isn't that the point of newsgroups?

anyhow, an earlier response had dissected my request. i'ts easier to spend
$25 and buy it online.

gads!
=======
Bruce Lane wrote:

> In article <USednV1WbOBjLJCjXTWcow@comcast.com>, jdwalton@comcast.net
> says...
>
> <snip>
>
> > I wish WordPerfect hadn't faltered so badly.
>
> Faltered? Maybe. Failed? No way. I still use WP. Have been since
> DOS ver. 5.1, and I've got not the slightest intention of switching.
>
> I don't care who makes it. At its core feature set, WP still runs
> rings around Office for technical writing.
>
> But, then again, that's a whole 'nother story. I'll not let the
> topic drift get any further than that on my part.
>
> --
> Bruce Lane, Owner and Head Hardware Heavy,
> Blue Feather Technologies -- http://www.bluefeathertech.com
> Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
> kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
> "I'll get a life when someone demonstrates to me it would be superior to
> what I have now..." (Taki Kogoma)

4762. Re: WORD97 disks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 18:07:00 UTC
From: Crusty Curmudgeon <crusty@wyenot.dot.servebeer.dot.com>
Message-ID: <30qr0v0jrbjf0m96uup3vuiq4djop41qei@4ax.com>
Source record: 39025

You might want to try OpenOffice - it's free
http://www.openoffice.org/

Seems to open W97 doc files ok.

On Fri, 27 Dec 2002 16:41:43 -0800, L Caracciolo <larryc@northwest.com> wrote:

>Where could I find a generous soul to sell/send me the install disks for
>WORD 97? Also what newsgroup would be more appropriate?

4763. Re: WORD97 disks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 18:22:58 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E0DEC02.97A8ED61@northwest.com>
Source record: 39026

i'm looking to downgrade from Word 2000 to Word 97.

My WORD 2000 documents look like garbage when opened by Word 97.

Thanks anyway...
=====

Crusty Curmudgeon wrote:

> You might want to try OpenOffice - it's free
> http://www.openoffice.org/
>
> Seems to open W97 doc files ok.
>
> On Fri, 27 Dec 2002 16:41:43 -0800, L Caracciolo <larryc@northwest.com> wrote:
>
> >Where could I find a generous soul to sell/send me the install disks for
> >WORD 97? Also what newsgroup would be more appropriate?

4764. Re: WORD97 disks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 20:21:39 UTC
From: Bill M <don'tspamme-exray@caribe.net>
Message-ID: <v0s1qkspiiv020@corp.supernews.com>
Source record: 39027

L Caracciolo wrote:
> i'm looking to downgrade from Word 2000 to Word 97.
>
> My WORD 2000 documents look like garbage when opened by Word 97.
>
> Thanks anyway...

I don't have 2000...still using 97. It has in the 'Save As' routine a
manner to save in the older formats.
Does 2000 not have that?
-Bill

4765. Re: WORD97 disks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 21:28:59 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E0E179B.B9C5B851@northwest.com>
Source record: 39028

word2000 doesn;t save in the same format as the older versions.

if i save a Word 2000 doc file "AS WORD97," then Word 97 doesn;t recognise
the translated formats from Word 2000. so, i'm downgrading.

that's the crux of the issue.
==========
Bill M wrote:

> L Caracciolo wrote:
> > i'm looking to downgrade from Word 2000 to Word 97.
> >
> > My WORD 2000 documents look like garbage when opened by Word 97.
> >
> > Thanks anyway...
>
> I don't have 2000...still using 97. It has in the 'Save As' routine a
> manner to save in the older formats.
> Does 2000 not have that?
> -Bill

4766. Re: divide by 10 at 150 mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 22:45:02 UTC
From: "Thomas C. Sefranek" <WA1RHP@ARRL.net>
Message-ID: <OPpP9.634$134.92304@newsread1.prod.itd.earthlink.net>
Source record: 39029

gary <gpatterson53@hotmail.com> wrote in message
news:9c2b8e62.0212271403.392045d6@posting.google.com...
> How does one prescale by 10 at 2 meter frequencies these days? I can
> no longer get my 95H90 or 11C90 chips (argghhh!). Any help?

I have a few candidates:
http://hamradio.cmcorp.com/inventory/LINEAR/PLL/Motorola.html
>
> Tnx Gary W4AF

--
*
| __O Thomas C. Sefranek WA1RHP@ARRL.net
|_-\<,_ Amateur Radio Operator: WA1RHP
(*)/ (*) Bicycle mobile on 145.41, 448.625 MHz

http://hamradio.cmcorp.com/inventory/Inventory.html
http://www.harvardrepeater.org

4767. Re: Troubleshooting Simple VHF-AM Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-28 23:54:39 UTC
From: Paul Burridge <pb@notthisbitosiris1.co.uk>
Message-ID: <rubs0v0h6lr89nhartc91i9so80n2ac7rc@4ax.com>
Source record: 39031

On 25 Dec 2002 05:02:54 GMT, et472@FreeNet.Carleton.CA (Michael Black) opined thusly:

>People got by with a lot of ingenuity in the past, and
>a simple receiver can be checked out with similarly simple bits of
>circuitry.

I once knew a totally blind guy who did radio repairs for a living. He developed all sorts of other clues as to where a circuit was going wrong. Quite remarkable. Another chap I knew (sighted) had *no* knowledge of radio whatever but still had an intuitive grasp of how to build and repair them. Seems to be an inexplicable and very rare gift in just a few people, though.
--

"What is now proved was once only imagin'd"
- William Blake, 1793

4768. Re: WORD97 disks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 00:59:51 UTC
From: Idontwantspam@net
Message-ID: <3e0e47c3.79230717@news.bellatlantic.net>
Source record: 39030

On Sat, 28 Dec 2002 13:28:59 -0800, L Caracciolo
<larryc@northwest.com> wrote:

>word2000 doesn;t save in the same format as the older versions.
>
>if i save a Word 2000 doc file "AS WORD97," then Word 97 doesn;t recognise
>the translated formats from Word 2000. so, i'm downgrading.
>
>that's the crux of the issue.
>==========

I've been using Office 97 as a standard between workplace and home for
the last few years, although I have 2000 in the box around here
somewhere.

The feature of saving in older formats has always worked fine for me,
but I haven't gone to Word 2000. Other than losing the benefit of new
features, it should work fine. At least it did with the significant
file format change from Office 95 to 97.

You might want to check with the Microsoft website in their "Knowledge
Base" as well as getting any patches issued after your CD was burned.
Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4769. Re: Ideas for GS-35 tube mounting

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 03:32:26 UTC
From: "G. Beat" <gregory.beat.nospam@spam.attbi.com>
Message-ID: <e1uP9.366232$GR5.110269@rwcrnsc51.ops.asp.att.net>
Source record: 39032

Doug -

Tom Adams, WB8WJU, hand constructs some beautiful sockets, chimneys and
filament
chokes for the GS-35B.

Pictures can be seen on the Harbach Electronics site (select at bottom of
frame)
http://www.harbachelectronics.com/

For Information or orders
CONTACT TOM, WB8WJU
(304) 723-0896
wb8wju@attbi.com

OR WRITE

TOM ADAMS WB8WJU
145 POWERS RD
WEIRTON, WV 26062
USA

"Douglas Snowden" <snowden@peoplepc.com> wrote in message
news:v0hq2g7koudk85@corp.supernews.com...
> I am starting to collect parts for a Russian GS-35 linear, which is
> similar in characteristics to the 8877, but mounting is a lot
> different. I successfully mounted a GI7B tube by just clamping the
> grid to the chassis and providing air holes for circulation to the
> plate. Any experience with the GS-35 out there?
> Could I do similar with the GS35? I am guessing I might need to make sure
> I cool the cathode are also.
>
> Merry Christmas
>
> Doug N4IJ
>
>
>
>
>

4770. AM Stereo and ECSS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 06:33:28 UTC
From: David Findlay <david@davsoft.com.au>
Message-ID: <YGwP9.5319$aV5.14570@news-server.bigpond.net.au>
Source record: 39033

I'm planning an AM broadcast band reciever, with the purpose of DXing very distant stations. I'd like to have a few modes one of which is AM stereo and Exulted carried sideband select. Anyone know of some documentation on how the various AM stereo systems work and can be demodulated? Secondly does anyone know how you can use the carrier and one sideband or only one sideband to pick up the station? The purpose of this is to dig out weak signals from more powerful local ones. Thanks,

David

--
BOFH excuse #413:

Cow-tippers tipped a cow onto the server.

4771. Re: amplifier schematic help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 09:56:42 UTC
From: Mario <nospam@nospam.com>
Message-ID: <uFzP9.77217$Ti2.10824@afrodite.telenet-ops.be>
Source record: 39034

L Caracciolo <larryc@northwest.com> wrote in
news:3E0DD78D.E8E1A7A0@northwest.com:

> hi, mario. remember, the bias point (drive current) for q3/q4 sets the
> output current drive for q1/q2. not quite the same beast as grid
> voltage for a tube.
>
> we're looking at currents here, not voltage. you could work backwards,
> knowing a basic Vbe is about 0.6volt. using kirchoff's voltage laws,
> and make a rough estimate of what current values are involved.
> ======

Larry,

Actually what i meant was to measure the voltage across R2. This gives you
the current through R2. So, this will allow you to calculate more or less
the other currents.. Couldn't you assume that half of this 'R2-current'goes
more or less to each push pull transistor ?

M.

4772. Re: Obtaining SPICE model paramters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 11:49:30 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <aumoie$7u2$1@news6.svr.pol.co.uk>
Source record: 39035

"Paul Burridge" <pb@notthisbitosiris1.co.uk> wrote in message
news:9lgr0vok4vad0m51niv4r8mgnscj1sv4ai@4ax.com...
>
> Hi,
>
> How does one derive model parameters as required by SPICE from
> manufacture's datasheets?

With some difficulty. If they are just transistors in something like an AF circuit you can usually manage with a generic device and simply add things from the data sheet like like hFE. Try posting this to sci.electronics.cad. There are *lots* of SPICE experts lurking there who delight in this sort of question.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

4773. Re: divide by 10 at 150 mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 11:52:02 UTC
From: Leon Heller <leon@heller123.freeserve.co.uk>
Message-ID: <aumoig$7u2$2@news6.svr.pol.co.uk>
Source record: 39036

"gary" <gpatterson53@hotmail.com> wrote in message
news:9c2b8e62.0212271403.392045d6@posting.google.com...
> How does one prescale by 10 at 2 meter frequencies these days? I can
> no longer get my 95H90 or 11C90 chips (argghhh!). Any help?

You could use a CPLD and put all your other digital stuff into it (like most of a PLL). They go up to 200 MHz or more. This approach is getting quite common.

73, Leon
--
Leon Heller, G1HSM
leon_heller@hotmail.com
http://www.geocities.com/leon_heller

4774. Re: Obtaining SPICE model paramters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 12:10:19 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <v0tphka80ucl7a@corp.supernews.com>
Source record: 39037

A lot of manufaturers provide SPICE model parameters for transistors and diodes. A search of the manufacturer's web site for "SPICE" should get you to the right spot. For those that don't, you can derive some of the parameters from the data sheet and curves. The process is simple for some parameters, complex for others. An excellent book was written on the topic. Although I'm sure it's long out of print, there might be a successor to it, or you might be able to find an old copy. The book is "Modeling the Bipolar Transistor" by Ian Getreu. It was published by Tektronix in 1976, and carried Tektronix part number 062-2841-00.

For many or most analyses, a very simple model of a transistor or FET, with only hfe or gm, ft, and capacitances, read pretty much directly from the data sheet, will give adequately accurate results.

Roy Lewallen, W7EL

Paul Burridge wrote:
> Hi,
>
> How does one derive model parameters as required by SPICE from
> manufacture's datasheets?
>
> thanks

4775. TM742 problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 12:45:19 UTC
From: cdr at pandora dot be <cdr@pandora.be>
Message-ID: <z7CP9.77687$Ti2.10693@afrodite.telenet-ops.be>
Source record: 39038
Cross-posted to: alt.nl.radio.zendamateur.gelicentieerd,nl.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

HI folks

I have a strange problem with my tm742 Kenwood tranceiver :

i cannot transmit and receive on any band , not on 2, not on 70, not on 23cm
if i puch the PTT it like it transmitting but no signal

a collegue advised to cheque the backup-battery. normaly it is 3 volt, i
measured 3.2 volts (seems normal i think)

who nows more????

Happy Newyear to you all !!!

73

4776. Re: TM742 problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 13:44:48 UTC
From: hans@remeeus.nl
Message-ID: <3e0efc2e$0$11527$7a0f4ed3@energis-news-env>
Source record: 39039
Cross-posted to: alt.nl.radio.zendamateur.gelicentieerd,nl.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

Hello CDR,

I did have exactly the same problem with my TM-742E, due to a short-circuit in the microphone connector. I think a (SMD) fuse has been blown. I did'nt fix the problem myself, but the local service outlet did; so I cannot help you with the exact sparenumber of the fuse. You may find this SMD-part in the Control Unit.

Don't hesitate to drop me an e-mail if you have any further questions about this problem.

Good luck and happy 2003 to you too!

--

73 (���), Hans PA1HR
www.remeeus.nl, www.qsl.net/pa1hr

"cdr at pandora dot be" <cdr@pandora.be> schreef in bericht
news:z7CP9.77687$Ti2.10693@afrodite.telenet-ops.be...
> HI folks
>
> I have a strange problem with my tm742 Kenwood tranceiver :
>
> i cannot transmit and receive on any band , not on 2, not on 70, not on
23cm
> if i puch the PTT it like it transmitting but no signal
>
> a collegue advised to cheque the backup-battery. normaly it is 3 volt, i
> measured 3.2 volts (seems normal i think)
>
> who nows more????
>
> Happy Newyear to you all !!!
>
> 73

4777. Re: TM742 problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 14:10:00 UTC
From: Ronad Sato <Sato@keinspam-mora.de>
Message-ID: <YmDP9.1935$Qt4.277735@nlnews00.chello.com>
Source record: 39040
Cross-posted to: alt.nl.radio.zendamateur.gelicentieerd,nl.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

En ik maar denken dat ze in Belgie Nederlands op school kregen ;-)

"cdr at pandora dot be" <cdr@pandora.be> schreef in bericht
news:z7CP9.77687$Ti2.10693@afrodite.telenet-ops.be...
> HI folks
>
> I have a strange problem with my tm742 Kenwood tranceiver :
>
> i cannot transmit and receive on any band , not on 2, not on 70, not on
23cm
> if i puch the PTT it like it transmitting but no signal
>
> a collegue advised to cheque the backup-battery. normaly it is 3 volt, i
> measured 3.2 volts (seems normal i think)
>
> who nows more????
>
> Happy Newyear to you all !!!
>
> 73
>
>
>

4778. Re: AM Stereo and ECSS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 14:52:42 UTC
From: Doug Smith <me@invalid.invalid>
Message-ID: <3E0F0C3A.9084BB91@invalid.invalid>
Source record: 39041

David Findlay wrote:
> I'm planning an AM broadcast band reciever, with the purpose of DXing very
> distant stations. I'd like to have a few modes one of which is AM stereo
> and Exulted carried sideband select. Anyone know of some documentation on
> how the various AM stereo systems work and can be demodulated? Secondly
> does anyone know how you can use the carrier and one sideband or only one
> sideband to pick up the station? The purpose of this is to dig out weak
> signals from more powerful local ones. Thanks,

FWIW there is now only one AM stereo system in use. (the Motorola
system)

Not that I can tell you how it works. Someone was offering decoder
chips for sale a few weeks back, I can't remember where.
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://www.w9wi.com

4779. Re: Obtaining SPICE model paramters

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 15:01:05 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.co.uk>
Message-ID: <mx7fVNCx4wD+EAuq@ifwtech.co.uk>
Source record: 39044

Roy Lewallen wrote:

>A search of the manufacturer's web site for "SPICE" should get you to
>the right spot.

On-site search engines are sometimes pretty dumb, and may not find
things that you know darn well are there.

If you have problems, try using a much smarter search engine like
www.google.com/advanced_search

In "With all of the words", enter SPICE (Google ignores capitalization).
In "Domain", enter the site you want to search, eg manufacturer.com
Now click "Google Search", and if it's anywhere on that site, Google
will probably find it.

Unfortunately, not all sites will have SPICE data. If the manufacturer
provides SPICE files, you'd naturally expect the data to be accurate...
but that takes effort, time, and money. For complex devices at high
frequencies, it can become so difficult that even the device
manufacturers don't know exactly how to do it - they subcontract the job
to specialist companies. Having spent all that money, they may not feel
like giving the information away for free.

So, as others have said, if it's a very simple device you'll probably
have to edit a default SPICE file yourself. Also look for similar
alternative devices, and see if you can find files for them instead.

Don't worry if you have to make a few blind guesses, because eventually
you ought to check the effects of changing any of the major device
parameters. If your circuit is very sensitive to component values and
device parameters, then maybe you need to improve the design and make it
more tolerant.

The more tolerant your design is, the less you need to worry about
accurate modelling, and the better it's likely to work in real life.

--
73 from Ian G3SEK 'In Practice' columnist for RadCom (RSGB)
Editor, 'The VHF/UHF DX Book'
http://www.ifwtech.co.uk/g3sek

4780. Re: Stuff I want to get rid of

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 15:42:48 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2912021044360001@c-66-176-144-254.se.client2.attbi.com>
Source record: 39042

In article <3E0DB335.5EDCB2DA@ieee.org>, dan.stanger@ieee.org wrote:

> I have about 14 lbs of RG 108 A/U coax,
> 2 Raytheon thermal relays gh 2392 12e in boxes from 1951,1952
> 1 bomac bl 650, it looks like a waveguide terminator?
> hp 1422A timebase quantity 2, have calibration tags on them.
> hp 1400A diff amps quantity 2, have calibration tags on them.
>
> will take a offer enough to
> get me to pack it and ship it + shipping from Denver, CO.
> dan.stanger@ieee.org

Did you put this offer up on the boat anchors newsgroup? :-) Actually,
it's not a bad idea to do so.

Steve

4781. Re: Troubleshooting Simple VHF-AM Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 15:46:52 UTC
From: motsteve@attbi.com
Message-ID: <motsteve-2912021048330001@c-66-176-144-254.se.client2.attbi.com>
Source record: 39043

In article <rubs0v0h6lr89nhartc91i9so80n2ac7rc@4ax.com>,
pb@notthisbit.osiris1.co.uk wrote:

> On 25 Dec 2002 05:02:54 GMT, et472@FreeNet.Carleton.CA (Michael Black)
> opined thusly:
>
> >People got by with a lot of ingenuity in the past, and
> >a simple receiver can be checked out with similarly simple bits of
> >circuitry.
>
> I once knew a totally blind guy who did radio repairs for a living. He
> developed all sorts of other clues as to where a circuit was going
> wrong. Quite remarkable. Another chap I knew (sighted) had *no*
> knowledge of radio whatever but still had an intuitive grasp of how to
> build and repair them. Seems to be an inexplicable and very rare gift
> in just a few people, though.

Troubleshooting is booth an art and a science. A good troubleshooter is
well balanced here.

Say hi to my relatives in Ottawa.

Steve Carlton WB4CZR

4782. Re: Iambic paddles?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 17:45:38 UTC
From: bjorn890@aol.com57304573
Message-ID: <20021229124538.28406.00000374@mb-fv.aol.com>
Source record: 39045

While it is not an iambic pattle system, you could use an old computer mouse. Remove the ball, strip the cord and use a continuity tester to see which wire goes to which microswitch. Then apply those wires to the keyer and use the remaining wire to form the keying system line.

There is plenty of DOS left in Windows, just make a boot disk!
Bjorn890

4783. Re: AM Stereo and ECSS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 17:51:44 UTC
From: bjorn890@aol.com57304573
Message-ID: <20021229125144.28406.00000375@mb-fv.aol.com>
Source record: 39046

You could build a filtering circuit with inductance coils to pull out stations in your proposed way but they would have to be operating companded sidenband, which is highly unlikey. Companded sideband is almost never used in the broadcast world because of the filtering requirements. BTW Companded sideband is when a station trasnmits both sidebands but no carrier. The carrier must be placed back in, in the reciveing stage with a filter.

There is plenty of DOS left in Windows, just make a boot disk!
Bjorn890

4784. Re: amplifier schematic help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 18:39:44 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E0F4170.F6D7C967@northwest.com>
Source record: 38947

That's one way to do it. If Q1 and Q2 are matched (to 1% ?), this can be so.

A better way is to measure the actual collector current of Q1 and Q2, and adjust their individual base drive (idle) currents for equality. However, the AC gains of Q1 and Q2 are not exact, nor are T1 and T2 perfectly balanced, so measuring idle DC (standby) current is only a rough approximation.
==========
Mario wrote:

> L Caracciolo <larryc@northwest.com> wrote in
> news:3E0DD78D.E8E1A7A0@northwest.com:
>
> > hi, mario. remember, the bias point (drive current) for q3/q4 sets the
> > output current drive for q1/q2. not quite the same beast as grid
> > voltage for a tube.
> >
> > we're looking at currents here, not voltage. you could work backwards,
> > knowing a basic Vbe is about 0.6volt. using kirchoff's voltage laws,
> > and make a rough estimate of what current values are involved.
> > ======
>
> Larry,
>
> Actually what i meant was to measure the voltage across R2. This gives you
> the current through R2. So, this will allow you to calculate more or less
> the other currents.. Couldn't you assume that half of this 'R2-current'goes
> more or less to each push pull transistor ?
>
> M.

4785. Re: amplifier schematic help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 18:46:10 UTC
From: Mario <nospam@nospam.com>
Message-ID: <SpHP9.78405$Ti2.10977@afrodite.telenet-ops.be>
Source record: 38948

L Caracciolo <larryc@northwest.com> wrote in
news:3E0F4170.F6D7C967@northwest.com:

> That's one way to do it. If Q1 and Q2 are matched (to 1% ?), this can
> be so.
>
> A better way is to measure the actual collector current of Q1 and Q2,
> and adjust their individual base drive (idle) currents for equality.
> However, the AC gains of Q1 and Q2 are not exact, nor are T1 and T2
> perfectly balanced, so measuring idle DC (standby) current is only a
> rough approximation. ========================

Larry,

Although replying through email would be easier, I think it's better to continue the analysis here, so that other people can learn something as well.

Actually the biggest problem I have with the circuit, is that I don't know anything about the final transistors. They are both PT9790, made by Motorola about 20 years ago, but I never found any datasheets on these 'exotic' transistors. I found out that R2 is getting rather hot, even when not transmitting, so I assume the bias is way too high. I'd like to find a good way to bias the transistors. To do this I have to understand the bias circuit 100%. I have some kind of a manual from this thing, but it only says : set the quiescent current to 300 mA. Is this 300mA the current going through each transistor ? Or is this 300mA the total current through Q1 and Q2 ? Or maybe the total current of the entire module. I haven't got any clue. This is what keeps my busy these days :-)

Maybe the PT9790 does ring a bell on your end ?

Mario.

4786. Re: amplifier schematic help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 18:54:35 UTC
From: Mario <nospam@nospam.com>
Message-ID: <LxHP9.78416$Ti2.11060@afrodite.telenet-ops.be>
Source record: 38949

L Caracciolo <larryc@northwest.com> wrote in
news:3E0F4170.F6D7C967@northwest.com:

> That's one way to do it. If Q1 and Q2 are matched (to 1% ?), this can
> be so.
>
> A better way is to measure the actual collector current of Q1 and Q2,
> and adjust their individual base drive (idle) currents for equality.
> However, the AC gains of Q1 and Q2 are not exact, nor are T1 and T2
> perfectly balanced, so measuring idle DC (standby) current is only a
> rough approximation. ========================
> Mario wrote:
>
>> L Caracciolo <larryc@northwest.com> wrote in
>> news:3E0DD78D.E8E1A7A0@northwest.com:
>>
>> > hi, mario. remember, the bias point (drive current) for q3/q4 sets
>> > the output current drive for q1/q2. not quite the same beast as
>> > grid voltage for a tube.
>> >
>> > we're looking at currents here, not voltage. you could work
>> > backwards, knowing a basic Vbe is about 0.6volt. using kirchoff's
>> > voltage laws, and make a rough estimate of what current values are
>> > involved. ======
>>
>> Larry,
>>
>> Actually what i meant was to measure the voltage across R2. This
>> gives you the current through R2. So, this will allow you to
>> calculate more or less the other currents.. Couldn't you assume that
>> half of this 'R2-current'goes more or less to each push pull
>> transistor ?
>>
>> M.
>

Larry, check your MSN mail, i tried to add you in my messenger...

4787. Re: amplifier schematic help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 19:15:01 UTC
From: "G. Beat" <gregory.beat.nospam@spam.attbi.com>
Message-ID: <VQHP9.352022$pN3.27687@sccrnsc03>
Source record: 38950

"Mario" <nospam@nospam.com> wrote in message
news:SpHP9.78405$Ti2.10977@afrodite.telenet-ops.be...
> L Caracciolo <larryc@northwest.com> wrote in
> news:3E0F4170.F6D7C967@northwest.com:
>
> > That's one way to do it. If Q1 and Q2 are matched (to 1% ?), this can
> > be so.
> >
> > A better way is to measure the actual collector current of Q1 and Q2,
> > and adjust their individual base drive (idle) currents for equality.
> > However, the AC gains of Q1 and Q2 are not exact, nor are T1 and T2
> > perfectly balanced, so measuring idle DC (standby) current is only a
> > rough approximation. ========================
>
> Larry,
>
>
> Actually the biggest problem I have with the circuit, is that I don't
> know anything about the final transistors. They are both PT9790, made by
> Motorola about 20 years ago, but I never found any datasheets on these
> 'exotic' transistors. I found out that R2 is getting rather hot, even
> when not transmitting, so I assume the bias is way too high. I'd like to
> find a good way to bias the transistors. To do this I have to understand
> the bias circuit 100%. I have some kind of a manual from this thing, but
> it only says : set the quiescent current to 300 mA. Is this 300mA the
> current going through each transistor ? Or is this 300mA the total
> current through Q1 and Q2 ? Or maybe the total current of the entire
> module. I haven't got any clue. This is what keeps my busy these days :-)
>
> Maybe the PT9790 does ring a bell on your end ?
>
> Mario.

Mario -

Yes. The PT9790 transistor was used in Transworld RF amplifiers,
that I saw in a number of surplus units 6 to 7 years ago.
http://www.lxoindustries.com/rftransistors/

A German firm at one time had the specification sheets, but when I talked to
RF Parts,
as that time, Merit (W6NQ - I believe), advised me to use the MRF429 spec
sheet.
http://www.s-direktnet.de/homepages/sangmeister/daten/attent.htm

The MRF429 is usually the equivalent substitute. [Uses a .500 flange]
You MUST replace these transistors in pairs.
RF Parts does sell matched pairs (MP)
http://www.rfparts.com/mototran.html

The temperature rise of the terminating resistor of the associated port in the output coupler will
usually tell you how well the current pair of transistors are matched.

Hope that helps.

Greg
W9GB

4788. Re: CW filter, kW amp, Spkr/patch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 19:43:16 UTC
From: "Edward L. Dowdy" <ellhatespamdowdy@ctscomp.com>
Message-ID: <ofIP9.374132$GR5.111470@rwcrnsc51.ops.asp.att.net>
Source record: 38951
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

When did this become a binaries group?

73,
Ed KA9EES

"Bob" <balbert@cnmnetwork.com> wrote in message
news:BHqdnd9CYL8kV5CjXTWcog@cnmnetwork.com...
> 1. Kenwood YK-88C-1 500 Hz CW filter for many Kenwood rigs. $75 shipped
to
> lower 48.
>
> 2. Yaesu SP-101PB speaker/phone patch with original manual. $70 plus
> shipping, or trade for something.
>
> 3. HF amplifier project. Four 572B tubes, legal limit amplifier. 10-80
> meters. Originally was Gonset GSB-101 but modified with higher voltage
> transformer (Triad) and higher power tubes. Have original manual. Needs
> filter capacitors installed; all the parts are included. Make offer; I
> don't want to ship this. I live in the Los Angeles area.
>
> 73, Bob K6DDX
>
>
>

4789. Re: amplifier schematic help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 20:30:02 UTC
From: Mario <nospam@nospam.com>
Message-ID: <eXIP9.78619$Ti2.11076@afrodite.telenet-ops.be>
Source record: 38952

"G. Beat" <gregory.beat.nospam@spam.attbi.com> wrote in
news:VQHP9.352022$pN3.27687@sccrnsc03:

>
> "Mario" <nospam@nospam.com> wrote in message
> news:SpHP9.78405$Ti2.10977@afrodite.telenet-ops.be...
>> L Caracciolo <larryc@northwest.com> wrote in
>> news:3E0F4170.F6D7C967@northwest.com:
>>
>> > That's one way to do it. If Q1 and Q2 are matched (to 1% ?), this
>> > can be so.
>> >
>> > A better way is to measure the actual collector current of Q1 and
>> > Q2, and adjust their individual base drive (idle) currents for
>> > equality. However, the AC gains of Q1 and Q2 are not exact, nor are
>> > T1 and T2 perfectly balanced, so measuring idle DC (standby)
>> > current is only a rough approximation. ========================
>>
>> Larry,
>>
>>
>> Actually the biggest problem I have with the circuit, is that I don't
>> know anything about the final transistors. They are both PT9790, made
>> by Motorola about 20 years ago, but I never found any datasheets on
>> these 'exotic' transistors. I found out that R2 is getting rather
>> hot, even when not transmitting, so I assume the bias is way too
>> high. I'd like to find a good way to bias the transistors. To do this
>> I have to understand the bias circuit 100%. I have some kind of a
>> manual from this thing, but it only says : set the quiescent current
>> to 300 mA. Is this 300mA the current going through each transistor ?
>> Or is this 300mA the total current through Q1 and Q2 ? Or maybe the
>> total current of the entire module. I haven't got any clue. This is
>> what keeps my busy these days :-)
>>
>> Maybe the PT9790 does ring a bell on your end ?
>>
>> Mario.
>
> Mario -
>
> Yes. The PT9790 transistor was used in Transworld RF amplifiers,
> that I saw in a number of surplus units 6 to 7 years ago.
> http://www.lxoindustries.com/rftransistors/
>

> A German firm at one time had the specification sheets, but when I
> talked to RF Parts,
> as that time, Merit (W6NQ - I believe), advised me to use the MRF429
> spec sheet.
> http://www.s-direktnet.de/homepages/sangmeister/daten/attent.htm
>
> The MRF429 is usually the equivalent substitute. [Uses a .500 flange]
> You MUST replace these transistors in pairs.
> RF Parts does sell matched pairs (MP)
> http://www.rfparts.com/mototran.html
>
> The temperature rise of the terminating resistor of the associated
> port in the output coupler will
> usually tell you how well the current pair of transistors are matched.
>
> Hope that helps.
>
> Greg
> W9GB
>
>
Greg,

Thanks for the reply.
The MRF429 is a good substitute. So the quiescent current should be more
or less similar ?

4790. Re: CW filter, kW amp, Spkr/patch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 22:48:30 UTC
From: Chuck/KE4ETH <chuck_hawks@hotmailNOSPAMORAMA.com>
Message-ID: <V1QP9.2189$us1.1164@news.bellsouth.net>
Source record: 38961
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

ould be worse. The Speaker could have had its top off.
:)>

--
73,
Chuck
KE4ETH
USA-NA
Remove the obvious from Email.

"Edward L. Dowdy" <elIhatespamdowdy@ctscomp.com> wrote in message
news:ofIP9.374132$GR5.111470@rwcrnsc51.ops.asp.att.net...
> When did this become a binaries group?
>
> 73,
> Ed KA9EES
>
> "Bob" <balbert@cnmnetwork.com> wrote in message
> news:BHqdnd9CYL8kV5CjXTWcog@cnmnetwork.com...
> > 1. Kenwood YK-88C-1 500 Hz CW filter for many Kenwood rigs. $75 shipped
> to
> > lower 48.
> >
> > 2. Yaesu SP-101PB speaker/phone patch with original manual. $70 plus
> > shipping, or trade for something.
> >
> > 3. HF amplifier project. Four 572B tubes, legal limit amplifier.
10-80
> > meters. Originally was Gonset GSB-101 but modified with higher voltage
> > transformer (Triad) and higher power tubes. Have original manual.
Needs
> > filter capacitors installed; all the parts are included. Make offer; I
> > don't want to ship this. I live in the Los Angeles area.
> >
> > 73, Bob K6DDX
> >
> >
> >
>
>

4791. Re: amplifier schematic help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-29 23:28:24 UTC
From: "G. Beat" <gregory.beat.nospam@spam.attbi.com>
Message-ID: <syLP9.158529$qF3.11824@sccrnsc04>
Source record: 38953

```
Yes
"Mario" <nospam@nospam.com> wrote in message
news:eXIP9.78619$Ti2.11076@afrodite.telenet-ops.be...
> "G. Beat" <gregory.beat.nospam@spam.attbi.com> wrote in
> news:VQHP9.352022$pN3.27687@sccrnsc03:
>
> >
> > "Mario" <nospam@nospam.com> wrote in message
> > news:SpHP9.78405$Ti2.10977@afrodite.telenet-ops.be...
> >> L Caracciolo <larryc@northwest.com> wrote in
> >> news:3E0F4170.F6D7C967@northwest.com:
> >>
> >> > That's one way to do it. If Q1 and Q2 are matched (to 1% ?), this
> >> > can be so.
> >> >
> >> > A better way is to measure the actual collector current of Q1 and
> >> > Q2, and adjust their individual base drive (idle) currents for
> >> > equality. However, the AC gains of Q1 and Q2 are not exact, nor are
> >> > T1 and T2 perfectly balanced, so measuring idle DC (standby)
> >> > current is only a rough approximation. ========================
> >>
> >> Larry,
> >>
> >>
> >> Actually the biggest problem I have with the circuit, is that I don't
> >> know anything about the final transistors. They are both PT9790, made
> >> by Motorola about 20 years ago, but I never found any datasheets on
> >> these 'exotic' transistors. I found out that R2 is getting rather
> >> hot, even when not transmitting, so I assume the bias is way too
> >> high. I'd like to find a good way to bias the transistors. To do this
> >> I have to understand the bias circuit 100%. I have some kind of a
> >> manual from this thing, but it only says : set the quiescent current
> >> to 300 mA. Is this 300mA the current going through each transistor ?
> >> Or is this 300mA the total current through Q1 and Q2 ? Or maybe the
> >> total current of the entire module. I haven't got any clue. This is
> >> what keeps my busy these days :-)
> >>
> >> Maybe the PT9790 does ring a bell on your end ?
> >>
> >> Mario.
> >
> > Mario -
> >
> > Yes. The PT9790 transistor was used in Transworld RF amplifiers,
```

> > that I saw in a number of surplus units 6 to 7 years ago.
> > http://www.lxoindustries.com/rftransistors/
> >
> > A German firm at one time had the specification sheets, but when I
> > talked to RF Parts,
> > as that time, Merit (W6NQ - I believe), advised me to use the MRF429
> > spec sheet.
> > http://www.s-direktnet.de/homepages/sangmeister/daten/attent.htm
> >
> > The MRF429 is usually the equivalent substitute. [Uses a .500 flange]
> > You MUST replace these transistors in pairs.
> > RF Parts does sell matched pairs (MP)
> > http://www.rfparts.com/mototran.html
> >
> > The temperature rise of the terminating resistor of the associated
> > port in the output coupler will
> > usually tell you how well the current pair of transistors are matched.
> >
> > Hope that helps.
> >
> > Greg
> > W9GB
> >
> >
> Greg,
>
> Thanks for the reply.
> The MRF429 is a good substitute. So the quiescent current should be more
> or less similar ?
>

4792. Oak Hills qrp

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 00:42:43 UTC
From: Adam 9A4QV <alicajic.adam@pu.hinet.hr>
Message-ID: <auo4nl$f7c7$1@as201.hinet.hr>
Source record: 38954

Hello,
Does anybody have the electronic diagram of the Oak Hills qrp (20mtrs), CW.
It is the older version of the qrp, not the latest. I bought the qrp without
the diagram, RIT is out of order and tx/rx frequency is off set. Please mail
me the diagram.
Thanks in advance.
Adam, 9a4qv

4793. Need schematic for Diamond SX-1000 watt/swr meter!

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 01:37:22 UTC
From: Tony <nospam@shoveit.com>
Message-ID: <mrNP9.60899$6H6.2431077@twister.austin.rr.com>
Source record: 38955

Need schematic for SX-1000 or at least the HF sensor!

Let me know.

--
Sign up for Paypal and make me $5.00

https://www.paypal.com/refer/pal=WHRP8XHRMLSX4

4794. Re: WORD97 disks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 03:17:32 UTC
From: la8ak.xnd@online.no
Message-ID: <3e0e40b1.37561809@news.online.no>
Source record: 38956

On Sat, 28 Dec 2002 08:23:43 -0800, Bruce Lane
<SpammersAreVermin@dev.nul> wrote:

>In article <USednV1WbOBjLJCjXTWcow@comcast.com>, jdwalton@comcast.net
>says...
>
> <snip>
>
>> I wish WordPerfect hadn't faltered so badly.
>
> Faltered? Maybe. Failed? No way. I still use WP. Have been since
>DOS ver. 5.1, and I've got not the slightest intention of switching.
>
> I don't care who makes it. At its core feature set, WP still runs
>rings around Office for technical writing.
>
> But, then again, that's a whole 'nother story. I'll not let the
>topic drift get any further than that on my part.
>
only problem is that I must keep my a PC running with win95, because
word97 won't open all my WP51 files, and still another PC to run old
dos programs

Don't dare to think about win2000 or office2000

73
LA8AK
--
remove ,xnd to reply

4795. Re: WORD97 disks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 03:59:23 UTC
From: Idontwantspam@net
Message-ID: <3e0fc426.26741602@news.bellatlantic.net>
Source record: 38957

On Mon, 30 Dec 2002 03:17:32 GMT, la8ak.xnd@online.no (J M Noeding)
wrote:

>only problem is that I must keep my a PC running with win95, because
>word97 won't open all my WP51 files, and still another PC to run old
>dos programs
>
>Don't dare to think about win2000 or office2000
>
If you search through the Microsoft site, you will find a number of
add-on features for Microsoft Office, include the ability to read
additional file formats.

This may not solve everything, but it may reduce how many systems you
need.

Happy trails,
Gary (net.yogi.bear)
---
at the 51st percentile of ursine intelligence

Gary D. Schwartz, Needham, MA, USA
Please reply to: garyDOTschwartzATpoboxDOTcom

4796. Re: AM Stereo and ECSS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 04:26:21 UTC
From: David Findlay <david@davsoft.com.au>
Message-ID: <NVPP9.9606$aV5.24163@news-server.bigpond.net.au>
Source record: 38958

Bjorn890 wrote:
> You could build a filtering circuit with inductance coils to pull out
> stations in your proposed way but they would have to be operating
> companded sidenband, which is highly unlikey. Companded sideband is almost
> never used in the broadcast world because of the filtering requirements.
> BTW Companded sideband is when a station trasnmits both sidebands but no
> carrier. The carrier must be placed back in, in the reciveing stage with a
> filter.

Hmm. Someone told me about an old reciever that could use just a single sideband. It didn't matter if the station sent the carrier or not, it didn't use it in the special mode. I'll see if I can find anything more about it. Thanks,

David

--
BOFH excuse #116:

the real ttys became pseudo ttys and vice-versa.

4797. Anyone know what a black and white stripe on a diode means?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 04:39:15 UTC
From: Tony <nospam@shoveit.com>
Message-ID: <T5QP9.62029$6H6.2464019@twister.austin.rr.com>
Source record: 38959

Can't figure out what kind of diode this is??

Looks like a 1N914 but (glass and about the same size) BUT it has a BLACK
and WHITE line on it? LIKE THIS BELOW!

B W

```
_________
---| | | |---
----------------
```

Sign up for Paypal and make me $5.00

https://www.paypal.com/refer/pal=WHRP8XHRMLSX4

4798. Re: AM Stereo and ECSS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 04:39:58 UTC
From: David Findlay <david@davsoft.com.au>
Message-ID: <y6QP9.9635$aV5.23146@news-server.bigpond.net.au>
Source record: 38960

Bjorn890 wrote:
> You could build a filtering circuit with inductance coils to pull out
> stations in your proposed way but they would have to be operating
> companded sidenband, which is highly unlikey. Companded sideband is almost
> never used in the broadcast world because of the filtering requirements.
> BTW Companded sideband is when a station trasnmits both sidebands but no
> carrier. The carrier must be placed back in, in the reciveing stage with a
> filter. --

The mode I'm talking about is mentioned here
http://www.arrl.org/news/features/1998/1201/4/?nc=1 under AM Listening
Enhancements. Thanks,

David

--
BOFH excuse #69:

knot in cables caused data stream to become twisted and kinked

4799. Re: Anyone know what a black and white stripe on a diode means?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 05:31:16 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <ESQP9.9753$aV5.24700@news-server.bigpond.net.au>
Source record: 38962

Tony wrote:
> Can't figure out what kind of diode this is??
>
> Looks like a 1N914 but (glass and about the same size) BUT it has a
> BLACK and WHITE line on it? LIKE THIS BELOW!
>
> B W
> _________
> ---| | | |---
> ----------------
>

I'd hazard a guess and say that the stripes are the cathode end of the diode. Why not check it with a meter ?

Steve

4800. Re: Anyone know what a black and white stripe on a diode means?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 05:34:17 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <tVQP9.9760$aV5.24858@news-server.bigpond.net.au>
Source record: 38963

Steve Andrew wrote:
> Tony wrote:
>> Can't figure out what kind of diode this is??
>>
>> Looks like a 1N914 but (glass and about the same size) BUT it has a
>> BLACK and WHITE line on it? LIKE THIS BELOW!
>>
>> B W
>> _________
>> ---| | | |---
>> ----------------
>>
>
> I'd hazard a guess and say that the stripes are the cathode end of the
> diode. Why not check it with a meter ?
>
> Steve

Sorry Tony

I just re-read your post and realised you probably know that already and are just looking for the diode type.....Cannot help you there.

Steve

4801. PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 08:29:56 UTC
From: David Findlay <david@davsoft.com.au>
Message-ID: <8uTP9.10440$aV5.26750@news-server.bigpond.net.au>
Source record: 38964

I've seen PLL and DDS used to create signals for IF's and tuning. What are the pros and cons of the two systems? Are there single chips available for them suitable for use in recievers? I'm trying to design a versatile digital tuning module that I can use in my homebrew recievers and stuff.
Thanks,

David

--
BOFH excuse #327:

The POP server is out of Coke

4802. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 08:43:40 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <0HTP9.10500$aV5.26960@news-server.bigpond.net.au>
Source record: 38965

David Findlay wrote:
> I've seen PLL and DDS used to create signals for IF's and tuning.
> What are the pros and cons of the two systems? Are there single chips
> available for them suitable for use in recievers? I'm trying to
> design a versatile digital tuning module that I can use in my
> homebrew recievers and stuff. Thanks,
>
> David

A first stop might be
http://www.analog.com/UploadedFiles/Application_Notes/70863939AN557.pdf

It's an applications note for a ham VFO based on DDS. Includes circuits and
PCB layout plus very useful information regarding DDS. Analogue will provide
2 samples of the IC for free.

Also check http://www.analog.com/UploadedFiles/Application_Notes
for other app notes on DDS and PLLs

Steve

4803. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 08:45:36 UTC
From: Steve Andrew <sjandrew@bigpond.net.au>
Message-ID: <QITP9.10502$aV5.26590@news-server.bigpond.net.au>
Source record: 38966

Steve Andrew wrote:
> David Findlay wrote:
>> I've seen PLL and DDS used to create signals for IF's and tuning.
>> What are the pros and cons of the two systems? Are there single chips
>> available for them suitable for use in recievers? I'm trying to
>> design a versatile digital tuning module that I can use in my
>> homebrew recievers and stuff. Thanks,
>>
>> David
>
> A first stop might be
> http://www.analog.com/UploadedFiles/Application_Notes/70863939AN557.pdf
>
> It's an applications note for a ham VFO based on DDS. Includes
> circuits and PCB layout plus very useful information regarding DDS.
> Analogue will provide 2 samples of the IC for free.
>
> Also check http://www.analog.com/UploadedFiles/Application_Notes
> for other app notes on DDS and PLLs
>
> Steve

Sorry - Second link seems to be bust. try http://www.analog.com
and navigate to RF devices to see list of app notes.

4804. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 08:58:16 UTC
From: mike@corn2.freeserve.co.uk
Message-ID: <3e100a54.683914@news.freeserve.net>
Source record: 38967

On Mon, 30 Dec 2002 08:29:56 GMT, David Findlay <david@davsoft.com.au>
wrote:

>I've seen PLL and DDS used to create signals for IF's and tuning. What are
>the pros and cons of the two systems? Are there single chips available for
>them suitable for use in recievers? I'm trying to design a versatile
>digital tuning module that I can use in my homebrew recievers and stuff.
>Thanks,
>
David, take a look at
www.qsl.net/m3msm
and follow the links on the relevant page for other DDS's.
hth Mike W, G8NXD aka M3MSM

4805. Re: divide by 10 at 150 mhz

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 09:15:02 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <lgqv0v4b4n60mjeenepsd2u08nh6qphuls@4ax.com>
Source record: 38968

On 27 Dec 2002 14:03:37 -0800, gpatterson53@hotmail.com (gary) wrote:

>How does one prescale by 10 at 2 meter frequencies these days? I can
>no longer get my 95H90 or 11C90 chips (argghhh!). Any help?

If you can not find a suitable BCD counter from any common logic
family, you can always connect five master-slave flip-flops into a 5
stage Johnson counter, which should do the trick, provided that the
flip-flops works at 144 MHz.

Paul OH3LWR

4806. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 11:36:25 UTC
From: Richard <nearlynews_email@ntlworld.com>
Message-ID: <aupb27$96qsa$1@ID-150848.news.dfncis.de>
Source record: 38969

Maybe some of these might be intersting for you.

http://www.nitehawk.com/rasmit/dds50.html

http://www.njqrp.org/digitalhomebrewing/wb2v_dds_vfo/wb2v_dds_vfo.html

http://computel.slovanet.sk/~mokos/

http://www.minikits.com.au/kits4.html#eme85

http://www.circuitcellar.com/pastissues/articles/lacoste130/text.htm

http://www.g4gxo.cwc.net/new_page_5.htm

http://lea.hamradio.si/~s57nan/ham_radio/index.html

http://www.farcircuits.net/vfo2.htm#2vfo

http://members.iinet.net.au/~richardh/VK6BRO.htm

http://www.qsl.net/m3msm/dds/dds.htm

http://www.qsl.net/zl1bpu/FUZZY/Beacon/ddsvfo.html

http://www.analog.com/UploadedFiles/Application_Notes/70863939AN557.pdf

4807. Re: TM742 problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 16:01:48 UTC
From: Itsme <antwoord_mij@hotmail.com>
Message-ID: <3e106de4$0$29637$ba620e4c@news.skynet.be>
Source record: 38971
Cross-posted to: alt.nl.radio.zendamateur.gelicentieerd,nl.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

Moeten we blijven opvolgen: Een Nederlander die begint te "denken" !!!

hahaha, sorry kon het even niet laten - een Belgische amateur
73 de on7jq

"Ronad Sato" <Sato@keinspam-mora.de> schreef in bericht
news:YmDP9.1935$Qt4.277735@nlnews00.chello.com...
> En ik maar denken dat ze in Belgie Nederlands op school kregen ;-)
>
> "cdr at pandora dot be" <cdr@pandora.be> schreef in bericht
> news:z7CP9.77687$Ti2.10693@afrodite.telenet-ops.be...
> > HI folks
> >
> > I have a strange problem with my tm742 Kenwood tranceiver :
> >
> > i cannot transmit and receive on any band , not on 2, not on 70, not on
> 23cm
> > if i puch the PTT it like it transmitting but no signal
> >
> > a collegue advised to cheque the backup-battery. normaly it is 3 volt, i
> > measured 3.2 volts (seems normal i think)
> >
> > who nows more????
> >
> > Happy Newyear to you all !!!
> >
> > 73
> >
> >
> >
>
>

4808. Re: CW filter, kW amp, Spkr/patch

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 16:45:48 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <dlidnd8an9okT42jXTWc2Q@cnmnetwork.com>
Source record: 38982
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew,rec.radio.swap

Sorry, in my ignorance I posted a couple of pictures. I'll try to remember not to do it again.

73, Bob

4809. Re: AM Stereo and ECSS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 17:14:16 UTC
From: "Sverre Holm (LA3ZA)" <0junk4me@qsl.net>
Message-ID: <L9%P9.5223$CG6.93549@news4.e.nsc.no>
Source record: 38970

ECSS means "exalted carrier, selectable sideband" and seems to be the same
as synchronous AM detection. It comes in the better receivers these days, or
you could get a kit: http://www.qsl.net/wd8das/syncinfo.txt

or buy the detector separately (very expensive!):
http://www.sherweng.com/indepth.html

Sverre
LA3ZA
www.qsl.net/la3za

"David Findlay" <david@davsoft.com.au> wrote in message
news:y6QP9.9635$aV5.23146@news-server.bigpond.net.au...
> The mode I'm talking about is mentioned here
> http://www.arrl.org/news/features/1998/1201/4/?nc=1 under AM Listening
> Enhancements. Thanks,
>
> David
>

4810. Re: TM742 problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 18:12:31 UTC
From: Ronald Sato <sato@-keinspam-mora.de>
Message-ID: <j00Q9.667038$e%3.26651909@Flipper>
Source record: 38972
Cross-posted to: alt.nl.radio.zendamateur.gelicentieerd,nl.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

```
Ja dom van me he dat ik dacht dat ze in Belgie een fatsoenlijk talenpakket
met Nederlands erin hadden op belgische scholen ;-)

"Itsme" <antwoord_mij@hotmail.com> schreef in bericht
news:3e106de4$0$29637$ba620e4c@news.skynet.be...
> Moeten we blijven opvolgen: Een Nederlander die begint te "denken" !!!
>
> hahaha, sorry kon het even niet laten - een Belgische amateur
> 73 de on7jq
>
> "Ronad Sato" <Sato@keinspam-mora.de> schreef in bericht
> news:YmDP9.1935$Qt4.277735@nlnews00.chello.com...
> > En ik maar denken dat ze in Belgie Nederlands op school kregen ;-)
> >
> > "cdr at pandora dot be" <cdr@pandora.be> schreef in bericht
> > news:z7CP9.77687$Ti2.10693@afrodite.telenet-ops.be...
> > > HI folks
> > >
> > > I have a strange problem with my tm742 Kenwood tranceiver :
> > >
> > > i cannot transmit and receive on any band , not on 2, not on 70, not
on
> > 23cm
> > > if i puch the PTT it like it transmitting but no signal
> > >
> > > a collegue advised to cheque the backup-battery. normaly it is 3 volt,
i
> > > measured 3.2 volts (seems normal i think)
> > >
> > > who nows more????
> > >
> > > Happy Newyear to you all !!!
> > >
> > > 73
> > >
> > >
> > >
> >
> >
>
>
```

4811. Re: Diplexer improvements (was Re: First mixer in Drake R7/TR7?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 18:29:09 UTC
From: Kevin <rfman@xtra.co.nz>
Message-ID: <3E109075.F38C8499@xtra.co.nz>
Source record: 38973

Hi,
I did some work on simple mixer terminations on a High IF Milspec HF radio some years ago by adding simple series C and R terminations to ground on all ports (R= 50 ohms & Xc= ~200 ohms at used frequency eg IF,RF,LO).
These would terminate the higher frequency harmonic and mixing products. Just
one these terminations on one of the ports (cant remember which)improved the
Intermod performance(IP3) by 10 dB over part of the HF band. However adding all of them broadbanded it across the whole of the HF band.

The simple termination would probably loose a db or so but would be offset by improved mixer performance due to mixer termination. The mixer had filters on all ports.
Mixer terminations need to be done right at the ports as the performance degradation as one moves away through other components can be significant.
(IF components like 10 nF capacitors in series may effect the termination.
Learnt that on my 432 MHz transverter)

DC offset (due to diode balance or mixing products) can also be a factor and if the IF port is used as the IF port some designs have a choke to ground additionally.

Kevin
ZL1UJG

4812. Re: TM742 problem

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 19:02:49 UTC
From: la8ak.xnd@online.no
Message-ID: <3e10862d.52401683@news.online.no>
Source record: 38974
Cross-posted to: alt.nl.radio.zendamateur.gelicentieerd,nl.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,uk.radio.amateur

On Mon, 30 Dec 2002 17:01:48 +0100, "Itsme" <antwoord_mij@hotmail.com>
wrote:

>Moeten we blijven opvolgen: Een Nederlander die begint te "denken" !!!
>
>hahaha, sorry kon het even niet laten - een Belgische amateur
> 73 de on7jq
>
Just waiting for some Swedes to join the group...., it is almost the
same relation between PA/ON as LA/SM

--
remove ,xnd to reply

4813. need help understanding regen for class project

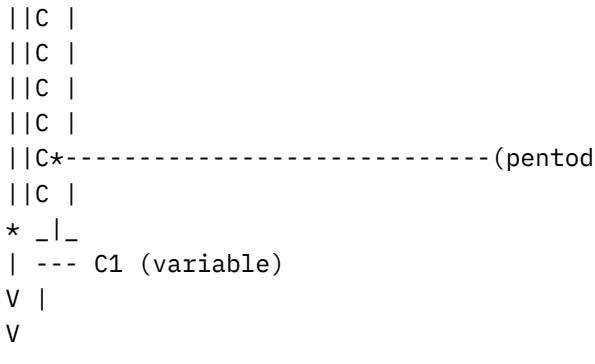
Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 19:21:31 UTC
From: Ross <rjtucke@asu.edu>
Message-ID: <rjtucke-858274.12235230122002@news.west.cox.net>
Source record: 38975

This is my first post on rec.radio.amateur.homebrew and my second usenet post in my life. I've been licensed for a few years and in my undergraduate Physics curriculum this past semester, I successfully built "A 40-Meter Regenerative Receiver You Can Build" (By David Newkirk, then WJ1Z, published in _QRP Power_ and /QST/, September 1992, page 35). (This was an extra credit project, obviously.) The circuit uses two 6GH8A triode/pentode tubes in a circuit decended from George Grammer ("Rationalizing the Autodyne," QST Jan 1933 page 11-16, 23). With the names I've seen on this group and the high level of electronics radio magic you all work, I know I am asking a lot to brazenly barge in with my youthful ignorance, but I assure you that my respect and honor are commensurate with my obvious impertinance.

Now I have been able to analyze the AF stages (triodes) in a complete mathematical description (with very few simplifications) and have developed an Excel simulation that works (I _think_!) But I am really completely STUCK on the detector for two big reasons.
One is that I've only ever been able to find big ugly models for the pentode (for use in SPICE simulation). And I'm not exactly sure how to even fit these to my tubes (6GH8A's), though I do have plenty of data sheets.
Two is that I don't get the detector circuit.

I know I don't have a big probability of getting any replies because I don't have a scanner to show you the schematic- the intersections of the sets of people who can and would help me and the set of people who have QRP Power/QST1992 is probably not too huge. So let me make an attempt to ASCII-art the thing a bit ("and in the process irritating EVERYBODY who would help away with my verbosity" says my cynical side)
Values:
Inductor ("L1") is "about 1.7 mmH", 19 turns on T68-6 tapped at 1 turn above ground (to the pentode's cathode). (there is also a fine-tuning cap at another tap-- omitted for simplicity)
Tuning cap ("C1") ranges from 180-280 pF.
Grid leak resistor ("R1") is 1M.
Grid leak capacitor ("C2") is 100 pF, NP0.
There's also a 1 pF, NP0 feeding from the prev stage.

```
C2
----| |-----
Input | |
| | |
|-----*--------*--/\/\/\--*---(pentode grid)
* | R1
L1 ||C |
```



Of course, the V symbolizes ground, and * is connection

The regeneration circuit feeds into the screen grid- I don't see a feedback path, though. I think it simply adjusts the DC voltage! If anybody requests it, I will ASCII-ify it (very simple), but as mentioned, I suspect I'm WAAAY long winded anyway.

The output comes off the plate with an LC low pass filter to dump RF to ground and let AF through. I'm fine with this part.

The input (before the 1pF NP0 cap) is from the RF stage plate (of course), but there is one interesting thing. The plate supply has (looking from B+ rail) a bias resistor, a massive bypass cap, alarger bias resistor, a smaller bypass cap, and an RFC. I mention this because at 7 MHz, the reactance of the RFC is equal to that of the 1pF NP0 cap to the next stage (detector tuned circuit). The bypass cap on the B+ side of the RFC has low reactance, and so I see that the incoming signal sees equal reactances to ground (through RFC in plate supply) and the detector (through cap). And the tank circuit is after my cap, so isn't this essentially dumping half the useful output of the RF amp to ground through that RFC?!?

Now finally, I gather that this is a grid-leak detector with a Hartley oscillator, but HOW DO I ANALYZE IT?

Again, I'm VERY sorry about the length of all this. Many many many thanks for putting up with me and (hopefully) offering any ideas. I really appreciate your consideration.

Most sincerely,
Ross

4814. Re: WORD97 disks

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 19:52:29 UTC
From: Duncan Clark <NEWS@[127.0.0.1]>
Message-ID: <sBqNQVD9PKE+Ewk5@ntlworld.com>
Source record: 38976

In message <30qr0v0jrbjf0m96uup3vuiq4djop41qei@4ax.com>, Crusty
Curmudgeon <crusty@wyenot.dot.servebeer.dot.com> writes
>You might want to try OpenOffice - it's free
>http://www.openoffice.org/
>
>Seems to open W97 doc files ok.

I run one work machine with Office 2000 and umpteen others with Open
Office. Works fine under Win2K. We came to the conclusion that MSOffice
is way overkill for the standard WP and Excel files that we use.

Duncan
--
Support bacteria. They are the only culture some people have.

Duncan Clark

4815. Re: need help understanding regen for class project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 21:02:03 UTC
From: Ross <rjtucke@asu.edu>
Message-ID: <rjtucke-9BA896.14042130122002@news.west.cox.net>
Source record: 38977

Doh! Correction on my part- the reactance of the RFC on the RF amp B+ supply line is NOT equal to the 1pF cap. It is a 500 uH RFC, giving a reactance at 7 MHz of +3500j ohms, versus about -143,000j ohms for that feedthrough cap. So that removes a coincidence, but a mystery still remains- that means the impedance for the signal path is more than FORTY TIMES greater than the impedance of this ground path... what gives?
Ross

4816. POSITIVE acting spray resist

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 21:12:35 UTC
From: NoBody <NotHere@NoWhere.net>
Message-ID: <3E10B6C3.224D8C74@NoWhere.net>
Source record: 38978

Does anyone know a source (USA) for positive acting resist in a spray can. There's lots of NEGATIVE spray resist but I've not been able to find positive....

Thanks

Ted in Atlanta
KD4EE

4817. Re: Ringmixer LO level?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 21:39:13 UTC
From: Rick Karlquist <richard@karlquist.remove.this.com>
Message-ID: <523Q9.384731$GR5.115257@rwcrnsc51.ops.asp.att.net>
Source record: 38979

"J M Noeding" <la8ak.xnd@online.no> wrote in message
news:3e0cd108.181450507@news.online.no...
> Rick
>

> I was told that better IMD could be achieved by connecting two 1N4148 or
> other type in series for each place. On the other hand I have a douzen

AFAIK, this isn't a very effective way to improve IMD. The reverse
bias method works better. This was all explained ~20 years ago in
a paper by a W-J engineer in Microwaves & RF.

Rick N6RK

4818. Hello all...update on the 'humming' noise from my power supply.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 21:50:34 UTC
From: braincambre500@yahoo.com
Message-ID: <85a87c6c.0212301350.4451d471@posting.google.com>
Source record: 38980

Hello all who responded to my question concerning the humming...

It seems as though I have finally licked it.

I started out using my regular RG-58 coax to the open half wave
dipole antenna.

Conclusion: Humming is there.

I then put a 5600uF electrolytic capacitor in parallel on the output of
the power supply.

Conclusion: Humming is still there, but just a 'little' less.

I then changed out the coax to an RG-6 (that large 50 ohm coax) together
with the 5600uF in parallel.

Conclusion: THE HUMMING IS TOTALLY GONE!

I want to thank everyone for added inputs to my challenge. I wanted to
state how I got rid of it. I did many things, but when I did, what
was mentionied above, it finally went away...all the way!

Again, thank you for the kind input and a very happy New Year to all!

Sincerely,

Patrick Cambre

P.S. I want to add this...to all the ones that replied back to me.

I have made an amazing one transistor FM receiver. Total component count
in the receiver itself is 12. Then I added the typical LM386 to boost
up the volume.

I know many look for these simple things on the www, so have I. But I
could never find one to my likings.

I could tell you the whole story how it came to be, but my website will
do all that.

I call it the Radio Shack Special, since all of the parts may be
purchased there.

Without comprimising senstivitiy, selectivity and audio out, this little
jem is doing it's job just fine. I am still amazed how it works so well,
with so little.

When you get to the website, scroll down until you see the words...

The Radio Shack Special Project

...and under that will be all the people who have made it and responded back to me, telling me it is truly a littl marvel. Yes, read what Pedro, Phillip and Murphy had to say about it.

I do believe just going all the way and building it...is really a gamble. But when you read what these people had to say about their own story, you will have more of an incentive to know that IT CAN WORK EXTREMELY WELL!

My main website, which is a free account with Freeservers, does go over the bandwidth every now and then...toward the middle of each month. As I speak, the site is disabled. But come Jan 1st the site will be open again. Please wait until that time and you will find the project there...waiting for you.

My website is at: http://braincambre500.freeservers.com

In case the website again goes disabled during the month of Jan, I have a special backup site I can also give you...while you are waiting for the main site to come back on the 1st of Feb.

With all that said my friends, I tip my hat to all those who have helped me through my 'humming' challenge!

4819. Re: need help understanding regen for class project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 21:58:57 UTC
From: keep-it-clean <keep-it-clean@worldnet.att.net>
Message-ID: <Bk3Q9.86617$hK4.7041231@bgtnsc05-news.ops.worldnet.att.net>
Source record: 38981

Ross ---

I would suggest that you also post your questions to the following newsgroups: rec.audio.tubes, sci.electronics.components, sci.electronics.design

Between this newsgroup (rec.radio.amateur.homebrew) and those other 3 groups, I'm very sure some sharp folks will be pleased to help you out.

Good luck !!

==========

"Ross" <rjtucke@asu.edu> wrote in message news:rjtucke-858274.122352301220002@news.west.cox.net...
> This is my first post on rec.radio.amateur.homebrew and my second usenet
> post in my life. I've been licensed for a few years and in my
> undergraduate Physics curriculum this past semester, I successfully
> built "A 40-Meter Regenerative Receiver You Can Build" (By David
> Newkirk, then WJ1Z, published in _QRP Power_ and /QST/, September 1992,
> page 35). (This was an extra credit project, obviously.) The circuit
> uses two 6GH8A triode/pentode tubes in a circuit decended from George
> Grammer ("Rationalizing the Autodyne," QST Jan 1933 page 11-16, 23).
> With the names I've seen on this group and the high level of
> electronics radio magic you all work, I know I am asking a lot to
> brazenly barge in with my youthful ignorance, but I assure you that my
> respect and honor are commensurate with my obvious impertinance.
>
> Now I have been able to analyze the AF stages (triodes) in a complete
> mathematical description (with very few simplifications) and have
> developed an Excel simulation that works (I _think_!) But I am really
> completely STUCK on the detector for two big reasons.
> One is that I've only ever been able to find big ugly models for the
> pentode (for use in SPICE simulation). And I'm not exactly sure how to
> even fit these to my tubes (6GH8A's), though I do have plenty of data
> sheets.
> Two is that I don't get the detector circuit.
>
> I know I don't have a big probability of getting any replies because I
> don't have a scanner to show you the schematic- the intersections of the
> sets of people who can and would help me and the set of people who have
> QRP Power/QST1992 is probably not too huge. So let me make an attempt to
> ASCII-art the thing a bit ("and in the process irritating EVERYBODY who
> would help away with my verbosity" says my cynical side)
> Values:
> Inductor ("L1") is "about 1.7 mmH", 19 turns on T68-6 tapped at 1 turn

> above ground (to the pentode's cathode). (there is also a fine-tuning
> cap at another tap-- omitted for simplicity)
> Tuning cap ("C1") ranges from 180-280 pF.
> Grid leak resistor ("R1") is 1M.
> Grid leak capacitor ("C2") is 100 pF, NP0.
> There's also a 1 pF, NP0 feeding from the prev stage.
>
>
> C2
> ----| |-----
> Input | |
> | | |
> |-----*--------*--/\/\/\--*---(pentode grid)
> * | R1
> L1 ||C |
> ||C |
> ||C |
> ||C |
> ||C |
> ||C*----------------------------(pentode cathode)
> ||C |
> * _|_
> | --- C1 (variable)
> V |
> V
>
> Of course, the V symbolizes ground, and * is connection
>
> The regeneration circuit feeds into the screen grid- I don't see a
> feedback path, though. I think it simply adjusts the DC voltage! If
> anybody requests it, I will ASCII-ify it (very simple), but as
> mentioned, I suspect I'm WAAAY long winded anyway.
>
> The output comes off the plate with an LC low pass filter to dump RF to
> ground and let AF through. I'm fine with this part.
>
> The input (before the 1pF NP0 cap) is from the RF stage plate (of
> course), but there is one interesting thing. The plate supply has
> (looking from B+ rail) a bias resistor, a massive bypass cap, alarger
> bias resistor, a smaller bypass cap, and an RFC. I mention this because
> at 7 MHz, the reactance of the RFC is equal to that of the 1pF NP0 cap
> to the next stage (detector tuned circuit). The bypass cap on the B+
> side of the RFC has low reactance, and so I see that the incoming signal
> sees equal reactances to ground (through RFC in plate supply) and the
> detector (through cap). And the tank circuit is after my cap, so isn't
> this essentially dumping half the useful output of the RF amp to ground
> through that RFC?!?
>
> Now finally, I gather that this is a grid-leak detector with a Hartley
> oscillator, but HOW DO I ANALYZE IT?

>
> Again, I'm VERY sorry about the length of all this. Many many many
> thanks for putting up with me and (hopefully) offering any ideas. I
> really appreciate your consideration.
>
> Most sincerely,
> Ross

4820. Re: Ringmixer LO level?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-30 23:11:48 UTC
From: la8ak.xnd@online.no
Message-ID: <3e10cd1c.70564099@news.online.no>
Source record: 38983

I read in rec.radio.amateur.homebrew that "Rick Karlquist" wrote on
Mon, 30 Dec 2002 21:39:13Z:

>"J M Noeding" <la8ak.xnd@online.no> wrote in message
>>
>> I was told that better IMD could be achieved by connecting two 1N4148 or
>> other type in series for each place. On the other hand I have a douzen
>
>AFAIK, this isn't a very effective way to improve IMD. The reverse
>bias method works better. This was all explained ~20 years ago in
>a paper by a W-J engineer in Microwaves & RF.
>
>Rick N6RK

This is very interesting to see, but would work for 1N4148, too. The
RC pad might equalize the differences between diodes? On the other
hand I'll keep using the different mixers when they are supposed to be
good enough, but don't find 1N4148 type mixer to be a good choice when
a ready off-the-shelf type is available and solves the problem

Just noticed the MacKay 3010-B*) receiver used 4x 1N82 diodes as first
mixer (up-converter) in an otherwise tube-type construction. Suppose
this is a very early application of ringdiode mixer for communication
receivers, although they have been widely used for telephone line
equipment many years earlier. See http://bama.sbc.edu/ .
Believe 1N82 is a germanium diode. *) The manual is dated July 1964.

73,
Jan-Martin
--
remove ,xnd to reply

4821. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-31 00:31:04 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <auqol7ucn1@slb6.atl.mindspring.net>
Source record: 38984

David Findlay wrote:
> I've seen PLL and DDS used to create signals for IF's
> and tuning. What are the pros and cons of the two
> systems? Are there single chips available for them
> suitable for use in recievers? I'm trying to
> design a versatile digital tuning module that I can
> use in my homebrew recievers and stuff. Thanks,
>
> David

David, I would have to say that DDS is probably the better method these days, although there is a good chance that a combination of DDS and PLL will be the thing you need to do.

DDS will give VERY high resolution steps, less than 1 Hz between steps is very easy, and it is extremely stable and repeatable.

However, DDS by itself tends to have discrete spurs on it's output due to various reasons, and most of the reasonably low cost chips have upper frequency limits too.

PLL doesn't have the same types of spurs, but it steps in something like several KHz for each step. That has to do with loop filters, phase noise, and a lot of other engineering compromises.

So a lot of people use DDS combined with PLL to get the high frequencies for the LO but keep the 1 Hz steps a DDS can achieve. The PLL can also serve to clean up a lot of the discrete spurs DDS chips tend to have.

I see some of the other replies show websites and application notes that will explain in much more detail and so on, but I hope this gives a general understanding of some of the differences in the two approaches.

==========

Analog Devices have wonderful DDS chips, they seem to be the leader in the technology. I would indeed check their website and their App Notes.

As for PLL chips, there a quite a lot of manufacturers with single chip solutions, National Semiconductor among others.

Keep in mind that both PLL and DDS will require programming for each frequency, and it tends to be a serial bit stream so in addition to the synthesizer, you will need some sort of microprocessor and probably an LCD display screen to show the frequency.

Jim Pennell
N6BIU

4822. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-31 00:33:40 UTC
From: Jim Pennell <NoSpam@killspam.com>
Message-ID: <auqol9ucn2@slb6.atl.mindspring.net>
Source record: 38985

From: "Jim Pennell" <NoSpam@killspam.com>
Subject: Re: PLL vs DDS
Date: Monday, December 30, 2002 4:31 PM

David Findlay wrote:
> I've seen PLL and DDS used to create signals for IF's
> and tuning. What are the pros and cons of the two
> systems? Are there single chips available for them
> suitable for use in recievers? I'm trying to
> design a versatile digital tuning module that I can
> use in my homebrew recievers and stuff. Thanks,
>
> David

David, I would have to say that DDS is probably the better method these days, although there is a good chance that a combination of DDS and PLL will be the thing you need to do.

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However, DDS by itself tends to have discrete spurs on it's output due to various reasons, and most of the reasonably low cost chips have upper frequency limits too.

PLL doesn't have the same types of spurs, but it steps in something like several KHz for each step. That has to do with loop filters, phase noise, and a lot of other engineering compromises.

So a lot of people use DDS combined with PLL to get the high frequencies for the LO but keep the 1 Hz steps a DDS can achieve. The PLL can also serve to clean up a lot of the discrete spurs DDS chips tend to have.

I see some of the other replies show websites and application notes that will explain in much more detail and so on, but I hope this gives a general understanding of some of the differences in the two approaches.

==========

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As for PLL chips, there a quite a lot of manufacturers with single chip solutions, National Semiconductor among others.

Keep in mind that both PLL and DDS will require programming for each frequency, and it tends to be a serial bit stream so in addition to the synthesizer, you will need some sort of microprocessor and probably an LCD

display screen to show the frequency.

Jim Pennell
N6BIU

4823. FS: HAM STUFF

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-31 01:33:44 UTC
From: Heytubeguy <heytubeguy@worldnet.att.net>
Message-ID: <Yt6Q9.86890$hK4.7064451@bgtnsc05-news.ops.worldnet.att.net>
Source record: 38986

Ham stuff FS on ebay:

Nat. RF choke

Nat. 'S' meter

Millen worm gear

Jensen 8" spkr

Collins audio xfmr

Dow Key relay

10v 7a fil xfmr

vac. Relays(2)

plus others too

more coming..do search on seller heytubeguy

Tnx heytubeguy

4824. Re: need help understanding regen for class project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-31 01:37:16 UTC
From: n2ey@aol.com
Message-ID: <20021230203716.02538.00000547@mb-da.aol.com>
Source record: 38987

In article <rjtucke-858274.12235230122002@news.west.cox.net>, Ross
<rjtucke@asu.edu> writes:

>I successfully
>built "A 40-Meter Regenerative Receiver You Can Build" (By David
>Newkirk, then WJ1Z, published in _QRP Power_ and /QST/, September 1992,
>page 35).(This was an extra credit project, obviously.) The circuit
>uses two 6GH8A triode/pentode tubes in a circuit decended from George
>Grammer ("Rationalizing the Autodyne," QST Jan 1933 page 11-16, 23).

You might want to read the original article - nice rx.

>Now I have been able to analyze the AF stages (triodes) in a complete
>mathematical description (with very few simplifications) and have
>developed an Excel simulation that works (I _think_!) But I am really
>completely STUCK on the detector for two big reasons.
>One is that I've only ever been able to find big ugly models for the
>pentode (for use in SPICE simulation). And I'm not exactly sure how to
>even fit these to my tubes (6GH8A's), though I do have plenty of data
>sheets.

Closest thing to a pentode is a dual gate MOSFET.

>Two is that I don't get the detector circuit.
>
>I know I don't have a big probability of getting any replies because I
>don't have a scanner to show you the schematic- the intersections of the
>sets of people who can and would help me and the set of people who have
>QRP Power/QST1992 is probably not too huge.

You may be surprised.

> So let me make an attempt to
>ASCII-art the thing a bit ("and in the process irritating EVERYBODY who
>would help away with my verbosity" says my cynical side)
>Values:
>Inductor ("L1") is "about 1.7 mmH", 19 turns on T68-6 tapped at 1 turn
>above ground (to the pentode's cathode). (there is also a fine-tuning
>cap at another tap-- omitted for simplicity)
>Tuning cap ("C1") ranges from 180-280 pF.
>Grid leak resistor ("R1") is 1M.
>Grid leak capacitor ("C2") is 100 pF, NP0.
>There's also a 1 pF, NP0 feeding from the prev stage.

That's all I need...

>The regeneration circuit feeds into the screen grid- I don't see a
>feedback path, though.

You're looking in the wrong place.

> I think it simply adjusts the DC voltage!

Adjusting the screen voltage of that circuit adjusts the gain of the stage. No voltage = no gain, low voltage = low gain, etc. Feedback is not adjusted in that circuit - gain is.
>
>The output comes off the plate with an LC low pass filter to dump RF to
>ground and let AF through. I'm fine with this part.
>
>The input (before the 1pF NP0 cap) is from the RF stage plate (of
>course), but there is one interesting thing. The plate supply has
>(looking from B+ rail) a bias resistor, a massive bypass cap, alarger
>bias resistor, a smaller bypass cap, and an RFC. I mention this because
>at 7 MHz, the reactance of the RFC is equal to that of the 1pF NP0 cap
>to the next stage (detector tuned circuit). The bypass cap on the B+
>side of the RFC has low reactance, and so I see that the incoming signal
>sees equal reactances to ground (through RFC in plate supply) and the
>detector (through cap). And the tank circuit is after my cap, so isn't
>this essentially dumping half the useful output of the RF amp to ground
>through that RFC?!?

Oh yes, but that's not a problem. The RF stage is not there for maximum gain. Its main purpose is to isolate the detector from the antenna. Gain is secondary.

The Ancient Ones were working the Antipodes on 40 meters with QRP and wire antennas more than 70 years ago using rxs much simpler than that one.
>
>Now finally, I gather that this is a grid-leak detector with a Hartley
>oscillator, but HOW DO I ANALYZE IT?

First you have to understand it. The feedback path is via the cathode tap on the tuning coil. Feedback is set by how far up the coil the tap is.

I don't have models for the pentode, but here's a basic description: In this circuit, it's a voltage controlled dependent source. Signal input impedance is essentially a vacuum diode in parallel with a few pF capacitance to ground and cathode. Output impedance is very high (megohm?). In addition to the source being controlled by the input (grid) voltage, it's also controllable by the screen voltage.

73 de Jim, N2EY

4825. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-31 02:42:30 UTC
From: David Findlay <david@davsoft.com.au>
Message-ID: <qu7Q9.13637$aV5.35056@news-server.bigpond.net.au>
Source record: 38988

> Keep in mind that both PLL and DDS will require programming for each
> frequency, and it tends to be a serial bit stream so in addition to the
> synthesizer, you will need some sort of microprocessor and probably an LCD
> display screen to show the frequency.

I was planning on using a PIC chip with 5 7-segment LED display for the
frequency. This section would then have shielding around it to reduce
interference. Thanks,

David

--
BOFH excuse #82:

Yeah, yo mama dresses you funny and you need a mouse to delete files.

4826. Re: Hello all...update on the 'humming' noise from my power supply.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-31 03:20:48 UTC
From: Bruce Lane <SpammersAreVermin@dev.nul>
Message-ID: <MPG.187aacee4f3a5e399896a0@192.168.42.131>
Source record: 38989

In article <85a87c6c.0212301350.4451d471@posting.google.com>,
braincambre500@yahoo.com says...

<snippety-bloof>

> I then changed out the coax to an RG-6 (that large 50 ohm coax) together
> with the 5600uF in parallel.
>
> Conclusion: THE HUMMING IS TOTALLY GONE!

Uhhhh... Excuse me? RG-6 is also known as 'Aluminax,' and has a
characteristic impedance of 75 ohms. It finds use in cable TV hookups,
for the most part.

Of course, if you're using it as DC power cable, that may not be
relevant. ;-)

Keep the peace(es).

--
Bruce Lane, Owner and Head Hardware Heavy,
Blue Feather Technologies -- http://www.bluefeathertech.com
Amateur Radio: KC7GR (Formerly WD6EOS) since 12-77.
kyrrin (a/t) bluefeathertech dot-com (Reassemble to use)
"I'll get a life when someone demonstrates to me it would be superior to
what I have now..." (Taki Kogoma)

4827. Re: need help understanding regen for class project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-31 04:23:01 UTC
From: Reg Edwards <g4fgq.regp@btinternet.com>
Message-ID: <aur633$h4i$2@knossos.btinternet.com>
Source record: 38990

Functioning of a super-regerative receiver is quite simple. There are two modes, A and B.

(A) Oscillation builds up exponentially from an ampltude begining at the initial received signal level. Oscillation builds up to a constant maximum value at which it blocks itself off. It squeggs.

The greater the incoming signal level the shorter the time taken to build up to maximum amplitude and the heigher the squegging frequency. The oscillating device's DC component then increases with squegging frequency and hence incoming signal level.

(B) The squegging frequency is that of a separate fixed-frequency oscillator which modulates the DC supply of receiving oscillator. The receiving circuit is a modulated oscillator.

Again, oscillations build up exponentially from a level depending on the incoming signel level. But now oscillation amplitude does not build up to a constant value - it builds up only to a value allowed in the time of one cycle of the separate fixed-frequency modulating oscillator.

The DC component then depends on the amplitude to which oscillations build up and so, once again, on the incoming signal.

==========

The superegen clearly responds best to amplitude-modulated signals. For receiving audio modulation the squegging frequency is usually in the range 50 to 100 kiloherts. Least distortion occurs when a separate squegging oscillator is used. The circuit is more linear.

With delicate adjustments it can be made to demodulate FM signals. But due to instability it is not recommended.

The self-squegging/blocking frequency (50-100 kHz) of a receiver is adjusted by the capacitor/resistor time constant of the grid/base/gate circuit. It is very non-critical.

Superregen receivers are characterised by EXTREMELY high sensistivity but VERY wide receiving bandwidth. This means they are prone to interference from adjacent channels. The high noise level at the output of the demodulator stage is no disadvantage - it is just an indication of of the high sesitivity even to thermal noise in the antenna.

Historical note: A WW2 application was used by the RAF in IFF (Identify Friend or Foe) airborne equipment on 176 MHz. The receiver picked up friendly ground radar signals and because the reciever was a sqegging oscillator at the radar frequency it re-transmitted the radar pulses back to

where they came. So the radar echos were returned greatly magnified and could be detected by friendly ground stations at great range. But the clever part was on/off binary coding of the returned echos. By knowing the code ground stations could identify particular squadrons, even aircraft.

The IFF receiver was simplicity itself - a single 1-watt VHF valve, top grid and anode, which, of course, was also the transmitter.

It was essential not to allow IFF equipment to fall into enemy hands. It was contained in a box about 1-foot cube and contained an explosive charge designed to explode with sudden acceleration as when crash-landing in enemy territory. Unfortunately when returnig to base it was easy for the crew to forget to switch off the electrically-operated detonator and when the aircraft decelerated on landing there was often a loud bang from the rear where the IFF gear was located. The equipment cube almost changed to a sphere.

There were navigation equipments using similar principle, the coded superegen receiver/transmitter being ground based and the interrogator being in the aircraft. The ground-based equipment was, of course, a coded VHF beacon for returning home.

==========
Regards from Reg G4FGQ
For Free Radio Design Software
Go to http://www.g4fgq.com
==========

4828. Re: need help understanding regen for class project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-31 04:48:41 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <aur7j9$8o$1@freenet9.carleton.ca>
Source record: 38991

"Reg Edwards" (g4fgq.regp@btinternet.com) writes:
> Functioning of a super-regerative receiver is quite simple. There are two
> modes, A and B.
> [stuff deleted]
The problem with the explanation is that the poster is asking about a
regenerative detector, not superregen.

And I think a lot of the mystification of the superregen comes from
treating it as a standalone design, rather than a regen detector
that has been modulated by an ultrasonic signal. That whole self-quenching
bit, while obviously making the thing easy to build, doesn't make
it's operation as clear as when an external oscillator is shown.

Armstrong himself showed an external quenching oscillator in his
patent application.

Michael VE2BVW

4829. Error on pages still there

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-31 04:54:54 UTC
From: WB8NUT <duffy@wb8nut.com>
Message-ID: <3E11231E.1000109@wb8nut.com>
Source record: 38992

Carolyn and Gary,

I still get the error on any "order me" button that I click.

This is the error page I get.

http://home.att.net/sbb/errors/sbb_err.html

Looks like there may still be a problem.

Duffy

4830. Re: need help understanding regen for class project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-31 05:12:22 UTC
From: et472@FreeNet.Carleton.CA
Message-ID: <aur8vm$2ar$1@freenet9.carleton.ca>
Source record: 38993

Ross (rjtucke@asu.edu) writes:
> This is my first post on rec.radio.amateur.homebrew and my second usenet
> post in my life. I've been licensed for a few years and in my
> undergraduate Physics curriculum this past semester, I successfully
> built "A 40-Meter Regenerative Receiver You Can Build" (By David
> Newkirk, then WJ1Z, published in _QRP Power_ and /QST/, September 1992,
> page 35). (This was an extra credit project, obviously.) The circuit
> uses two 6GH8A triode/pentode tubes in a circuit decended from George
> Grammer ("Rationalizing the Autodyne," QST Jan 1933 page 11-16, 23).
> With the names I've seen on this group and the high level of
> electronics radio magic you all work, I know I am asking a lot to
> brazenly barge in with my youthful ignorance, but I assure you that my
> respect and honor are commensurate with my obvious impertinance.
> [stuff deleted]

But are you trying to understand this specific circuit, or just
regenerative detectors in general?

A regen is just an oscillator with some sort of control to reduce
the oscillation. Or to look at it another way, an amplifier with
positive feedback and a means of controlling it.

You can read Armstrong's patent for the regenerative detector
at the US Patent office website, http://www.uspto.gov/patft
The patent number is 1,113,149. While you're there, you
can also look at his patent for superregeneration, #1,424,065
which was issued 8 years after the regen patent, and two
years after his superhet patent, $1,342,885.

Once you understand how a regen detector works, then you
can see that there are plenty of different circuits, oscillators,
that can result in the same scheme. It looks like the oscillator
in the article is a Hartley. Reading up on it might help
you to understand how the circuit is supposed to work. Armstrong himself
has an oscillator named after him, the Armstrong oscillator, and I'm pretty
certain that was the circuit he described in his patent for the regen
detector. (I don't think I've looked up the regen patent, though
I have looked at the superregen patent diagram.)

I'll try look over the article later, and reread your post.

Michael VE2BVW

4831. Re: need help understanding regen for class project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-31 07:31:51 UTC
From: phil <just_rtfm@yahooREMOVE.com>
Message-ID: <v12i01q7slneca@corp.supernews.com>
Source record: 38994

hi Ross:

i am new here also (first post). while i have limited understanding of regen using tubes, i will give this a go in general terms [looking at your ascii art] and let the experts correct. although people draw things differently the level of "pentode cathode" is what i would call "ground" under Hartley.

R1 under gate-leak (probably same for grid-leak) could have been connected to "ground" as this is an alternate method for the circuit. the cap and resistor are used for gate leak bias. bias places the proper DC potential [or flow] onto an active device [often setting class of operation].

L1/C1 puts an AC voltage on the grid. when the grid is positive it draws current from the cathode and C2 will be charged negative on the L1/C1 side and positive on the tube side. after oscillation, voltage steadies and provides bias.

the control grid and the cathode form a diode rectifier. usually there are three flows to think about: tank, bias, and feedback. tube output [via cap] will be connected back at the inductor tap. in Hartley's design Armstrong's "tickler" is just part of the resonant tank's inductor. the tap position on L1 [fixed] and variable cap inline [control, not shown in your ascii art] set the amount of positive feedback (aka "regen").

> The regeneration circuit feeds into the screen grid- I don't see a
> feedback path, though.

regeneration is happening at the inductor. the small tapped (lower) part of L1 [think "integrated tickler"] is part of an auto-transformer: this provides feedback. tube output should be connected to a capacitor (going to this "tickler") and an RFC (RF choke keeping signal out of the supply).

hopefully this is accurate and not over simplified... sorry, no tube wizard here... i like FETs! FWIW while 1M and 100 pF are considered the "standard" grid/gate-leak values they are often not ideal: unload.

regards,
phil

4832. Re: amplifier schematic help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-31 08:13:43 UTC
From: L Caracciolo <larryc@northwest.com>
Message-ID: <3E1151B7.E5209790@northwest.com>
Source record: 38996

Mario...

I'm not using MSN.

Just write to me direct...or continue thru the newsgroup.

To answer your question...

> >> Larry,
> >>
> >> Actually what i meant was to measure the voltage across R2. This
> >> gives you the current through R2. So, this will allow you to
> >> calculate more or less the other currents.. Couldn't you assume that
> >> half of this 'R2-current'goes more or less to each push pull
> >> transistor ?
> >>
> >> M.
> >
>
> Larry, check your MSN mail, i tried to add you in my messenger...

Yes, that is a good 1st approximation. I hv a description in my Motorola book, of the identical ckt used in your amp. I can scan the two pages as a JPG or PDF and email to you.

Let me know.

LarryC

4833. Re: AM Stereo and ECSS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-31 13:21:34 UTC
From: phil <just_rtfm@yahooREMOVE.com>
Message-ID: <v136dpin4c7q67@corp.supernews.com>
Source record: 38897

hi David:

while AM stereo is not popular, these chips are great for synchronous AM (important in reducing selective fading). one way to select a sideband on AM (other than phasing) is by using narrow filters under sync while applying the PBT or by changing the main LO (aka changing the tuned frequency) by plus or minus half the filter's width. example: for 640 AM engage a 2.4 kHz filter (-6 dB spec) and tune 641.2 (upper side) or 638.8 kHz (lower side).

ideally go with double conversion: first high IF for image rejection, second low IF for selectivity (455 kHz filters). tuning AM stations as if they were SSB (some call this "ECSS") is extremely effective at adjacent channel rejection. for more chip information look up the following data sheets:

Motorola C-QUAM AM Stereo MC13022 or MC13122
Phillips TDA1072 or the TDA1572

check out http://users.hfx.eastlink.ca/~amstereo/ [chips $5] and the AM Stereo Yahoo Group. FWIW IMO the most important ingredient for BCB DXing is getting a directional antenna. outdoors build a beverage or K9AY loop or phaser [very cool, do a search for Mark Connelly or join NRC or IRCA]. indoors build a box loop or amplified ferrite loop. BCB is great... have fun!
http://www.hard-core-dx.com/nordicdx/antenna/loop/index.html

regards,
phil

4834. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-31 18:46:52 UTC
From: xpyttl <xpyttl_nospam@earthling.net>
Message-ID: <v13phj1er6f7fb@corp.supernews.com>
Source record: 38898

"David Findlay" <david@davsoft.com.au> wrote in message
news:qu7Q9.13637$aV5.35056@news-server.bigpond.net.au...
> I was planning on using a PIC chip with 5
> 7-segment LED display for the frequency.

You might consider an LCD rather than an LED. The LED requires a lot of support hardware and will challenge the number of I/O pins available on the PIC unless you add a bunch of shift registers and latches. The LCD needs about 7 of your PIC's I/O, 5 volts, and that's it.

Also, take a look at some of the TI parts. The TRF4400, TRF4900, TRF2050, and TRF2052 include both the DDS and the PLL, and are a whale of a lot cheaper than the AD parts, plus they are available. AD parts are tough to get other than as samples (and I view that as a little dishonest in that I don't intend to buy a thousand of them). The TI parts are all pretty high frequency, so after you've divided them down to something reasonable all their hard work in making a sine wave is wasted, but it sounds like you'll be going into a mixer anyway...

..

4835. Re: Hello all...update on the 'humming' noise from my power supply.

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-31 20:14:53 UTC
From: braincambre500@yahoo.com
Message-ID: <85a87c6c.0212311214.73096c90@posting.google.com>
Source record: 38899

Hello Sir Bruce,

Yes, I apologize for that incorrect cable. It is, I do believe, an RG-8. Yes, my father used to use that for his 'Browning Eagle' back in the 70's when CB was a big thing.

...Patrick

4836. Re: AM Stereo and ECSS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-31 23:02:10 UTC
From: bjorn890@aol.com57304573
Message-ID: <20021231180210.23076.00000362@mb-mp.aol.com>
Source record: 38900

That old reciever uses exactly the same technology I am speaking of.

There is plenty of DOS left in Windows, just make a boot disk!
Bjorn890

4837. Re: Anyone know what a black and white stripe on a diode means?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-31 23:13:49 UTC
From: bjorn890@aol.com57304573
Message-ID: <20021231181349.11182.00000429@mb-ce.aol.com>
Source record: 38901

I have seen gunnplexer diodes similar to that. It could possible be for some microwave application.

There is plenty of DOS left in Windows, just make a boot disk!
Bjorn890

4838. Re: Anyone know what a black and white stripe on a diode means?

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-31 23:25:32 UTC
From: Tony <nospam@shoveit.com>
Message-ID: <MHpQ9.74392$6H6.2787018@twister.austin.rr.com>
Source record: 38902

It's in the HF/VHF sensor of the Diamond SX-1000 watt meter. The meter was hit by lightning and I'm rebuilding it. I use a 1N914 and it's not working right (the meter that is) so I'm guessing that there is something special about it?

"Tony" <nospam@shoveit.com> wrote in message
news:T5QP9.62029$6H6.2464019@twister.austin.rr.com...
> Can't figure out what kind of diode this is??
>
> Looks like a 1N914 but (glass and about the same size) BUT it has a BLACK
> and WHITE line on it? LIKE THIS BELOW!
>
> B W
> _________
> ---| | | |---
> ----------------
>
>
>
>
>
> Sign up for Paypal and make me $5.00
>
> https://www.paypal.com/refer/pal=WHRP8XHRMLSX4
>
>

4839. Re: need help understanding regen for class project

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-31 23:32:15 UTC
From: Ross <rjtucke@asu.edu>
Message-ID: <rjtucke-27224C.16344431122002@news.west.cox.net>
Source record: 38903

Wow, thank you all VERY much for your suggestions- you are very kind and
I feel honored by your attention. I'm now attempting to implement these
ideas- we'll see how it turns out! Once again, I thank you.
Sincerely,
Ross

4840. Re: PLL vs DDS

Newsgroup: rec.radio.amateur.homebrew
Date: 2002-12-31 23:32:32 UTC
From: Richard Hosking <richardh@iinet.net.au>
Message-ID: <3e11477c$0$1082@echo-01.iinet.net.au>
Source record: 38995

You have had a lot of replies giving various resources
Take a look at

http://www.qsl.net/ke5fx/

for a hybrid DDS/PLL design for a microwave synthesizer

Richard

David Findlay <david@davsoft.com.au> wrote in message
news:8uTP9.10440$aV5.26750@news-server.bigpond.net.au...
> I've seen PLL and DDS used to create signals for IF's and tuning. What are
> the pros and cons of the two systems? Are there single chips available for
> them suitable for use in recievers? I'm trying to design a versatile
> digital tuning module that I can use in my homebrew recievers and stuff.
> Thanks,
>
> David
>
> --
> BOFH excuse #327:
>
> The POP server is out of Coke
>